NEW ZEALAND

Living Standards 2000

Ngā Āhuatanga Noho o Aotearoa

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Disclaimer

Any opinions expressed in this report are those of the authors and do not necessarily represent the views of the Ministry of Social Development.

Foreword

Discussions about living standards are generally hampered by a lack of comparable and comprehensive data about different groups in society.

This report heralds an ongoing research programme focused on developing a comprehensive description of the living standards of New Zealanders. Besides being important in its own right, such a description will enable governments and communities to develop evidence-based policies to address disparities between different groups of New Zealanders.

In 1999, the Super 2000 Taskforce commissioned a comprehensive survey of the living standards of older people. Three separate surveys were conducted in order to meet the objectives of the research. Two were surveys of older New Zealanders; the first was a general survey, while the second was a survey of older Māori. The third survey was a sample of working-age people. Although the Super 2000 Taskforce was disbanded in March 2000, the survey and the related streams of research were continued by the then Ministry of Social Policy (now the Ministry of Social Development).

The first reports, *Living Standards of Older New Zealanders* and the companion technical report, were published in 2001. The latter documented the development of a measurement tool, the Material Well-being Scale, based on consumption of commonly desired goods/amenities. *Living Standards of Older New Zealanders* is a description of older New Zealanders based on data collected using the Material Well-being Scale.

Living Standards of Older Māori was published this year, documenting the use of the Material Well-being Scale to describe the living standards of older Māori.

The researchers recognised that the Material Well-being Scale needed modification if it was to be valid across the whole population. The survey of working-age people contained living standard measurement items but (unlike the survey of older people) included few potentially explanatory variables. Using the measurement items, the researchers have developed a second living standards measure, (broadly similar to the one for older people) that is applicable to the population as a whole. This new generic measure is called the Economic Living Standard Index (ELSI).

Using ELSI, the researchers have been able to describe the living standards of New Zealanders in a new and revealing way.

Future work scheduled by the Ministry will expand on this description and seek explanations for the differences observed between sub groups. Ongoing surveys will enable the development of a detailed analysis of changes over time.

This research programme will provide researchers and policy makers across sectors with a rich database to underpin future policy initiatives.

I commend the Centre for Social Research and Evaluation of the Ministry of Social Development for the valuable contribution this research is making toward building a better understanding of our society.

Peter Hughes
Chief Executive, Ministry of Social Development

Contents

CHAPTER ONE

Introduction and background

Introduction

This report provides a broad description of the living standards of New Zealanders. It examines the distribution for the population as a whole and for groups that have been a focus for social policy analysis and interventions. Thus it has separate sections on people with low incomes, Māori, Pacific people in New Zealand and families with dependent children.

A new social measurement tool, the Economic Living Standard Index (ELSI) underpins the analysis presented in this report. The ELSI scale consolidates a large amount of information about different aspects of individual economic well-being into a single score. The score has been shown to be a valid and reliable measure of the individual's standard of living, and is readily interpretable within the context of familiar ideas about living standards and the language commonly used to express those ideas.

The origins of the research

In 2001, the Ministry of Social Policy (now the Ministry of Social Development) published the results of a large scale research study on the living standards of older people (defined as people aged 65 years and older) (Fergusson et al, 2001). The study was initiated by a group called the Super 2000 Taskforce, established by the 1996-1999 National-led coalition government to advise it on the New Zealand state pension system. The Ministry assumed responsibility for this study when the Taskforce was disestablished in March 2000. The living standards research programme has been established by the Ministry to develop and carry forward the research begun by the Taskforce. More details on the background to this research are given in the next chapter.

The living standards of older New Zealanders was an issue on which there were contested views. On the one hand, there had been intermittent claims - based primarily on anecdotal information - of extensive poverty amongst older people[1]. On the other hand, there were other sources of indicative information (for example, the comparatively infrequent use of food banks by older people) that failed to support such a conclusion[2]. Although a complete resolution of these opposing views cannot be expected, the research went a long way towards clarifying the issue. It concluded that the majority of older people 'were doing quite well and had relatively few material restrictions and difficulties [but that] a minority (around 5 percent of the sample) had quite marked material hardship and a further 5-10 percent had some difficulties'.

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1 See New Zealand Press Association 10/11/1999, 'BOP Elderly Living on Bread and Jam'.
The Evening Standard 17/05/2002, 'Rent Increase Opposed'.
New Zealand Herald 02/04/2002, 'Surge in Food-Parcel Demand Reflects Poverty of City's Elderly'.
New Zealand Herald 06/04/2002, 'A Haven for the Lucky Few'.

2 See Social Policy Agency, 1994.

The work reported here moves forward to the task of describing the living standards of New Zealanders generally. How well it has succeeded is a matter for the judgement of those for whom it has been written, which includes all those with a concern about social well-being as well as more specific target audiences of policy makers and social scientists. This has been an ambitious project. It seeks to achieve an important goal by systematically combining a wide range of new information, collected specifically for the purpose. By doing this, the report is able to describe the living standards of New Zealanders in a new and revealing way. While some of the findings reinforce familiar ideas, others are new and surprising, pointing towards potentially fruitful new directions for future research. The analysis of living standards, taken as a whole, offers a panoramic picture that has a scope and level of detail not previously available.

Public and government concern about deprivation and inequality

Standard of living is a topic of great and enduring interest to social scientists, academics, social policy makers. This applies as much in New Zealand as it does in most parts of the world.

Over the past twenty years there has been continuing social and political debate in New Zealand about the economic position of the country and the development path it should take. Sharply dissenting positions have been taken by political parties and social commentators about the effectiveness and fairness of the economic and welfare reforms that have occurred. Most of this debate (directly or by implication) has touched upon or made claims about past and present living standards, and the ways in which they have been affected by the policies that governments have pursued.

Several themes can be distinguished in the public debates. One theme concerns poverty - its causes, effects, prevalence and the extent to which it has been worsened or ameliorated by changing economic conditions and government policies. This theme is reflected in accounts of some people having to rely on food banks and charitable assistance to meet basic needs, and sometimes falling into ill-health because they've been unable to do so[3]. Such accounts raise fundamental issues of social justice (are the human rights of disadvantaged people being safeguarded by the state?) and fiscal efficiency (will the deteriorating living