CHAPTER THREE

An overview of the living standards of the total population

Introduction

This chapter provides an overview of the living standards of the total New Zealand population. ELSI enables the living standards distribution of the population as a whole to be described and systematic comparisons between sub-groups to be made.

The analysis presented here conceptualises living standard as a dependent variable whose values are conditional on independent variables such as social, demographic and economic characteristics[19]. This approach is suited to the interests of a policy audience and recognises that the distribution of living standards is conditional on population characteristics. Taking this approach enables assessment of the degree to which there is inequality in the distribution of living standards and the degree to which some groups are worse off than others.

The results are presented in three parts. Part 1 summarises what the living standards of the population as a whole look like. Part 2 examines variations in living standards across different age, gender, ethnic, family type, region, education, occupation, income source and housing tenure characteristics[20]. Part 3 examines how living standards across the population vary according to income, asset position and accommodation costs.

The material that is presented is largely descriptive. Future research by the Ministry (which will involve further fieldwork to collect a wider range of potential explanatory variables) will go on to examine the extent to which these sorts of variables explain the variation in living standard scores that is reported for the population, and the extent to which they interact. The unit of reporting in this chapter is the individual. All estimates provided are for the total population[21].

Part 1: Overall distribution of living standards

Chapter 2 described the ELSI scale as bands made up of seven aggregated intervals (Levels 1 to 7). The overall distribution shows that 80 percent of the population have living standard scores that place them in the 'fairly comfortable' to 'very good' living standards categories. One in five New Zealanders, however, have living standard scores that place them in the 'somewhat restricted' to 'very restricted' categories of the

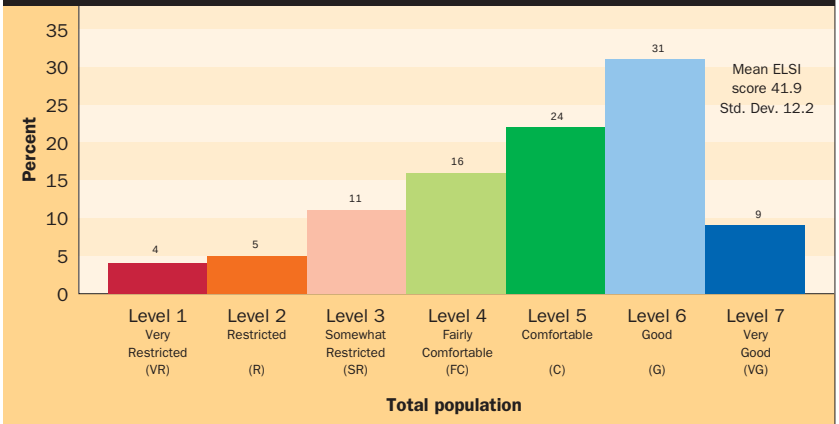
19 From a policy perspective, it is also of interest to examine the composition of various living standard categories, in particular the composition of those in the 'very restricted' to 'somewhat restricted' categories. For those with a particular interest in examining the distribution of the population conditional on living standard scores should refer to Appendix A which summaries this analysis.

20 A characteristic not examined here is the distribution of living standards by health and disability indicators. While some information on health and disability is available for the 65plus population, this information was not collected for the under 65 population. There is strong evidence that health and disability are associated (see Shaw et al, 1999; Gordon et al, 1999). The study on the living standards of older New Zealanders did not include health and disability as a separate explanatory factor of variation in living standards because of causal ambiguities. While poor living standards can lead to poor health, poor health can also lead to poor living standards - the causal linkages probably go in both directions (Fergusson et al, 2001).

21 The ELSI scale score was derived based on information provided by the respondent on their economic family unit. Population estimates have been calculated using respondent weights to represent the adult population and child weights to represent the children in the respondent's economic family unit. See chapter 2 for further clarification on unit of analysis and the ELSI scale.

scale. The mean ELSI score for the total population is 41.9, which falls within the score range characterised as 'comfortable'. The standard deviation for this mean is 12.2 (see Figure 3.1).

Figure 3.1 Living standard distribution of the total New Zealand population 2000



Those with a living standard at Level 1 (which is characterised as 'very restricted', the most restricted end of the range of ELSI scores) comprise 4 percent of the total population. Those at Level 2, which marks a 'restricted' living standard, make up a further 5 percent of the population. Level 3 represents a 'somewhat restricted' standard of living. Eleven percent have a Level 3 living standard. Level 4 is described as a 'fairly comfortable' living standard enjoyed by 16 percent of the population. Level 5 is described as a 'comfortable' living standard and accounts for 24 percent of the population. Level 6 represents a 'good' living standard. Almost a third (31 percent) of the population have an ELSI score that places them at level 6. Those with scores that place them at Level 7 of the Economic Living Standard Index have the highest living standard. One in every eleven New Zealanders (9 percent) have a score that places them in the top living standards category.

Part 2: Variations in living standards across demographic and social groups

Living standards vary across the population depending on a number of social and demographic factors. This section will examine this variation in relation to characteristics such as age, gender, ethnicity, economic family unit type, region, housing tenure, education, occupation and income source. These particular characteristics have been chosen for a variety of reasons:

- In the first instance, there is a long-standing concern about equitable social outcomes, and in the interests of equity, a view that disadvantage should not be concentrated in particular social and demographic groups e.g. age groups or ethnic groups.
- Secondly, there is special concern about the well-being of children. This concern stems from evidence that childhood hardship can have long term negative consequences and that children cannot affect their own living standards (to any great extent).
- Finally, policies are increasingly targeted using risk characteristics (known to be predictive of hardship/deprivation). Therefore, there is interest in knowing how well various characteristics indicate risk of lower living standards.

Age [22]

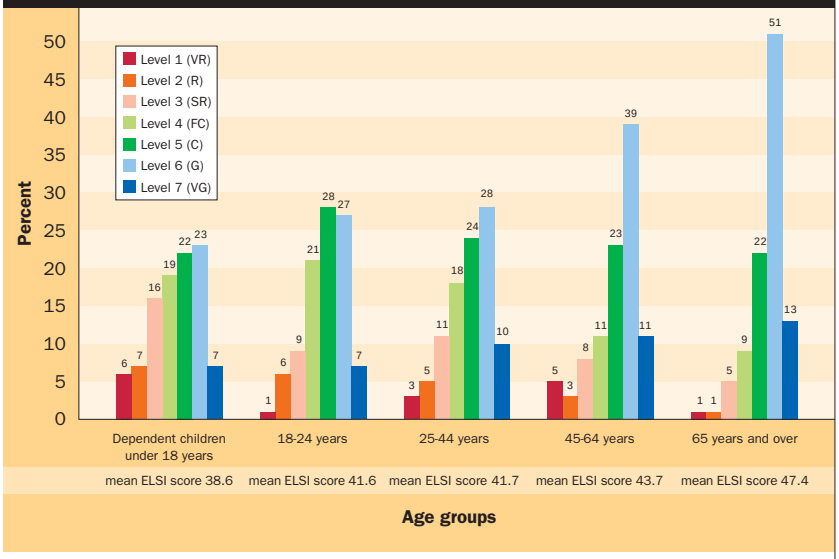
Living standards vary considerably by age. In broad terms, the results here indicate a rise in living standards across the life cycle.

Children's[23] ELSI scores are highly heterogeneous, with 6 percent in the bottom living standards interval (i.e. Level 1) but 7 percent in the top living standards interval (i.e. Level 7). Chapter 6 will show that children in two parent non-beneficiary families have a low risk of lower living standards, but children of sole parents (26 percent of all dependent children in the 2000 Living Standards Survey) have a higher risk. The distribution shown in Figure 3.2 reflects the combined effects of these two patterns.

22 Adult respondents aged 18 years and over are weighted to represent the total adult population. Children in this study were not surveyed in their own right but are counted in the economic family units of which they are members. The living standard score assigned to the relevant economic family unit is assigned to the child or children in the unit. The children in the sampled economic family units are weighted to represent the count of children in the total population.

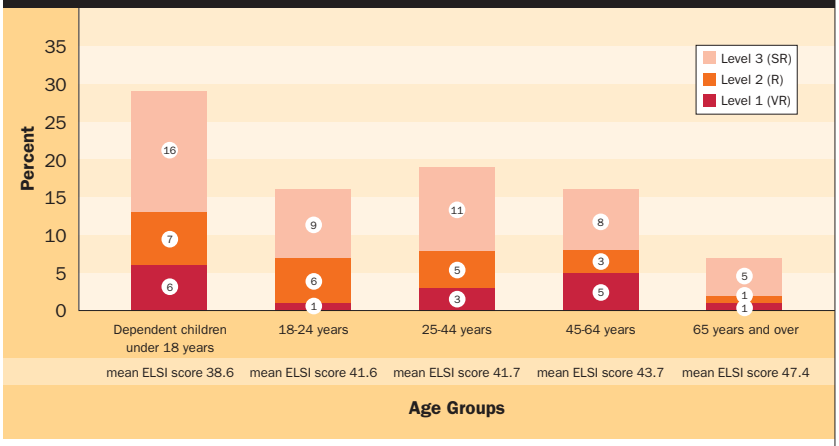
23 A child is defined as a person aged less than 18 years who is dependent and who does not have a partner or child of their own. By contrast, a person aged less than 18 who is self-supporting or has a partner or a child is counted as a separate economic family unit (or part of a separate unit).
The estimated population is of adults and children who (usually) live with adults (living in private dwellings), rather than the (usually) resident population (living in private dwellings).
The ELSI score is for the economic family unit and is attached to all the people in the economic family unit. Children with low living standards are those in economic family units with low ELSI scores, that is precisely all that is meant by a reference to children's living standards. A validation exercise was carried out by examining the extent to which children with lower ELSI scores experience constraints in consumption of 'child-specific' consumption items. The results show that those with lower ELSI scores consistently faced greater constraints in consumption of 'child-specific' items than those with higher ELSI scores.

Figure 3.2 Living standard of New Zealand population by age groups 2000



The detrimental implications of child poverty for child development have been a focus of policy concern in recent years. While no poverty threshold has been specified for the ELSI scale, children's living standards scores are disproportionately in the lower part of the range. In 2000, 29 percent had living standard scores that placed them in the 'somewhat restricted' to 'very restricted' categories of the scale. This compares with 20 percent of the total population (see Figure 3.3). As previously stated, however, not all groups of children are at risk of a lower living standard. In fact the risk primarily exists for children in sole-parent families who receive income from income-tested benefits. It is this group that elevates the proportion of children in the lower living standards end of the scale, relative to other age groups. This issue is explored further in Chapter Six.

Figure 3.3 Proportion of each group experiencing lower living standards (ELSI levels 1-3) 2000



The overall pattern of ELSI scores with respect to age shows that dependent children are relatively more likely to be at the lower end of the living standards range, those aged 65 years and older are substantially less likely to be at the lower end, and those aged 18 to 64 years are in an intermediate position. By contrast, the likelihood of being at the upper end of the living standards range (for example, levels 6 and 7), increases progressively across the age groups[24].

Young adults (aged 18-24 years) have a distinctively shaped distribution. Although they are not disproportionately represented at the lower (e.g. levels 1 to 3) end of the living standards continuum, they are under-represented at the higher (level 7) end of the continuum. They are therefore bunched in the middle (comfortable) range of the living standards continuum.

The results obtained for young adults (18-24 years), are likely to be due to a sizeable proportion of this age group being young adults who reside with care-givers or who are in tertiary education. Both these groups of young adults have low incomes but achieve moderate living standards. This is likely to be due to parental subsidisation. In 2000, 32 percent of 18-24 year olds were residing with a parent or parents. The mean equivalent disposable income of this group was under $10,000 (a very low mean income). However, the average living standard score for this group was 43.6 (in the range of 'comfortable' living standards). This compares with a lower average living standard score of 37.4 for young adults not residing with parents.

24 The ELSI distribution for the population aged 18-64 years is as follows: level 1(4%), level 2 (5%), level 3 (10%), level 4 (16%), level 5 (24%), level 6 (32%) and level 7 (10%).

Living standards generally rise across the remaining age groups, with the 65 plus age group having the highest average living standard score. The generally favourable living standards scores found for older New Zealanders, mirrors the results of the Material Well-being Scale reported in the study of the living standards of older New Zealanders. That study was able to draw on a much wider range of explanatory factors which weren't collected for the working age population and identified three sets of factors that operated cumulatively to influence the living standards of older people. These factors were:

- current economic circumstances: net annual income, value of savings and investments, and accommodation costs;
- exposure to past and current economic stresses; and
- social background: household composition, age, ethnicity, socio-economic status.

These factors acted cumulatively so that the older person most at risk of poor living standards was characterised by a mix of low income, no savings, high accommodation costs, a history of economic stress, being younger, Māori or Pacific ethnicity, and having held a low status occupation. These findings suggest that what determines levels of living standards in old age is not one single factor (such as net annual income) but an accumulation of factors that represent the individual's current circumstances and previous life history (Fergusson et al, 2001). The findings of this study suggest that the current levels of New Zealand Superannuation (NZS) and supplementary assistance are sufficient to protect the great majority of older people from hardship and material deprivation. The findings reinforce:

- the importance of state superannuation to the well-being of older people;
- the need to encourage savings and investment to meet economic needs in old age;
- the need to consider mechanisms for encouraging such savings; and
- the need for focus on developing social policy to ensure high levels of employment and adequate income levels over the life-course before retiring age (Fergusson et al, 2001).

Living standards by age and family composition

The presentation of social and demographic data sometimes draws upon a life-stage framework that postulates movement through a stylised sequence of living situations from youth to old age. The results of this analysis are not consistent with this sort of framework. Focusing on the life-cycle phases which involve some degree of economic independence, the stages can be characterised as:

I. young, financially independent single adult, who acquires a partner, to become part of a

II. young couple without children, who have children, to become part of a

III. couple with children, whose children grow up to leave home, at which stage they are a

IV. middle aged couple without children, who withdraw from the paid workforce to become a

V. retired couple, who eventually are reduced by bereavement to a

VI. retired single person.

The initial first two stages (involving at least modest incomes that are not required to be stretched for the support of dependent children) are postulated as giving rise to adequate-to-good living standards, likely to be increasing. At the point where the couple have children, living standards are postulated as undergoing a fall. After the children have become independent, living standards are postulated as being relatively high (probably reaching their maximum in this stage). Following retirement, they are postulated as being lower (the cells in Table 3.1 depicting this model are in bold). What Table 3.1 suggests however, is that for those who follow this life-course, living standards generally follow the pattern outlined, until the older ages, where living standards continue to be high (on average) rather than low. Table 3.1 also signals the many different trajectories that may be followed over the life-course, suggesting that some trajectories may cause living standards to rise or fall at different points in the life-course.

Table 3.1 Average living standard scores by age and family composition (2000)

Economic family unit type		18-24 years	25-29 years	30-34 years	35-55 years	55-64 years	65-74 years	75 years plus
Single person	Population proportion	**8.6%**	3.5%	1.6%	5.6%	2.4%	2.0%	**2.6%**
	Mean ELSI score	**42.9**	41.2	43.0	39.1	40.9	44.6	**48.7**
Couple only	Population proportion	0.8%	**2.3%**	2.2%	8.4%	**4.6%**	**4.6%**	2.3%
	Mean ELSI score	39.7	**45.1**	44.7	47.2	**46.4**	**47.3**	49.1
Couple with children	Population proportion	1.3%	3.1%	**8.0%**	**25.1%**	–	–	–
	Mean ELSI score	34.7	39.2	**40.2**	**43.2**	–	–	–
Single with children	Population proportion	1.2%	1.1%	1.9%	6.2%	–	–	–
	Mean ELSI score	32.9	23.5	25.5	31.6	–	–	–

– cell size too small for results to be presented.

Gender

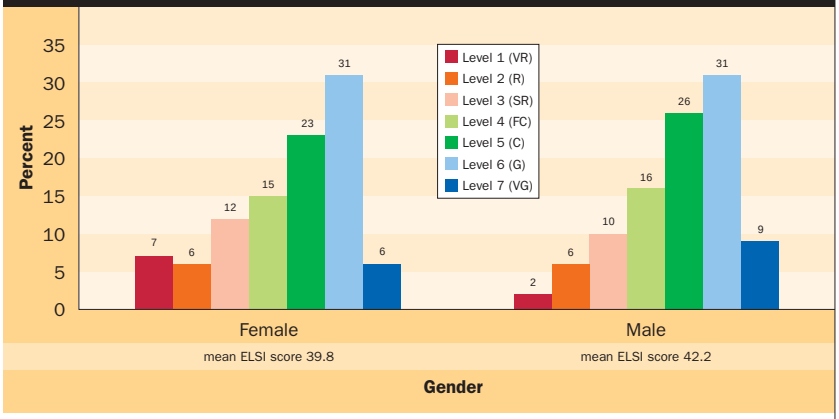
The ELSI scale is primarily a measure for the economic family unit, which means that the score distributions for partnered males and females will essentially be the same, with the exception of small differences associated with sampling and the effects of gender-related responses.

The family member who is interviewed, may be either male or female. He/she serves as the informant for the family unit, giving the information from which the family unit's ELSI score is estimated. Unless the data are distorted by gender-related response bias, the ELSI scores from data provided by partnered survey respondents will be affected very little by whether the respondent is male or female. The existence of such bias is not supported by the very similar ELSI means for partnered men and women: the mean ELSI scores for partnered men and partnered women are 44.9 and 44.4 respectively. Given this context, gender comparisons are only presented separately for units made up of lone adults (i.e. single-adult and sole-parent units) as well as for the population as a whole.

Figure 3.4 shows that women in single-person or sole-parent economic family units have lower living standards than men. The average living standard score for women in these family units is 39.8. This compares with 42.2 for men in similar family units. The differences in living standards between men and women in these units are more marked at

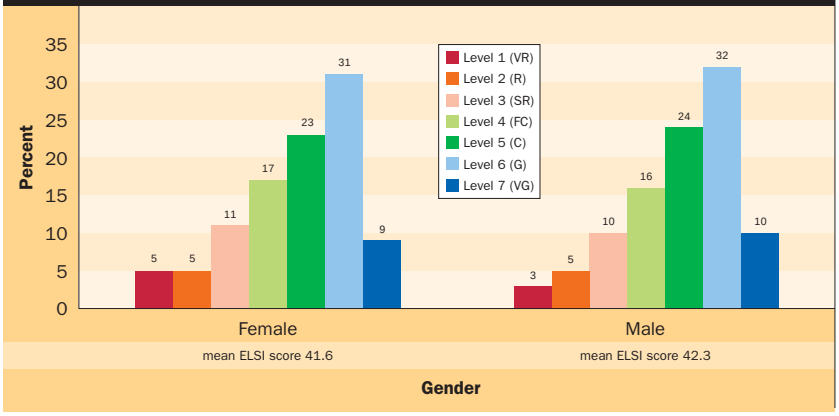
the lower living standards end of the continuum. In 2000, 25 percent of women in single-adult and sole-parent family units had lower living standards (in the level 1 to 3 range) compared with 18 percent of men. A large part of the difference between men and women portrayed here is due to the lower living standards of sole parent families (the majority of whom are female-headed). The average living standard scores of men and women in single person economic family units was about the same at 42.7 and 42.0 respectively. The average living standard scores of men and women in sole parent economic family units were also similar at 32.5 and 30.1 respectively.

Figure 3.4 Living standards distribution of adults in single person and sole parent economic family units by gender 2000



Because of the measurement process discussed above, the living standard distributions of men and women, overall, shown in Figure 3.5 are more alike than the distributions shown in Figure 3.4.

Figure 3.5 Distribution of living standards of total population by gender 2000



Ethnicity [25]

The following analysis provides a brief overview of the living standards of Māori, Pacific, European, Chinese, Indian and other ethnic groups. More detailed analyses of the living standards of the Māori and Pacific populations is provided in Chapters 4 and 5 respectively.

The distribution of living standards by ethnicity reveals marked differences for the different ethnic groups[26]. The European population on the whole has a favourable distribution, with the majority of the population having living standards which are described as 'fairly comfortable' to 'good'. In contrast, the distributions for the Pacific population and Māori population are less favourable, with higher proportions at the lower and middle parts of the scale and lower proportions at the higher end of the scale. The distribution for the Indian population shows a very favourable distribution with very few concentrated at the bottom end of the scale. While the distribution of living standards for the Chinese and other (non-European) ethnic groups is more favourable than those of the Māori and Pacific populations, it is less so than that of the European population (see Figure 3.6).

The Chinese and European populations have the highest proportions concentrated in the 'good' to 'very good' living standards range (51 percent and 46 percent respectively). They were followed by other ethnic groups (27 percent), Indians (25 percent), Māori (19 percent) and Pacific (16 percent).

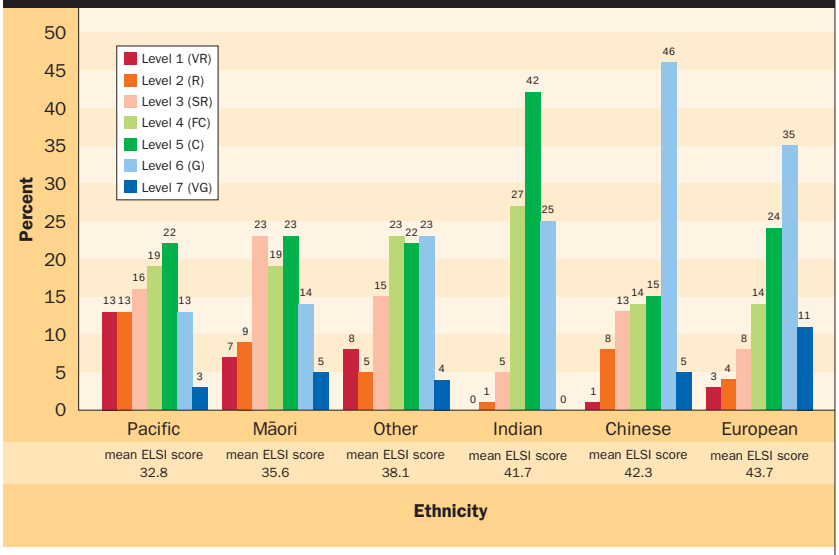
The Indian population appears to be more concentrated into the 'comfortable' range than other groups and under-represented at both extremes of the distribution. This is reflected in the standard deviation in living standard scores for the Indian population being barely half that of the population as a whole.

Overall, there is a range of 10.9 between the highest and lowest average living standard score for different ethnic groups in New Zealand, demonstrating the considerable differences in living standards between them.

25 Ethnicity is based on total responses to the ethnicity question. For example, if any adult respondent or child of the respondent had Pacific specified as one of their ethnicities, they are counted as part of the Pacific ethnic group. This procedure is followed for all the ethnic groups, therefore the ethnic categories are not mutually exclusive.

26 In the 2001 Population Census, 10 percent of the population resided in multi-family households. The proportions were substantially higher for the Māori, Pacific and Asian ethnic groups being 14 percent, 23 percent and 19 percent respectively. It is likely that living standards vary between those residing in multi-family households and those residing in single-family households. The exploration of the circumstances of multi-family households is possible within the living standards framework used here. This would however require that information is collected from a respondent within each family in a multi-family household. This is something that, while not possible with current data, can by explored by future research.

Figure 3.6 Living standards of population by ethnicity 2000



As stated earlier, there was a strong relationship between age and living standards, with average living standards systematically increasing with age. The relative youthfulness of populations such as the Māori and Pacific populations makes it relevant to examine average living standards across ethnic groups standardised for age. Table 3.2 shows that standardising average living standard scores for age, reduces very little of the between-group variation in average scores. The Māori and Pacific populations continue to be characterised by lower living standards even when adjustments are made for their relatively youthful age structure.

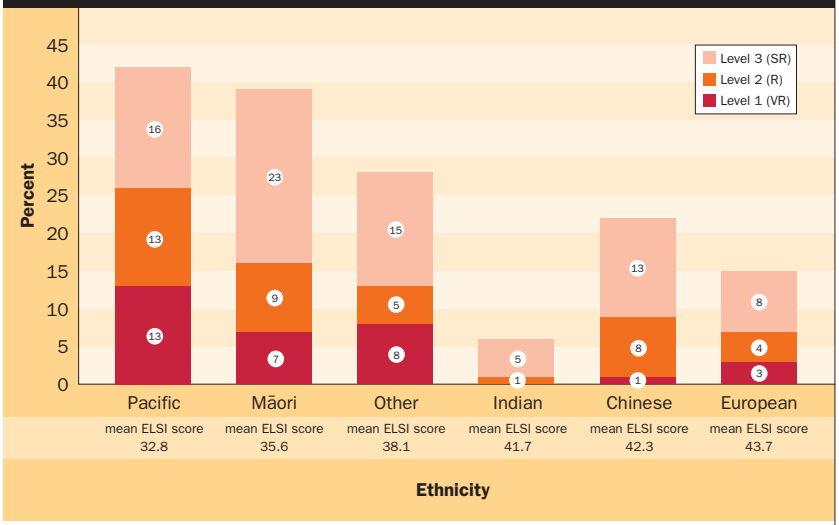
Table 3.2 Mean ELSI scores and mean ELSI scores standardised for age by ethnicity (2000)

Ethnicity	Mean ELSI score	Mean ELSI score standardised for age*
Pacific	32.8	32.0
Māori	35.6	36.4
Other	38.1	38.2
Indian	41.7	42.0
Chinese	42.3	41.9
European	43.7	43.3

*The standardisation procedure applies the age distribution of the total NZ population to each of the ethnic groups.

Because of the well-documented socio-economic disadvantage of Māori and Pacific people, ethnic comparisons that focus on the lower living standards end of the ELSI scale are also presented in Figure 3.7. Pacific people had the highest proportion of their population at levels 1 to 3 (42 percent). They were followed by Māori (39 percent), other ethnic groups (28 percent), Chinese (22 percent), Europeans (15 percent) and Indians (6 percent). The relatively high proportion of Chinese and other non-European ethnic groups facing difficulties is possibly associated with new migrants facing obstacles to employment. Up to 13 percent of the Pacific population had 'very restricted' living standards, a higher proportion than any other group.

Figure 3.7 Proportion of each ethnic group experiencing lower living standards (ELSI levels 1-3) 2000

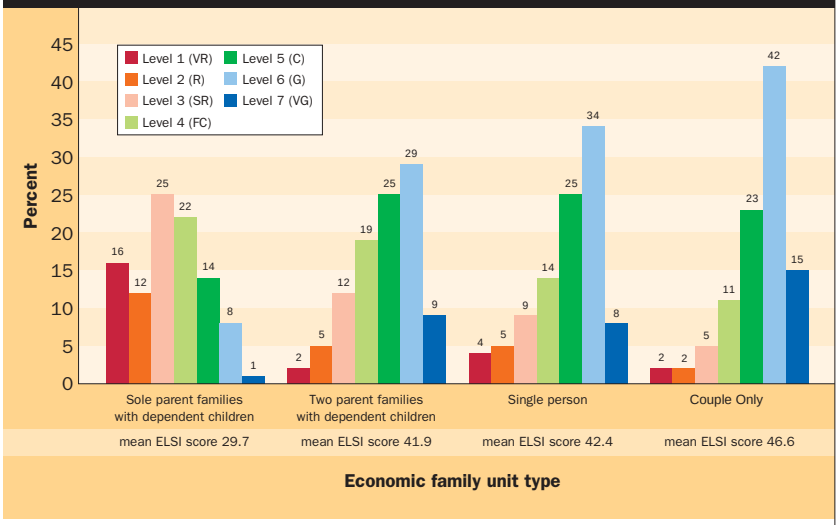


While higher proportions of Māori and Pacific people have ELSI scores that place them at the lower end of the ELSI scale, it is important to remember that the majority of Māori and Pacific people have living standard scores that place them in the 'fairly comfortable' to 'very good' living standards categories of the ELSI scale.

Economic Family Unit Type [27]

Average living standard scores varied widely between the different types of economic family units[28]. Sole-parent families with dependent children had the lowest average living standard score of any family type (29.7). Sole-parents with dependent children were at least four times less likely than any other family type to have a living standard score that placed them in the upper (levels 6 and 7) range, twice as likely as any other family type to have an ELSI score that placed them in the 'restricted' (level 2) category, and at least four times as likely to have a score placing them in the very 'restricted' (level 1) category (see Figure 3.8).

Figure 3.8 Living standards of population by economic family unit type 2000

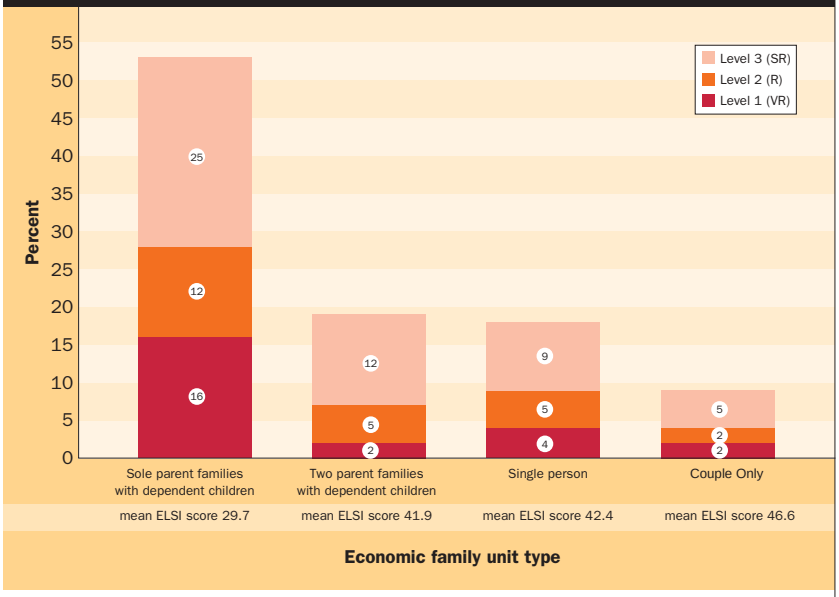


27 The analysis here is based on counts of people in the different economic family units. For example, where we refer to sole-parent families we mean the population in sole-parent families.

28 A negligible proportion (0.7 percent) of couple economic family units were same-sex couples in the living standards survey of the working-age population.

The situation of sole-parent families makes it relevant to focus on the lower living standard end of the scale. Figure 3.9 shows that people in sole-parent families were at least two times more likely than two-parent families to have 'restricted' (level 2) living standard scores and were eight times more likely than two-parent families to have 'very restricted' (level 1) living standard scores.

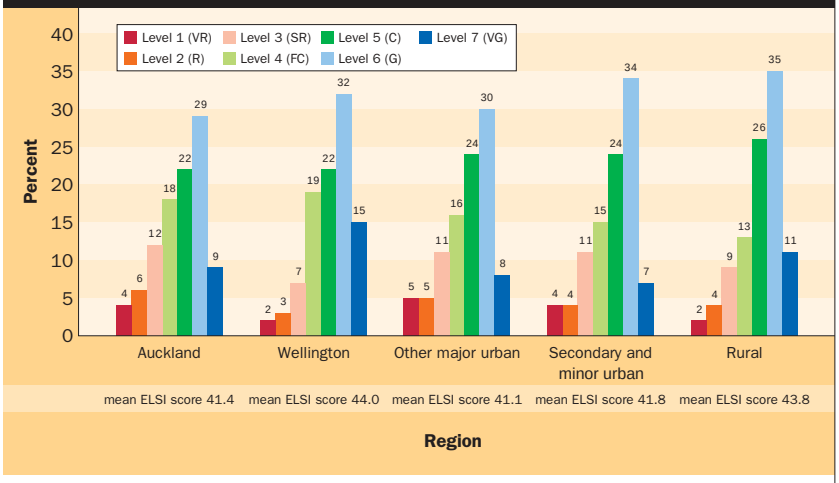
Figure 3.9 Proportion of population in each economic family type experiencing lower living standards (ELSI levels 1-3) 2000



Region

As geographical areas differ in levels of employment, incomes and other socio-economic indicators, corresponding differences in living standards could be expected. However, only a very broad geographic breakdown is possible for the current data, which limits the extent to which that issue can be examined (see Figure 3.10). The Auckland and Wellington areas presented here are based on the Auckland and Wellington Regional Council areas.

Figure 3.10 Living standards distribution by region 2000



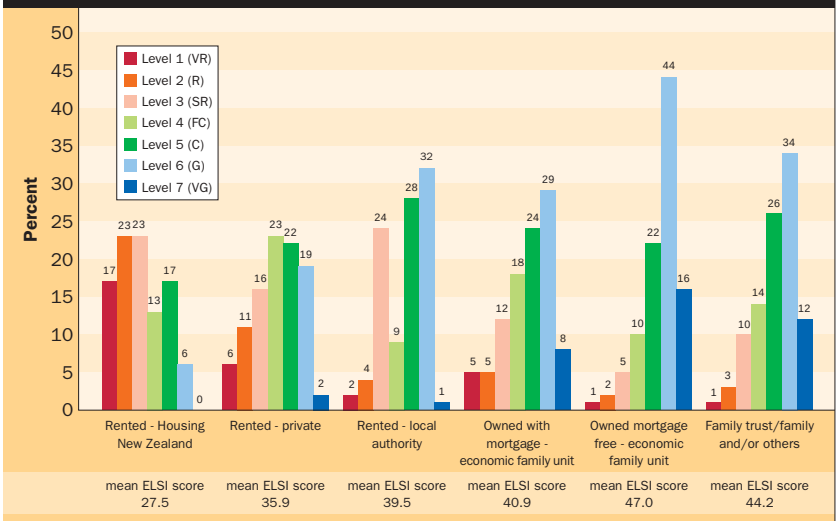
Differences are small between the broad geographic categories available. The results are consistent with data from other sources (e.g. 2001 Population Census) showing that Wellingtonians have a relatively high socio-economic profile. Although data from the Population Census and other sources show that there are rural areas of major socio-economic disadvantage, rural people do not have depressed living standards overall[29].

29 A tool used for understanding the geographical context of deprivation is the New Zealand Deprivation Index (NZDep96) (Crampton et al, 2000). It would have been interesting to examine the living standards results for NZDep96 deciles but data is not available for this purpose. It is therefore not possible to examine the living standards results in relation to the NZDep96. It is important to note, however, that the broad pattern of geographical deprivation portrayed by the NZDep96 is consistent with the regional variations in living standards portrayed by the ELSI. Of particular note here is the consistent finding of relatively good living standards (and low deprivation) in much of rural New Zealand.

Housing tenure

On the whole, homeowners have higher living standards than renters (see Figure 3.11).

Figure 3.11 Living standards distribution by housing tenure 2000



Lower than average proportions of those who own homes or own their homes as part of a family trust[30] have low living standard scores. Amongst home owners, those who own their homes mortgage free have higher average scores than those who own with a mortgage. Higher than average proportions of those who rent are at the lower living standards end of the scale. This is particularly the case for those who rent from Housing New Zealand (HNZ). The lower scores of HNZ tenants is primarily due to a selection bias, as HNZ tenancies have been targeted on the basis of need. The criteria for allocating HNZ rentals involves assessing the applicants' household circumstances and allocates according to level of need. Furthermore, HNZ tenants were subject to market-related rents policies at the time of the survey, which predates the introduction of 'income-related rents'. This may have compounded their propensity to have lower living standards (as a result of having relatively high housing cost outgoings to income). At the upper living standards end of the continuum, homeowners are over-represented while renters (in particular those who rent from HNZ) are under-represented.

30 This includes home is owned by family trust, family and/or others. This is distinguished from the owned - economic family unit category, where the home is owner occupied, i.e. the family unit residing in the home is the one that owns the home.

The only exception to this appears to be those who rent from local authorities. Local authority tenancies operate in ways which are quite different from HNZ tenancies. Different regions operate their own policies with regard to local authority tenancies. These tenancies are also targeted on the basis of social housing need and rentals on these tend to be very low and were lower than the HNZ market rentals in force at the time of the survey. Local authority tenants are primarily older New Zealanders who have low-cost housing that buffers them against lower living standards. These tenancies also tend to be long-term[31]. At the time of the survey, 72 percent of local authority rentals were occupied by persons aged 65 years and over. The majority of these were also single people. In comparison, 59 percent of HNZ tenancies are occupied by families with children.

Education

Results from the research on living standards of older people show that education is independently associated with living standards amongst that population. (That is to say, better education contributes to higher living standards independently of the contributions of income, assets, etc., which are themselves positively correlated with education)[32]. Generally speaking however, older people are less likely than working age people to have higher levels of formal education.

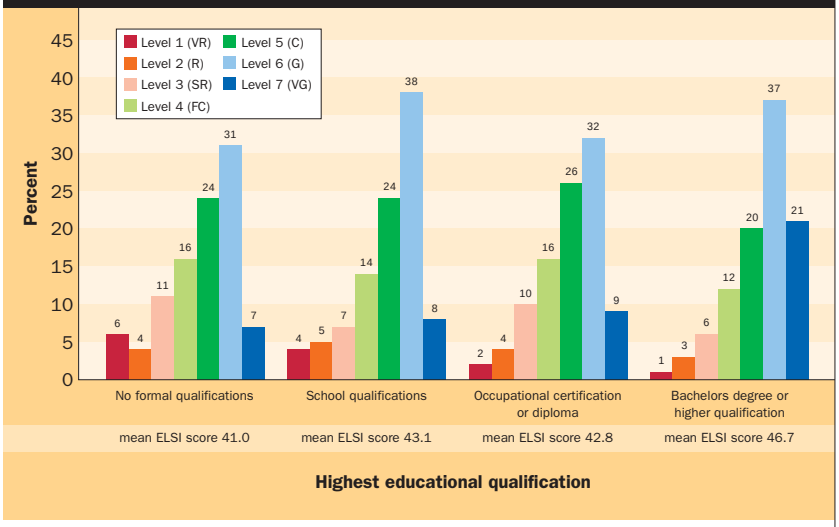
For the population as a whole, education is associated with living standard differences and there is a broad correspondence between educational level and living standard across the groups examined in the preceding analysis. For example, Māori and Pacific people, who have lower ELSI averages, have comparatively lower educational achievement with respectively 27 percent and 29 percent lacking any formal qualifications. Europeans, who have higher ELSI averages, have comparatively higher educational achievement, with only 14 percent lacking a formal qualification. Similarly, people in unskilled work ('elementary' occupations), who have lower ELSI averages, have comparatively lower educational achievement with 32 percent lacking a formal qualification. People in managerial occupations, who have higher ELSI averages, have higher educational achievement, with only 8 percent lacking a formal qualification. This pattern is the same for older people who have higher educational qualifications.

31 Historically a lot of the lending to allow Local Authorities to build housing was on the basis that Local Authorities provided housing to pensioners. In contrast, Housing New Zealand rentals since the 1970s, was opened up to Māori, Pacific people, sole-parent families, income-tested benefit recipients and other low income families. This resulted in a concentration of these groups in HNZ rentals. Consequently, local authorities have supplied housing to pensioners, while HNZ rentals have been targeted to families with children (Ferguson, 1994).

32 The research did not reveal the mechanism by which education independently affects living standards. It is possible that people with greater levels of education tend to lead better organised lives, or manage their income and assets more skilfully, and thus achieve better living standards than others with the same level of resources. However, such suggestions are merely speculative in the present state of knowledge.

Figure 3.12 shows the living standard distribution for each of four levels of educational qualification. Those with no formal qualifications are more likely to be at the lower end of the ELSI distribution, while those with bachelors degrees or higher qualifications are more likely to be at the upper end of the ELSI distribution. The high representation of those with no formal qualifications at the higher Level 6 category of living standard scores is partly a consequence of the favourable living standards distribution of older New Zealanders, who as noted, tend to have lower levels of formal education.

Figure 3.12 Living standards of population aged 18 years and over by highest qualification attained 2000



Standardising for age can control for the effect of older people predominantly found in the lower education group. Table 3.3 shows that the average living standard scores for those with no formal qualifications fall once standardised for age, while the average living standard scores for those with bachelors degrees or higher qualifications increase.

The effect is to strengthen the relationship between mean living standards and education. Before standardising for age, the ELSI means extend across a range of 5.7, while after standardisation they extend across a range of 8.4.

Table 3.3 Mean ELSI scores and mean ELSI scores standardised for age by highest educational qualifications of those aged 18 years and over (2000)

Highest educational qualification	Mean ELSI scores	Mean ELSI scores standardised for age*
No formal qualifications	41.0	39.2
School qualifications	43.1	43.0
Occupational certificate or diploma	42.8	43.1
Bachelors degrees or higher qualifications	46.7	47.6

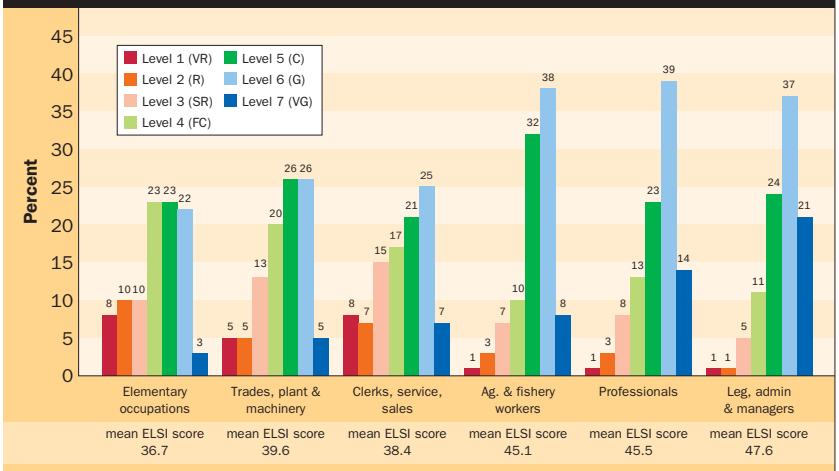
* The standardisation procedure applies the age distribution of the total adult population to each qualification group.

Occupation

Figure 3.13 below shows the ELSI distribution for various major occupational groups based on the New Zealand Standard Classification of Occupations (NZSCO-90). The occupational groups are ranked from highest to lowest on the basis of skill requirement to perform a job. It has been common practice to rank the 'agriculture and fisheries' occupational sector just above 'trade, plant and machinery workers' when presenting this type of data (Statistics New Zealand, 1998). However, the 'agriculture and fisheries' group is very mixed, containing farmers and agricultural contractors with substantial incomes along with farm labourers and unskilled agricultural workers. In this analysis, the 'agricultural group' has been placed above 'clerical, service and sales workers'. This is because their overall living standard resembles those of the 'higher-skilled' occupations rather than those of the 'lower-skilled' occupations.

Among the employed population aged 18-64 years, higher than average proportions of those in 'elementary occupations' (i.e. 'lower-skilled' occupations) are at the lower end of the ELSI distribution while higher than average proportions of those in 'professional' occupations are at the higher end of the ELSI distribution.

Figure 3.13 Living standards distribution of employed population aged 18-64 years by major occupational groups 2000



Those in 'elementary occupations' and those in 'clerical, service and sales occupations' had the highest proportions at the lower end of the ELSI continuum (levels 1 to 3), (the proportions being 28 percent and 30 percent respectively). In terms of the upper (levels 6 to 7) end of the scale, 58 percent of 'legislators, administrators and managers' and 53 percent of those in 'professional' occupations were located here. Of note here is the very high proportion of 'agricultural and fisheries workers' with 'good' or 'very good' living standards (46 percent). This finding suggests that the New Zealand Socio-economic index (NZSEI)[33] underestimates the socio-economic status of this occupational sector as a whole. This underestimation is due to the inability to capture the living standards of this group on the basis of just their levels of education and taxable income. In the case of farmers, measures of land holding or asset wealth are better able to estimate their socio-economic status (Davis et al, 1997). The results based on the ELSI confirm that, on average, this sector has relatively favourable living standards.

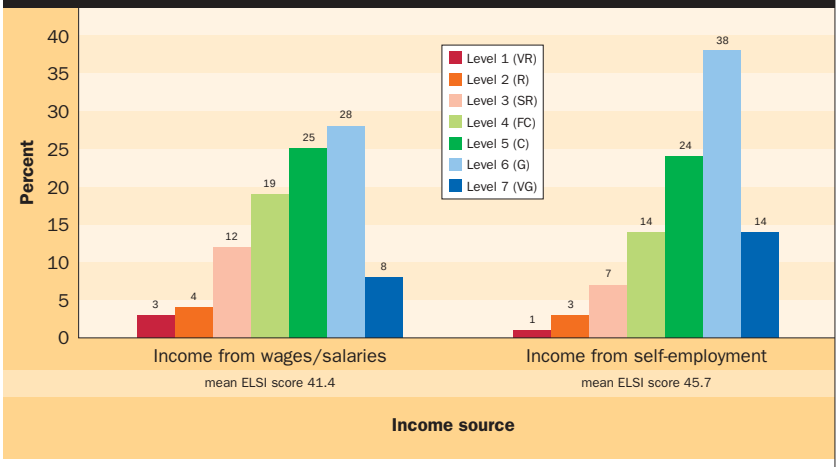
33 The NZSEI consists of an index of occupations classified according to the New Zealand Standard Classification of Occupations 1990 (NZSCO90). The NZSCO90 is a skills based classification, grouping together occupations with similar skills requirements. The NZSEI is modelled on the International Socioeconomic Index (ISEI) devised by Ganzeboom et al (1992; 1996). The Index was developed using a statistical formulation of the relationship between education, occupation and income, in which occupation acts as a latent, intermediate variable converting 'human capital' or education, into material rewards, or income (Davis et al, 1997). The problem in relation to agricultural and fisheries workers is that they are a very mixed group and are therefore difficult to rank on the basis of skill requirements. Furthermore, in some cases skill requirements may be relatively homogeneous but some people can combine that skill with an asset (e.g. a farm) and generate a much higher standard of living.

The living standards of the self-employed

Some self-employed people may also be better off than is suggested by income data alone. This is because some self-employed people are able to boost their personal consumption (and thus their living standards) at the expense of their declared income. In contrast to income-based measures of living standards, the ELSI provides a more direct method of assessing the living standards of the self-employed. Amongst the population in receipt of market income, information was available on whether they received income from self-employment earnings or just wages and salaries.

Figure 3.14 shows that the population in receipt of self-employment income generally enjoy higher living standards, with a negligible proportion at the bottom (level 1) end of the ELSI scale. They were almost twice as likely as those in receipt of wages and salaries to be at the top (level 7) end of the ELSI scale[34].

Figure 3.14 Living standards of population in receipt of market income by receipt of self-employment income or wages and salaries 2000



34 The mean equivalent disposable income of those in receipt of self-employment income was $26,500 and was higher than the mean equivalent disposable income of those in receipt of just wages and salaries ($22,800). The 2000 Living Standards Survey data permits a greater examination of the relationship between reported income and the living standards of the self-employed. This is a possible topic for future work.

Income source

The living standards of the population in receipt of income-tested benefits in comparison to the rest of the population is of substantial interest to policy makers, planners and the public at large. The concerns raised here relate to questions such as whether the benefit system provides enough assistance to mitigate hardship on the one hand but not so much as to discourage self-reliance on the other hand.

The following analysis divides the population into three mutually exclusive groups:

- those in economic family units where there was receipt of an income-tested benefit (core benefit) in the last 12 months and no one was in full-time employment at the time of the survey;
- those in economic family units where there was receipt of New Zealand Superannuation;[35]
- those in economic family units in neither of the above two categories and therefore receiving income primarily from market sources.

The population in family units where there was receipt of an income-tested benefit was considerably worse off on the Economic Living Standard Index (ELSI) than both the populations receiving New Zealand Superannuation and those receiving market income. In 2000, those in receipt of an income-tested benefit were at least four times more likely than the national average to be at the lowest level of the ELSI scale (level 1). They were at least eight times more likely to be there than those receiving market income or New Zealand Superannuation (see Figure 3.15).

In contrast, those receiving market incomes were seven times more likely than those receiving an income-tested benefit to have higher (levels 6 to 7) living standard scores. Those in family units in receipt of New Zealand Superannuation were less likely to have lower (levels 1 to 3) living standard scores than other groups. At the other end of the continuum, almost two-thirds (63 percent) of those in receipt of New Zealand Superannuation had 'good' or 'very good' living standard scores.

35 Some of the population here may have been in receipt of an income-tested benefit at some time during the past 12 months, but were employed full-time at the time of the survey. Similarly, some NZS recipients may have received an income-tested benefit before qualifying for NZS during the year. Some in the income-tested benefits group may also have received income from market sources during the year but were not in fulltime employment at the time of the survey.

While the majority of income-tested beneficiaries had ELSI scores that placed them in the lower living standards end of the scale, 6 percent had living standards scores that placed them at the level 6-7 end of the scale. There are probably several reasons why the living standards of some income-tested benefit recipients are better than others. Possible reasons include age at entry onto benefits, length of time spent on benefit, the levels of accommodation costs faced, involvement in part-time work and a variety of other personal circumstances.

Figure 3.15 Living standards distribution by income source 2000

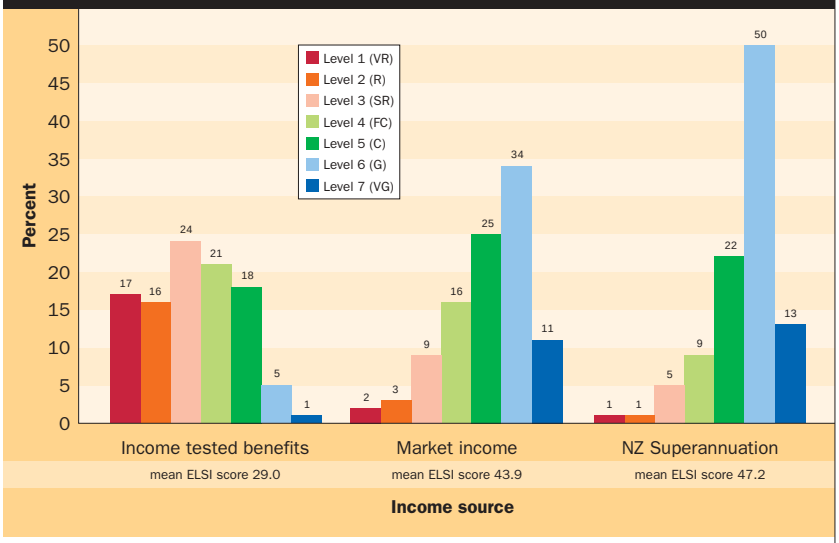
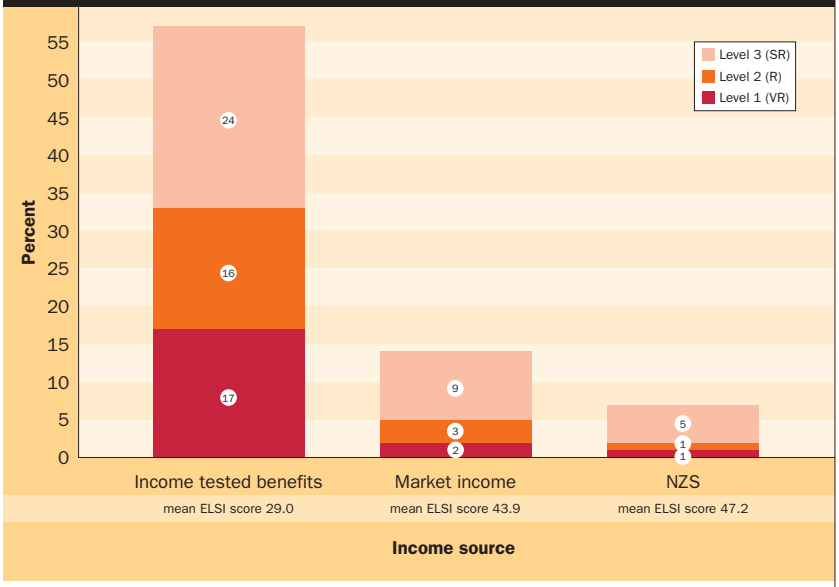


Figure 3.16 shows that income-tested beneficiaries were four times more likely than those receiving market incomes to have lower living standards in the levels 1 to 3 range. In total, 57 percent of those in receipt of income-tested benefits had scores placing them in one of the three categories from 'somewhat restricted' to 'very restricted'. This compares with 14 percent of those receiving market incomes and 7 percent of those in receipt of New Zealand Superannuation. Furthermore, income-tested beneficiaries were at least eight times more likely than any other group to have scores placing them in the 'very restricted' category of the scale.

Figure 3.16 Proportion of population in each income source category experiencing lower living standards (ELSI levels 1-3) 2000



Part 3: Living standards by financial characteristics of the population

In the study of the living standards of older New Zealanders, one of the major objectives was to explain variations in living standards. Data was collected on a large number of potentially explanatory factors. The analysis indicated that the current living standards of older people reflected the combined effect of many factors, some relating to current circumstances (e.g. current income, accommodation costs) and some relating to life history (e.g. death of a partner in the preceding decade, marital separation involving property settlement, business failure, victim of crime).

Most of those variables were not measured for people of working age, precluding such an explanatory analysis for the general population. (The collection of such data is one of the main objectives of the next stage of the Ministry of Social Development's living standards research programme.) However, three of the variables that emerged as significant in the older people's study, can be examined here. They are income, asset position and accommodation costs.

Income

It is a commonplace idea that living standard is influenced by income. The report on the living standards of older New Zealanders, which included an analysis of the factors affecting living standards, consistent with previous research, concluded that income is one of the primary determinants of the living standards of older people. It is relevant, therefore, to examine the association between income and living standards across the rest of the New Zealand population.

The income variable used in the following analysis ranks the population in economic family units by their equivalent disposable incomes. The equivalency procedure is used to account for variations in family size and composition. The income of the economic family unit has been adjusted using the 1988 Revised Jensen Equivalence Scale (RJS)[36].

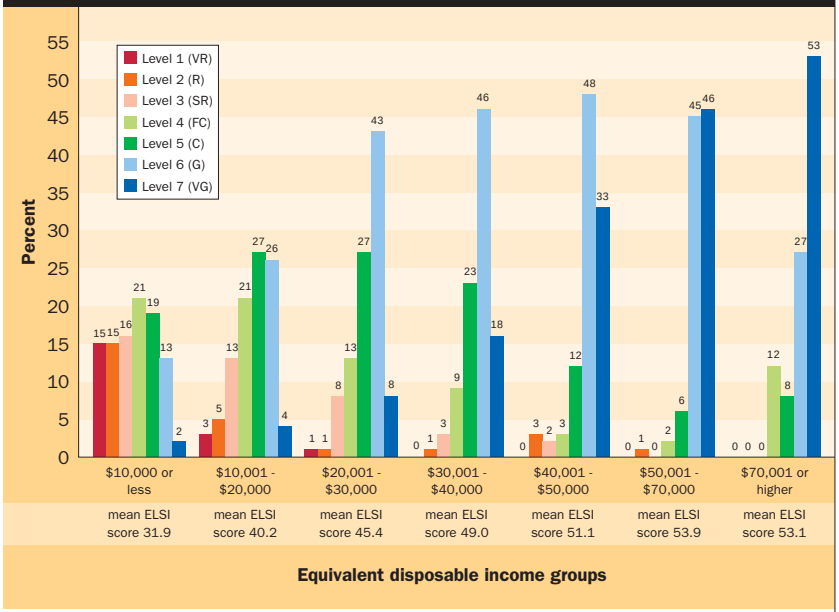
People living in economic family units with an equivalent disposable income less than $10,000 have a higher than average representation at the very low (level 1) end of the living standards scale. Nobody with an equivalent disposable income above $30,000 is at the bottom end of this scale. Those with incomes over $30,000 have a higher than

36 The RJS is a set of ratios (calculated to allow for economies of scale and the differential consumption by adults and children), that specify the relative incomes assumed to be required for households/families of different size and composition to attain a similar material standard of living. The RJS adjusts the disposable incomes of the economic family unit to a per capita (single 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 (Mowbray, 2001).

average representation at the top (level 7) end of the ELSI scale (see Figure 3.17). Caution must be exercised in interpreting the results for the top income group because it is based on a small effective sample size (19).

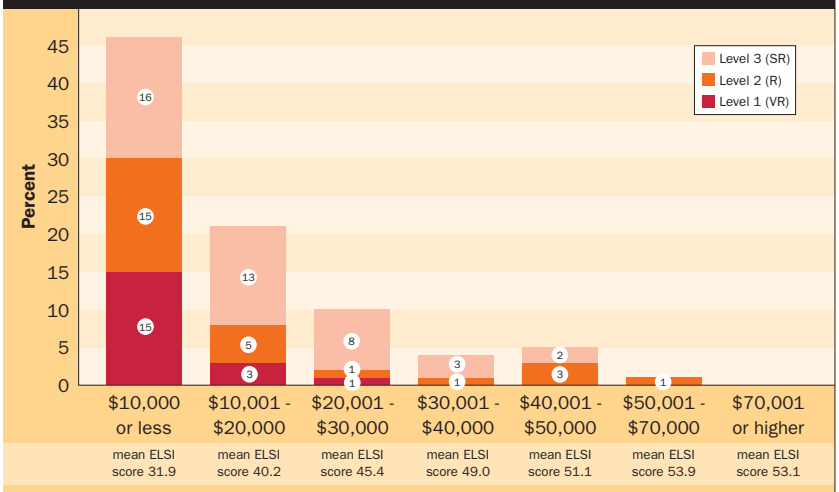
While the risk of lower living standards increases with reducing income, some of the population with low incomes have favourable living standard scores. In 2000, up to 15 percent of the population with equivalent disposable incomes of $10,000 or less per annum had living standard scores in the levels 6 to 7 range. A larger proportion (40 percent) had living standard scores in the comfortable (levels 4 to 5) range. Just over half (53 percent) of those with incomes of $10,000 or less, who also had ELSI scores which placed them in levels 6-7, were young adults aged 18-24 years. The explanations for this incongruent position of young adults probably lie in the degree to which their living standards are subsidised by parents or guardians (refer to earlier discussion on the living standards of young adults).

Figure 3.17 Living standards of total population by equivalent disposable income of the economic family unit 2000



In 2000, 46 percent of people in economic family units with equivalent disposable incomes of less than $10,000 per annum have scores in the levels 1 to 3 range. Twenty-one percent of those with incomes between $10,000 to $20,000 had scores in this range. This proportion drops sharply to 10 percent for incomes between $20,000 to $30,000. Above an equivalent disposable income of $30,000, a negligible proportion of the population are in any of the lower three ELSI categories (see Figure 3.18). Those in the bottom income category were five times more likely than any other income group to have living standard scores that placed them in the 'very restricted' category of the scale.

Figure 3.18 Proportion in each income group experiencing lower living standards (ELSI levels 1-3) 2000



Asset Position [37]

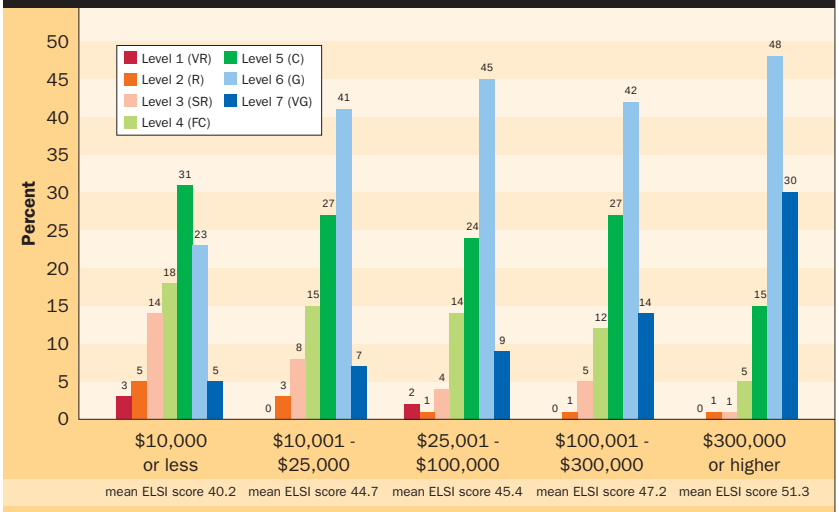
Assets can influence living standard indirectly by their effects on levels of income, as savings and investments can raise living standards by being progressively run down (spent) to permit a higher level of consumption than would otherwise have occurred. There is also likely to be a direct effect in which assets act as a buffer or cushion against unexpected economic shocks (Fergusson et al, 2001). For the population as a whole, there is a clear association between the value of the assets and living standards. The pattern of differences between sub-groups in their levels of assets roughly mirrors the pattern of living standard differences. For example, Māori (who have below-average living standard scores) are less likely to have substantial assets (above $25,000) than the population as a whole, the proportions being respectively 44 percent and 53 percent. In contrast, those in 'legislative, administrative and managerial' occupations (who have above average living standard scores) are more likely to have substantial assets (above $25,000) than the population as a whole, the proportions being 72 percent and 53 percent respectively.

The analysis presented here is based on questions asked of the financial value of the assets that the economic family unit has, excluding the value of the owner-occupied dwelling[38]. The overall pattern shows that the higher the value of the assets, the higher the living standard scores. This is demonstrated by the steady increase in average living standard scores from 40.2 for those with assets in the $10,000 or less range, to 51.3 for those with assets in the over $300,000 range (see Figure 3.19). While assets are associated with living standards, it is not necessary to have higher levels of assets to avoid lower living standards. In 2000, 22 percent of those with assets of $10,000 or less had scores that placed them in levels 1-3. Twenty eight percent of people with the same level of assets had 'good' or 'very good' living standard scores. For the population as a whole, a third, or 34 percent, had assets less than $10,000 and a further 13 percent had assets valued between $10,000 and $25,000. One in five New Zealanders had assets in the $25,000-$100,000 range while a further 20 percent had more substantial assets in the $100,000-$300,000 range. Only 13 percent of New Zealanders had assets valued at $300,000 or more.

37 A substantial group of people (31 percent) did not specify a response for this variable and it is likely that non-response is not randomly distributed across the ELSI categories. Asset position is also not adjusted for family size.

38 These assets include: money deposited with banks e.g. savings, cheque accounts, term deposits; other investments, e.g. shares, unit trusts, bonus bonds, debentures, credit unions; life insurance policies, e.g. whole life endowment investment linked policies; money or investments in a family trust; money owed to respondent; residential property, e.g. holiday home, rented-out residential property, land etc.; investment in commercial property; business ownership or investment, e.g. in farming, forestry or any other business; any other assets, e.g. art, antiques, collectibles.

Figure 3.19 Living standards of the population by asset position 2000



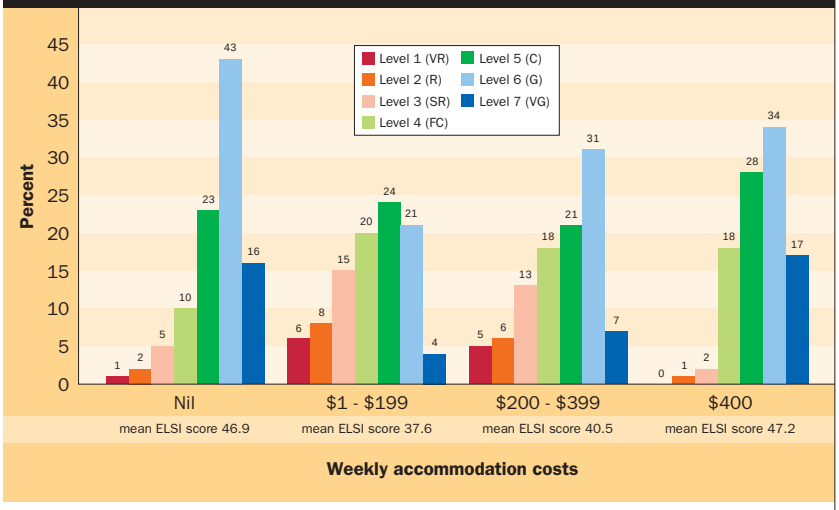
Accommodation costs

In the study on the living standards of older New Zealanders, accommodation costs were found to be a key determinant of living standards. Older New Zealanders who had high accommodation costs were substantially worse off than those who had low accommodation costs. As a relatively high proportion of older New Zealanders owned their own homes without a mortgage, those with high accommodation costs were mainly renters (Fergusson et al, 2001).

For the total population, this study has identified a more complex relationship between living standards and accommodation costs. Accommodation costs referred to here include weekly mortgage payments, rent, board and body corporate costs. This measure will slightly underestimate accommodation costs of those who own their own homes as it excludes rates[39]. Those with nil accommodation costs had relatively higher living standards. This group largely comprises mortgage-free home owners (many of whom are older New Zealanders). Those with very high housing costs also have relatively higher living standard scores, which are likely to be a reflection of relatively high incomes. By contrast, those with accommodation costs in the middle of the range have higher proportions distributed towards the lower end of the ELSI scale (see Figure 3.20).

39 Accommodation costs are not adjusted for family size.

Figure 3.20 Living standards of the population by weekly accommodation costs 2000



The mean ELSI scores given in Figure 3.20 clearly show the 'U-shaped' relationship between accommodation costs and living standards. The mean shows a drop from 46.9 to 37.6 across the first two categories (i.e. nil accommodation costs and costs in the range of $1-$199). However, the mean rises across the next two categories, from to 40.5 and then to 47.2. This reflects the tendency of those with very high accommodation costs to also have high incomes, enabling them to have higher living standards, despite their high housing costs. The category with the lowest mean ELSI score is the second one, comprising people with accommodation costs in the range of $1-$199. Many of these people have low incomes, and are capable of funding only a modest level of consumption once their accommodation costs are met. The impact of having high accommodation costs relative to income on living standard outcomes, for those on low incomes, is explored further in Chapter 7.

Overview of results on financial variables

The preceding results show that living standards do seem to be associated with each of the financial variables examined, that is to say, to income, assets and housing costs. These three variables are themselves related. High income can generally be expected to lead to the accumulation of assets, and also to be associated with relatively high accommodation costs (at least for people who are not mortgage-free homeowners). It can therefore be asked whether the relationships of these variables to living standards are substantially all reflections of a single pattern of association, largely implied by the relationship of income to living standards[40].

The most direct way to examine this question is to calculate how much of the variation in living standards is associated with income by itself, and then to calculate how much of the variation is associated with the three factors considered together. The usual technique for doing this is statistical regression analysis. The result of an exploratory regression analysis suggests that income alone is associated with 20 percent of the living standards variation, while the three factors, taken together, are associated with 35 percent of the variation. This is a substantial increase in the amount of living standard variation accounted for. These results indicate that living standards are statistically associated with assets and housing costs, independently of income. Both types of information (i.e. assets and accommodation costs) contribute to the increase in the variation accounted for. Taken together, the results show that that risk of lower living standards is separately related to all three factors, and that the ability to assess the risk is lessened if any one of the types of information is dispensed with[41].

The above results show a complex web of interrelationships among income, assets and accommodation costs. The results cannot validly be interpreted as measuring how strongly those variables, individually, affect living standard. That is because they may, to varying degrees, be 'standing in' for unmeasured variables whose influence may be the actual source of some of the observed statistical association, and because standardisation for other variables may alter the pattern of association. However, the results in this section, taken together, point strongly to the general conclusion that observed variations in living standards arise from a range of influences. If this is so, it means that a satisfactory

40 Some economists use a notion of "full income" which includes not only money received from earnings and investments, but also takes account of such things as home-grown food, government subsidisation of health and education services, the reduction in direct housing costs that commonly arise from mortgage-free home ownership etc. This broader notion of income could be expected to correlate more highly with living standards (as measured by ELSI) than income as commonly measured.

41 The relationship between income and living standards has been estimated from the correlation between ELSI and the logarithm of the economic family unit's equivalised disposable income. Equivalised income has been subjected to a logarithmic transformation because the curve giving the relationship of ELSI to equivalised income rises consistently with income but has a reducing slope; as a consequence, the relationship between ELSI and log(equivalised income) is approximately linear. The correlation is 0.45, with the square of this value (i.e. 0.20), indicating the proportion of the variation in ELSI that is common to the two variables. To introduce the effect of accommodation cost, a new variable, (income - accommodation cost), was created. This was equivalised and then subjected to a logarithmic transformation. That variable had a significantly higher correlation with ELSI than log (equivalised income). The effect of assets was measured using a simple count of the number of types of assets that were owned. This is a crude way of quantifying assets, but was used in preference to the aggregate value of the assets because the latter variable had a higher frequency of missing data. The multiple regression of ELSI against these variables gave an adjusted R^2 of 0.35.

explanation of the variations requires systematic analysis using a set of potential explanatory factors that is as comprehensive as possible. This will be a key focus of the next phase of the Ministry of Social Development's living standards research programme.

Summary

This chapter has presented results on the living standard distribution for the population as a whole and for groups defined by a number of standard social and demographic breakdowns (age, gender, ethnicity, occupation etc). The overall ELSI distribution shows a favourable distribution, with 80 percent of the population in the range of 'fairly comfortable' living standards to 'very good' living standards on the scale. One person in five, however, can be described as having lower living standards on the scale, in the range of 'somewhat restricted' to 'very restricted'.

There is considerable variation in living standards across the groups. Above-average living standard scores are found amongst:

- those aged 45 years and over (in particular those aged 65 years and over);
- Europeans;
- those in economic family units without children (i.e. single-person or couple-only economic family units);
- those who live in the Wellington region or in rural New Zealand;
- those in legislative, administrative, managerial, professional or agricultural occupations;
- those with income from self-employment;
- those in receipt of New Zealand Superannuation;
- working age people in receipt of market income;
- those who own their homes (especially those who own as part of a family trust).

In contrast, below-average living standard scores were found amongst:

- children (especially those in sole-parent families);
- Māori and Pacific people;
- those in clerical, service, sales, trade or elementary occupations;
- those receiving income-tested benefits.

The results of this analysis show that there is a strong relationship between living standards and financial position (as determined by variables such as income, assets and accommodation costs). It is beyond the scope of the present study to try to explain the observed variation in living standards, but the data presented tends to suggest that the variation is the combined result of a set of factors that are interconnected. Income is prominent among these factors but, of itself, may account for only part of the variation. This is dramatically highlighted by the position of NZ Superannuitants, most of whom have only modest incomes but 'comfortable' or 'good' living standards.

CHAPTER FOUR

The living standards of the Māori population[42]

Introduction

Māori people occupy a unique place in New Zealand society. As tangata whenua, a culturally distinct minority and a population undergoing considerable change. The social and economic position of Māori is the focus of much public discussion and debate. It is also the focus of policy initiatives from government and the Māori community itself. The Māori population have been affected by change, both positively and negatively in recent years. Economic restructuring, welfare reforms, treaty settlements, economic development initiatives and bicultural policies have all had a significant effect on the demographic, social and economic situation of Māori people (Statistics New Zealand, 1998a). At the time of the 2001 Population Census, 15 percent of the New Zealand population identified Māori as one of their ethnic affiliations. This proportion is expected to increase to 20 percent over the next 40 years (Social Policy Agency, 1999). The Māori population is younger and is growing more rapidly than the non-Māori population even though its birth rate has declined significantly over the last few decades. Trends in family structures show more Māori are living in two parent and one-parent families, although the traditional influence of the whānau or extended family is apparent in the relatively higher proportions living in larger households and with elderly relatives. Changes in the economic climate over the past 15 years have had a major impact on the Māori population. This is shown in higher rates of unemployment and growing differences in income between Māori and non-Māori. However, over the past 20 years Māori have moved into jobs similar to those of non-Māori. More Māori are now involved at all levels of education - from preschool to tertiary levels (Statistics New Zealand, 1998a).

A key finding in the study of the living standards of older New Zealanders was that older Māori as a group experience greater material and social disadvantage than non-Māori. Older Māori had lower living standards and most of this difference was explained by other variables in the analysis (such as income, savings and accommodation costs) that correlated with both ethnicity and living standards. However, even after other variables in the analysis had been taken into account, a part of the difference for Māori remained unexplained (Fergusson et al, 2001).

This chapter will examine the living standards of Māori of all ages and look at how their living standards vary by a variety of social, economic,

42 There were 579 Māori respondents in the Survey. There were also 700 Māori children in the economic family units of the Māori respondents.

demographic and Māori cultural identity characteristics. Due to the smaller sample size, most of the analysis presented here will be based on an aggregated distribution of ELSI and many variables will be presented in a more aggregated form. The aggregated distribution of ELSI will focus on the four levels of 'restricted' i.e. (levels 1 and 2 combined), 'somewhat restricted' (level 3), 'comfortable' i.e. (levels 4 and 5 combined) and 'good' living standards i.e. (levels 6 and 7 combined). Beneath most of the graphs presented in this chapter, a table of average ELSI scores across the factor examined is provided for the Māori population and the total New Zealand population, to enable comparisons to be made between the living standards of Māori and the living standards of the general population.

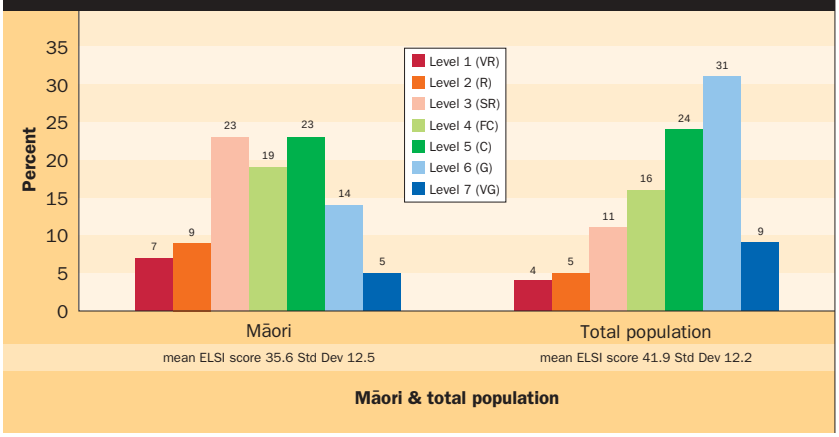
The analysis presented here is based on individuals who identified Māori as one of their ethnic groups in the survey[43].

Overall distribution

The ethnicity analysis provided in Chapter 3 showed that Māori have lower living standards than the population as a whole and that substantial disparities remain when the average living standard score for Māori is adjusted to take into account their youthful age structure[44].

Figure 4.1 shows that higher proportions of Māori are in the range of the ELSI scale from 'very restricted' to 'fairly comfortable' with higher proportions of the total population in the range of the ELSI scale from 'comfortable' to 'very good' living standards.

Figure 4.1 Living standards distribution of the Māori population 2000



43 The analysis provided in this chapter is based on total population estimates. The ELSI scale score was derived based on information provided by the respondent on their economic family unit. Population estimates have been calculated using respondents weights to represent the adult population and child weights to represent the children in the respondent's economic family unit. Refer to chapter 2 for further information on unit of analysis and the ELSI scale.
Ethnicity is based on total responses to the ethnicity question. For example, if any adult respondent or child of the respondent had Māori specified as one of their ethnicities, they are counted as part of the Māori ethnic group.

44 From a Treaty of Waitangi perspective, there is interest in comparing Māori with non-Māori. The non-Māori distribution is broadly similar to the total population distribution shown in Figure 4.1 (but has a slightly higher mean for non-Maori 42.9 compared with 41.9 for the total population). For the non- Māori population, the proportions at the seven ELSI levels (1-7) are, respectively, 3 percent, 4 percent, 9 percent, 15 percent, 24 percent, 34 percent, and 10 percent.

Variations in Māori living standards across demographic and social groups [45]

For Māori - as for the total population - living standards differ according to age, gender, region and living circumstances. The living standards of Māori across these variables however, do not always mirror the pattern of results found amongst the total population.

Age

In contrast with the overall population, living standards for Māori do not systematically increase with age after the age of 35 years. Māori children have living standard scores that place a far greater proportion of them at the lower living standards end of the scale than is the case for all children. The proportion of the Māori population with 'restricted' living standards falls until the age of 65 years and over, after which the proportion of older Māori with 'restricted' living standards increases. In contrast to the total population, older Māori aged 65 years and over do not have substantially better living standards than Māori as a whole as shown by the similar average ELSI score for Māori for all groups above 34 years (see Figure 4.2).

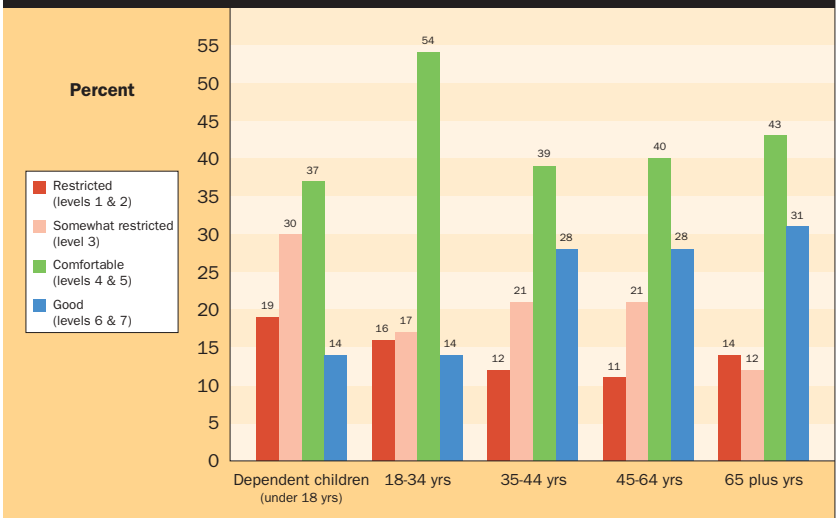
The fact that older Māori do not have better living standards than Māori in other age groups (as demonstrated by the ELSI scale), mirrors the results of the Material Well-being Scale reported in the study of the living standards of older Māori. That study identified three sets of factors that operated cumulatively to influence the living standards of older Māori. These were:

- economic factors including current income, current savings and investment, and current accommodation costs. These factors showed, predictably, that the mix of circumstances that combined to increase material disadvantage amongst Māori were low income; the absence of savings and investments, and high accommodation costs;
- exposure to recent economic stresses to meet unexpected bills or to economic problems such as redundancy, marriage breakdown etc. in the decade prior to retirement. These results highlight the fact that while current economic circumstances play an important role in determining the living standards of older Māori, the patterns can also be disrupted by unexpected shocks occurring both in the past and more recently;

45 As stated earlier, the analysis for the rest of this chapter will focus on the four levels of 'restricted' i.e. (levels 1 and 2 combined), 'somewhat restricted' (level 3), 'comfortable' i.e. (levels 4 and 5 combined) and 'good' living standards i.e. (levels 6 and 7 combined).

- number of children raised - the findings of the role of economic factors and economic stresses for Māori were very similar to the findings for non-Māori suggesting that in both populations a similar set of factors determined levels of affluence and living standards. However, for the Māori population, a further factor was identified in terms of the number of children the respondent(s) had raised. Many older Māori reported raising many children, and the study clearly suggests that raising many children over their lifetime led to an economic disadvantage that carried over into older age. This factor did not appear to apply to older non-Māori, as non-Māori tended to raise fewer children. These results suggest that culturally determined differences in family structures and sizes acted in a way that placed older Māori at a material disadvantage (Cunningham et al, 2002). This phenomenon is explored further in this chapter in the discussion of cultural identity and living standards.

Figure 4.2 Living standards of Māori population by age 2000



	Dependent children (under 18 yrs)	18-34 yrs	35-44 yrs	45-64 yrs	65 plus yrs
Māori mean ELSI score	33.2	36.4	38.7	38.3	38.0
Total mean ELSI score	38.6	41.4	42.2	43.7	47.4

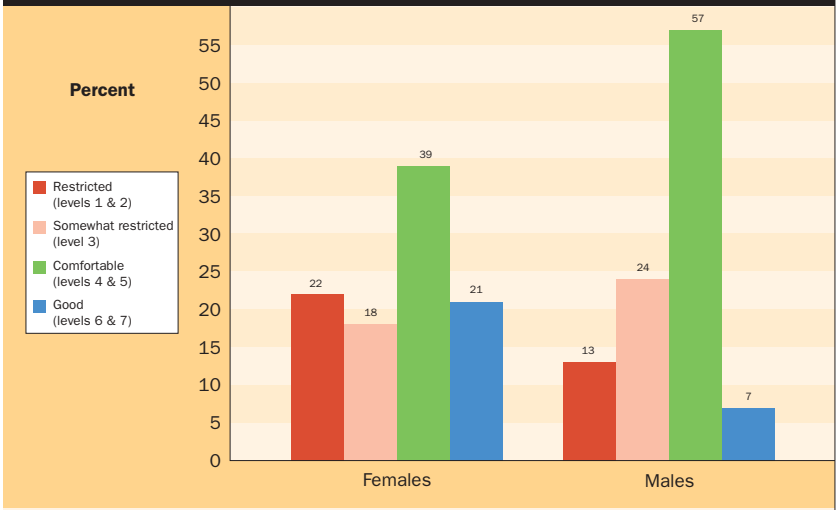
Gender

The average living standard scores of Māori females in single-person and sole-parent economic family units were lower overall than for Māori males in similar family units.

There was a substantially higher proportion of single or sole-parent Māori females with scores that placed them in the 'restricted' category, than was the case for Māori males. Against the overall pattern, there was also a slightly greater proportion of Māori females than Māori males in such families with scores that placed them in the 'good' living standards category (see Figure 4.3).

The differences by gender shown in Figure 4.3, are partly due to differences in type of economic family unit. Amongst single person economic family units, the average living standard scores for Māori men was 36.2, lower than that for Māori women at 41.1. Amongst sole-parent economic family units the average ELSI scores for Māori men was 29.0, higher than that for Māori women at 25.5.

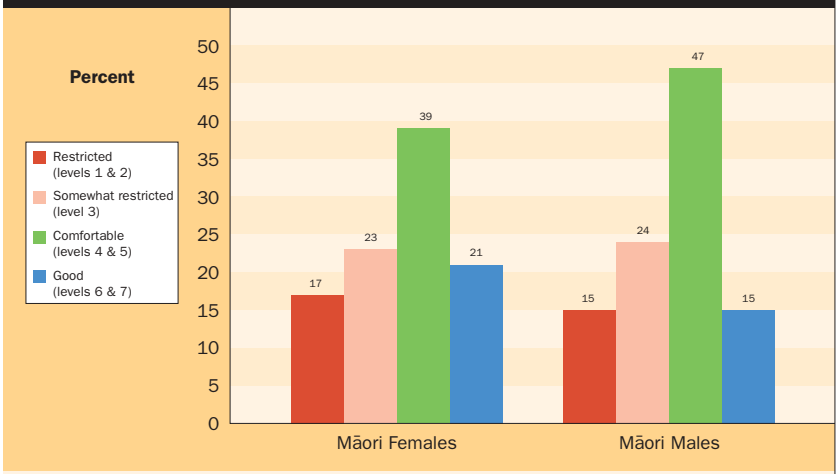
Figure 4.3 Distribution of living standards for Māori aged 18 years and over in single person and sole parent economic family units by gender 2000



	Females	Males
Māori mean ELSI score	34.7	35.4
Total mean ELSI score	39.8	42.2

This pattern is repeated for all Māori males and females. Like the gender distribution of living standards for the total population, slightly higher proportions of Māori females were at the lower living standards end of the continuum than Māori males. Unlike that of the total population however, there were also higher proportions of females at the upper end of the scale. The broader spread of living standard scores amongst Māori females is reflected in their slightly higher standard deviation for the mean (13.1 compared with 12.0 for males). The mean ELSI scores for Māori males and females were very similar (see Figure 4.4). Reasons for the higher proportions of Māori women at the upper end of the ELSI scale can only be speculated on and may include factors such as inter-marriage and accounts of Māori women achieving better outcomes than Māori men in some domains such as educational achievement (Ministry of Women's Affairs, 2001). This may be reflected in the broad spread of living standards of Māori women when compared with Māori men.

Figure 4.4 Living standards of Māori population by gender 2000



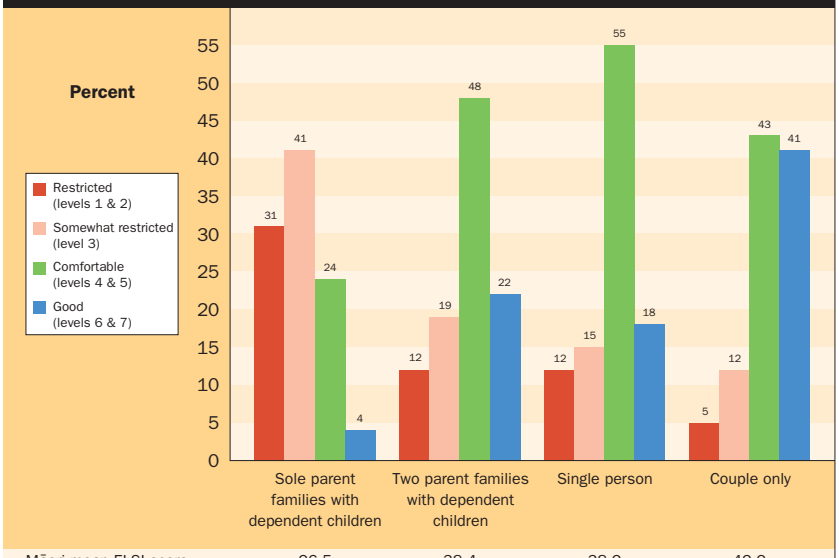
Māori mean ELSI score	35.6	35.7
Total mean ELSI score	41.6	42.3

Economic family unit type [46]

The general pattern of living standards results for Māori by family type is similar to that of the total population, with Māori in 'sole-parents families with dependent children' having the lowest average standard of living scores and Māori in 'couple only' families having the highest average standard of living scores.

For the same family types however, Māori are worse off in terms of their standard of living than the overall population. For example, over two-thirds (72 percent) of Māori in 'sole-parent families' have scores in the range 'somewhat restricted' to 'very restricted'. This compares with 53 percent of all people in 'sole-parent families' (see Figure 4.5).

Figure 4.5 Living standards of Māori population by economic family unit type 2000



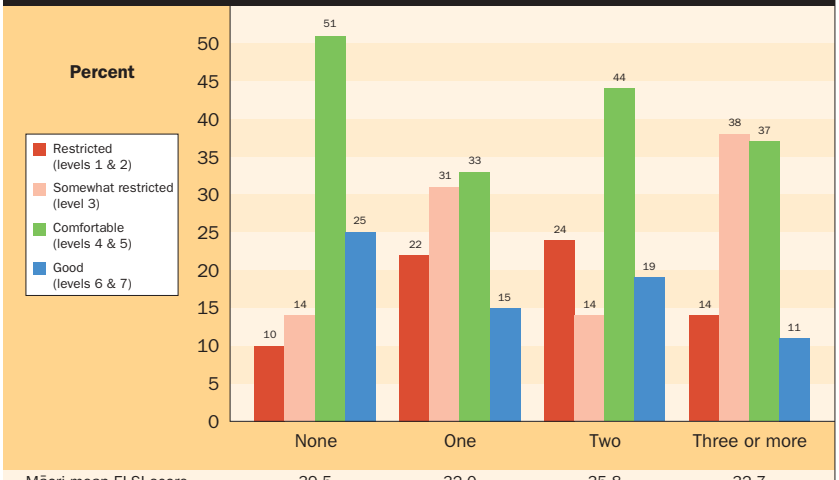
	Sole parent families with dependent children	Two parent families with dependent children	Single person	Couple only
Māori mean ELSI score	26.5	38.4	38.2	42.2
Total mean ELSI score	29.7	41.9	42.4	46.6

46 The analysis here is based on counts of people in the different economic family units. For example, where we refer to sole-parent families we mean the population in sole-parent families.

Number of dependent children [47]

As in the total population, Māori in economic family units with no dependent children had higher living standard scores than those with dependent children. However, average standard of living scores for Māori were lower (for a given number of dependent children) than for the total population. For example, amongst Māori in families with one dependent child, their average standard of living score was 32.0, while for all people in families with just one dependent child, the average standard of living score was 39.7 (see Figure 4.6).

Figure 4.6 Living standards of Māori population by number of dependent children 2000



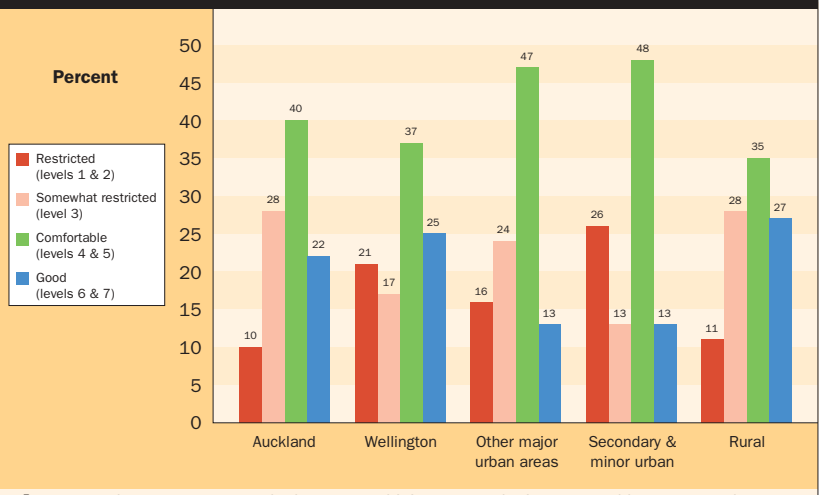
	None	One	Two	Three or more
Māori mean ELSI score	39.5	32.0	35.8	32.7
Total mean ELSI score	43.6	39.7	40.1	38.0

47 This is based on the under 65 population only.

Region

For the Māori population there was no observable pattern of variation in living standards by region. The overriding pattern, however, was the substantially lower living standards of Māori in all regions when compared with the national average (see Figure 4.7).

Figure 4.7 Living standards of Māori population by region 2000



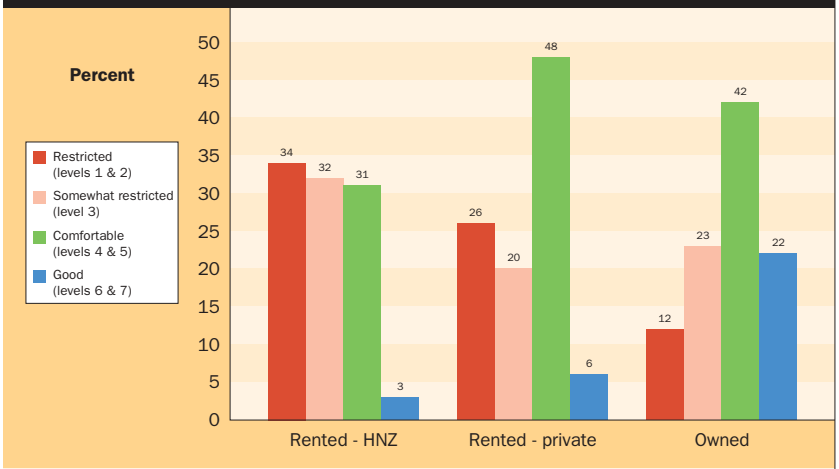
	Auckland	Wellington	Other major urban areas	Secondary & minor urban	Rural
Māori mean ELSI score	37.3	36.8	34.6	33.5	37.1
Total mean ELSI score	41.4	44.0	41.1	41.8	43.8

Housing tenure

The tenure information provided here aggregates those who rent from local authorities into the rented - private category as less than 1 percent of Māori rent from local authorities[48]. Those who own their own homes (with or without a mortgage) or own as part of a family trust are also aggregated into the owned category.

Overall results show that Māori who rent from Housing New Zealand have the lowest average living standard scores and the highest concentration in the 'restricted' category. They are followed by those who rent privately then by those who own their homes, who have the highest average scores (see Figure 4.8). Amongst Māori who owned their own homes however, average living standards were lower than for the total home owning population. Māori in HNZ rentals have similar average living standards to the total population in HNZ rentals, that is consistent with selection on the basis of need for HNZ rental accommodation.

Figure 4.8 Living standards of Māori population by housing tenure 2000



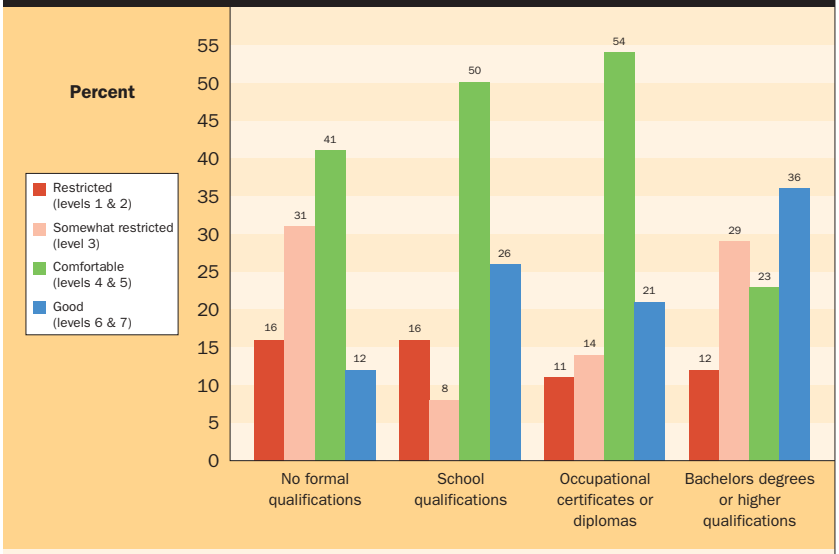
	Rented - HNZ	Rented - private	Owned
Māori mean ELSI score	27.8	32.0	37.1
Total mean ELSI score	27.5	36.0	43.1

48 Local authority rentals have been occupied primarily by older European New Zealanders. In 2000, 67 percent of local authority rentals were occupied by Europeans aged 65 years and over. The criteria for allocating HNZ rentals involves assessing the applicants' household circumstances and allocates according to level of need. By the 1970s, the opening up of state housing to Māori, Pacific people, sole-parent families and other low income families produced a concentration of these groups in state housing. Consequently, local authorities provided housing to pensioners while HNZ provided housing to families with children (Ferguson, 1994). The younger age structure of the Māori population and the need for low income family housing has meant that this population does not feature greatly amongst those in local authority rentals.

Education

As in the total population, average ELSI scores for Māori with no formal qualifications are appreciably lower than those for Māori with formal qualifications. Māori with school qualifications or occupational certificates and diplomas have similar average ELSI scores. This pattern is also consistent with that of the total population. Where Māori differ from the total population is that the average ELSI scores for Māori with bachelors degrees or higher qualifications is no different from those with other formal qualifications (see Figure 4.9). However, caution must be exercised in interpreting this particular average ELSI score as it is based on a very small effective sample size (24), giving rise to a large confidence interval.

Figure 4.9 Living standards of Māori aged 18 years and over by highest educational qualification 2000



Māori mean ELSI score	32.7	39.0	39.0	39.5
Total mean ELSI score	41.0	43.1	42.8	46.7

Age structure differences between Māori and the general population contributed very little to the difference in average ELSI scores by qualification level between the two populations (see Table 4.1).

Table 4.1 Māori population aged 18 years and over by highest educational qualification Mean ELSI scores and mean ELSI scores standardised for age (2000)

	Mean ELSI scores	Mean ELSI scores standardised for age*
No formal qualifications	32.7	32.9
School qualifications	39.0	41.6
Occupational certificates and diplomas	39.0	39.5
Bachelors degrees or higher qualifications	39.5	42.2

* The age standardisation applies the age distribution of the total population aged 18 years and over to the mean ELSI scores of the Māori population in each age and qualification group.

Cultural identity

The older Māori study of living standards used a cultural identity index in order to establish the degree of Māori cultural identity that older Māori had and to test whether there was any relationship between degree of cultural identity and living standards. This measure of cultural identity was developed by the Te Hoe Nuku Roa Research Unit at Massey University. (For further information on the background to this index, refer to *Ngā Āhuatanga Noho o te Hunga Pakeke Māori - Living Standards of Older Māori* (Cunningham et al, 2002)). The cultural identity index was based on a series of questions asked of respondents who specified Māori as one of the ethnic groups to which they belonged. These questions were asked both in the survey of older Māori as well as the survey of the working age population.

The questions asked included:

- Do you identify as Māori? (Yes/No);
- How many generations of your Māori ancestry can you name? (1 generation (parents)....More than 3 generations);
- Have you ever been to a marae (if yes), how often over the past 12 months? (Not at all...More than once a month);
- In terms of your involvement with your whānau, would you say that your whānau plays...(a very large part in your life...a very small part in your life);

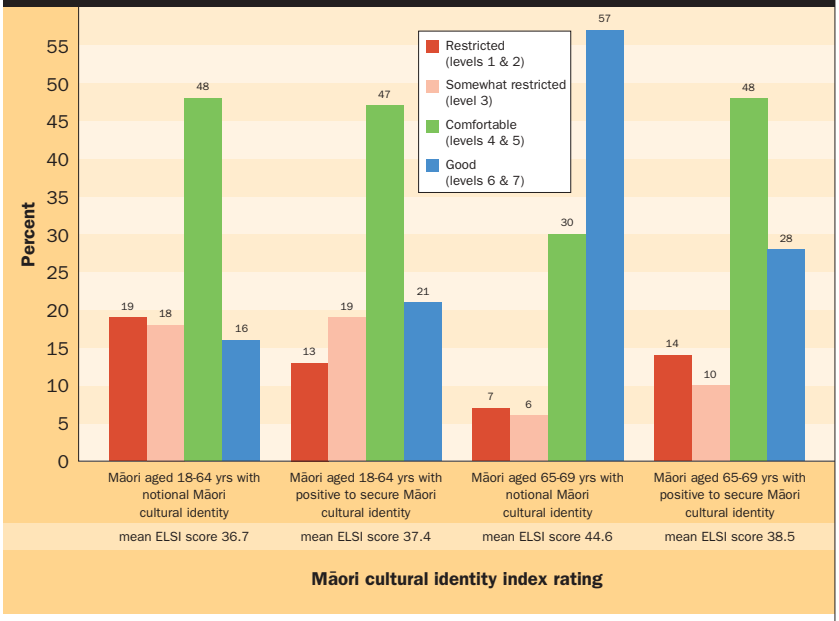
- Do you have a financial interest in Māori land (i.e. as an owner, part/potential owner or beneficiary)? (Yes/No/Not sure/don't know);
- In general, would you say your contacts are with ...(Mainly Māori...No Māori);
- How would you rate your overall ability with Māori language? (Excellent...Poor).

The responses to these questions were combined to provide a measure of Māori cultural identity along a continuum where a high score indicated high identification with Māori culture and a low score indicated low identification.

The results of the study of older Māori showed that there was a significant correlation between cultural identity and the living standard scores of older Māori. The direction of the results showed that amongst older Māori, those with high living standards tended to have low scores on the cultural identity index. The explanation for why high cultural identity is associated with low living standard lies in other factors related to living standard. These include measures of asset values, the number of financial stresses, and the number of children raised or supported (ever). These components affect living standards through multi-faceted factors including the cost associated with 'being Māori', the possible link between level of cultural identity and degree of engagement with mainstream culture, having fewer economic skills, being socio-economically disadvantaged and historical influences (leading to differences between urban and rural Māori). When examining the association between the number of children ever raised, cultural identity and living standards, the overall patterns for older Māori showed that those who raised more children tended to score highly on the cultural identity index and score lower on the living standards index. Two competing explanations for this are that those who have raised large numbers of children are likely to have lower socio-economic status or are likely to have incurred the inherent costs of raising more children (thus lowering their living standards). Another explanation for older Māori raising greater numbers of children lies with concepts of 'whangai' and 'whānaunga'. These are expressed when children of (usually) close relatives are cared for or raised by members of their whānau. This practice was common to traditional Māori lifestyles and was found to be related to cultural identity, where an increasing cultural identity is positively correlated with having raised or cared for more children (Cunningham et al, 2002).

The results presented below show the relationship between cultural identity and living standards separately for Māori aged 18-64 years and Māori aged 65-69 years. A rating of 0-5 on the Māori cultural identity index indicates a 'notional' association or identification with Māori culture. A rating of 6-18 indicates a 'positive to secure' association or identification with Māori culture (see Figure 4.10).

Figure 4.10 Living standards of Māori aged 18 years and over by rating on Māori cultural identity index 2000



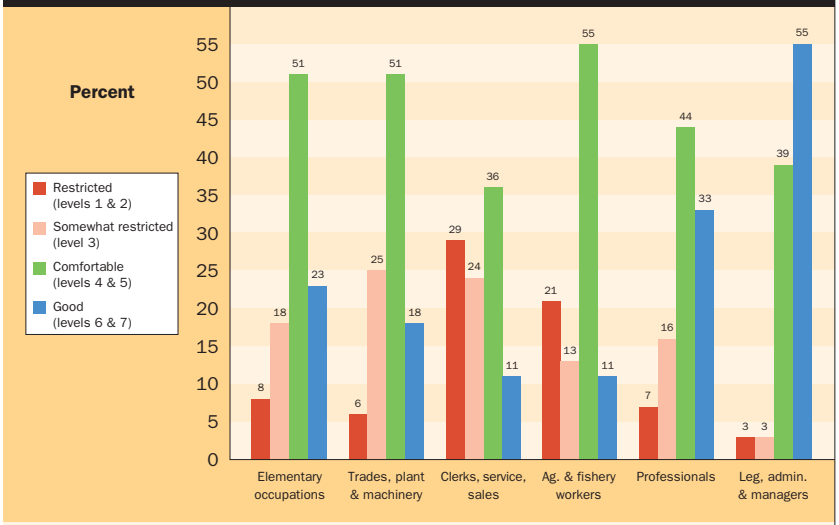
The majority of Māori in both age groups (91 percent for those aged 18-64 years and 81 percent for those aged 65-69 years) had a positive to secure identity with Māori culture as measured by the Māori cultural identity index. It is note-worthy that the percentage is higher for Māori aged 18-64 years than for those in the older age group.

For older Māori aged 65-69 years, the cultural identity score did differentiate Māori in terms of their living standard scores, with higher average living standard scores found for those with 'notional' identity. For younger Māori aged 18-64 years, the average ELSI scores by cultural identity ratings were very similar and the observed variation could be associated with chance variation. This suggests that the cultural identity score was not as strong a differentiating factor in terms of living standards, for younger Māori as it was for older Māori.

Occupation

As for the total population, Māori in higher skilled occupations ('legislators, managers' and 'professionals') had higher average standard of living scores than those in lower skilled occupations ('clerical, service, sales' and 'elementary' occupations). In a number of occupations however, Māori had lower average standard of living scores than found amongst the total population. The range was particularly marked for Māori in 'clerical' or 'agricultural' occupations. For example, average living standard scores for Māori in 'clerical' occupations was 31.1 compared with 38.4 for the total population. In agricultural occupations, the average ELSI score for Māori was 37.5 compared with 45.1 for the total population (see Figure 4.11). This suggests that within the broad occupational grouping, Māori hold different jobs when compared with non-Māori. At the bottom and top end of the occupational spectrum, there was very little difference in the average living standard scores of Māori and the total population.

Figure 4.11 Living standards of employed Māori by major occupational groups 2000

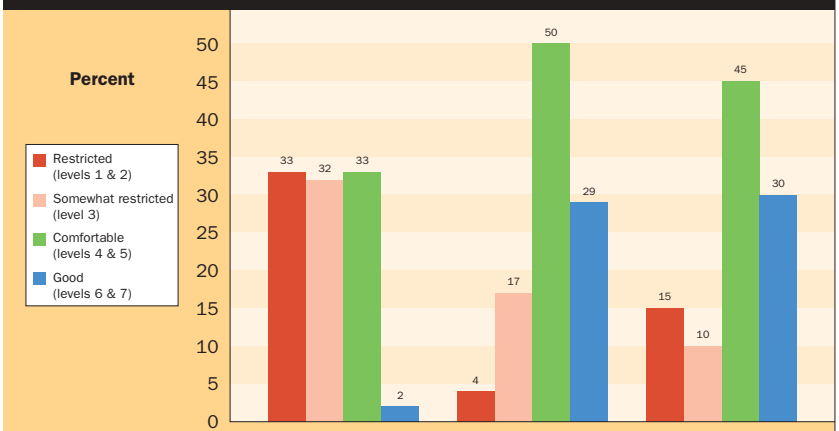


	Elementary occupations	Trades, plant & machinery	Clerks, service, sales	Ag. & fishery workers	Professionals	Leg, admin. & managers
Māori mean ELSI score	37.8	37.5	31.1	37.5	41.9	47.5
Total mean ELSI score	36.7	39.6	38.4	45.1	45.5	47.6

Income source [49]

A similar trend to that seen for the total population was obvious for Māori in receipt of income-tested benefits. Those with the lowest average living standard scores were those receiving benefits. Where the picture differed from that of the total population was that Māori in receipt of market income had a similar average standard of living score to Māori in receipt of NZS. This is supported by the study of the living standards of older Māori which shows that, unlike the total population, older Māori do not have better living standards than Māori in other age groups (Cunningham et al, 2002). A further point worth noting is that the living standards of Māori in receipt of benefits and Māori in receipt of market income had similar average living standard scores to the total population in each of these groups. In comparison, Māori in receipt of NZS had substantial lower living standards than the total population in receipt of NZS (see Figure 4.12).

Figure 4.12 Living standards of Māori population by income source 2000



Māori mean ELSI score	27.5	41.2	39.1
Total mean ELSI score	29.0	43.9	47.2

49 The above analysis divides the population into three mutually exclusive groups:

* those in economic family units where there was receipt of an income-tested benefit (core benefit) in the last 12 months and no one was in full-time employment at the time of the survey;
* those in economic family units where there was receipt of New Zealand Superannuation;
* those in economic family units who are in neither of the above two categories and therefore their income is primarily from market sources.

Some of the population here may have been in receipt of an income-tested benefit at some time during the past 12 months, but were full-time employed at the time of the survey. Similarly, some NZS recipients may have received an income-tested benefit before qualifying for NZS during the year. Some in the income-tested benefits group may also have received income from market sources during the year but were not in full-time employment at the time of the survey.

Living standards of Māori by financial characteristics

The report on the living standards of older Māori found they experienced marked material hardship and severe financial restrictions to a greater extent than did all older New Zealanders. Older single Māori tended to be worse off financially than older Māori who were part of a couple. This was primarily due to a history of reduced asset accumulation, higher accommodation costs, and - for the majority of single older Māori (of whom most were women) - the death of their spouse (Cunningham et al, 2002).

Factors found to predict variation in the living standard of older Māori were:

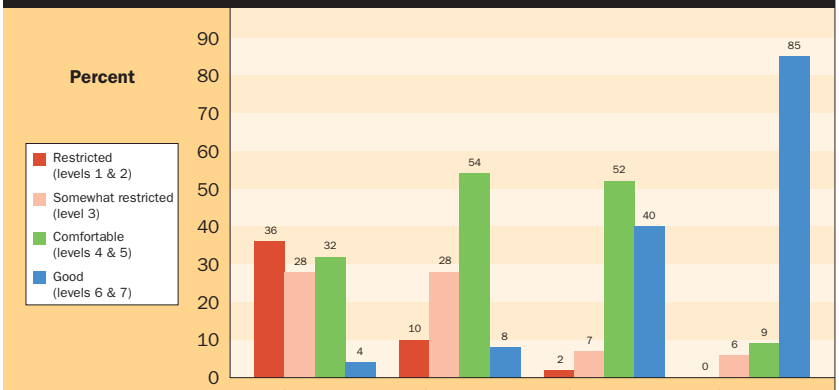
- net annual income;
- savings and investments;
- accommodation costs;
- economic life events and stresses;
- the number of children raised or supported.

For the general Māori population, three of these factors - income, asset position and accommodation costs - can be examined in terms of their association with Māori living standards.

Income

The ordinal relationship between income and living standards that has been found for the total population also applies for Māori. Higher incomes generally equate with better living standard scores and lower incomes with lower scores. However, Māori scores are lower within each income group under $20,000 than they are for the total population (see Figure 4.13). The differences between Māori and the total population in terms of average living standard scores are negligible for income groups above $20,000.

Figure 4.13 Living standards of Māori by equivalent disposable income of the economic family unit 2000

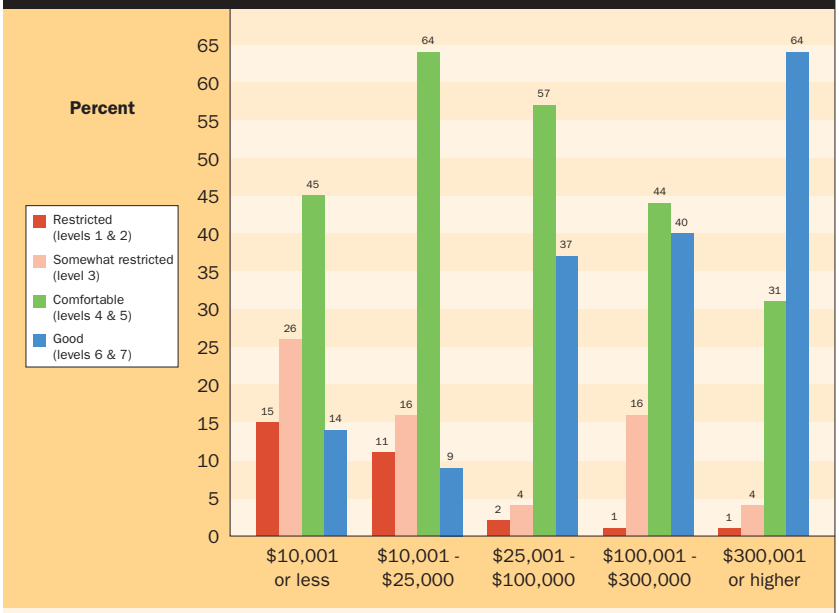


	$10,000 or less	$10,001 - $20,000	$20,001 - $40,000	$40,001 or higher
Māori mean ELSI score	27.6	34.9	45.1	52.7
Total mean ELSI score	31.9	40.2	46.8	52.3

Asset position [50]

A similar result for the possession of assets is illustrated by Figure 4.14. The ELSI averages for different asset levels range from 35.3 (for those with assets of less than $10,000) to 49.2 (for those with assets of more than $300,000), but these in turn are lower than the average score for these categories, for the total population. However, caution must be exercised in terms of interpreting the results for Māori in the top asset group due to small effective sample size giving rise to a large confidence interval of (±5).

Figure 4.14 Living standards of Māori by asset position 2000



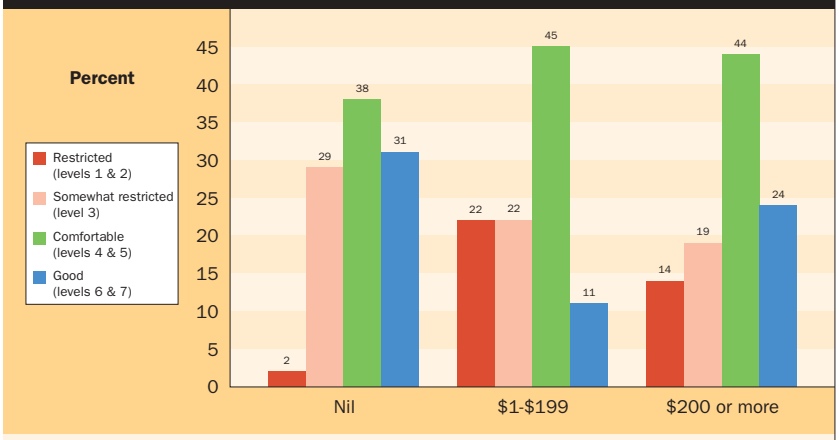
	$10,001 or less	$10,001 - $25,000	$25,001 - $100,000	$100,001 - $300,000	$300,001 or higher
Māori mean ELSI score	35.3	38.5	43.2	44.4	49.2
Total mean ELSI score	40.2	44.7	45.4	47.2	51.3

50 A substantial group of Māori (42 percent) did not specify a response for this variable and it is likely that non-response is not randomly distributed across the ELSI categories. The asset variable also possibly does not capture Māori access to communal assets.

Accommodation costs

As for the total population, Māori with no accommodation costs and those with very high accommodation costs had higher living standards on average (see Figure 4.15).

Figure 4.15 Living standards of Māori population by weekly accommodation costs 2000



	Nil	$1-$199	$200 or more
Māori mean ELSI score	41.1	32.9	38.0
Total mean ELSI score	46.9	37.6	41.8

Summary

This section has provided a descriptive summary of variation in Māori living standards according to a variety of social, economic and demographic characteristics. Taken together, the results provide a compelling illustration of lower scores for Māori. These results hold when the younger age structure of the Māori population is taken into account.

It has also been shown that the pattern of differences between Māori population sub-groups is not necessarily the same as it is for otherwise similar sub-groups in the general population. A particular difference is that living standard scores for older Māori are no higher than they are for other Māori age groups, whereas for those in the general population, average living standard scores are higher for older people. Māori in receipt of market income and those in receipt of benefit income had similar average living standard scores to the total population in each of these categories, whereas Māori in receipt of NZS had lower average ELSI scores than the total population in receipt of NZS. Likewise, Māori in HNZ rentals had similar average ELSI scores to the total population in HNZ rentals, whereas Māori who owned homes had lower average ELSI scores when compared with the total home-owning population. Differences in average ELSI scores between the Māori and total population are greatest for those in agricultural and clerical occupations and are similar for those at the top and bottom end of the occupational classification. Māori with incomes of $20,000 and over have similar average living standard scores to the total population in these income groups. For those with incomes under $20,000, Māori average living standard scores are lower than those of the total population.

A new finding from joint analysis of ELSI scores and scores on the Māori cultural identity index developed by Te Hoe Nuku Roa has also been discussed. This analysis suggests that for older Māori the cultural identity score did differentiate them in terms of their living standard scores, but that this was not a strong differentiating factor for younger Māori.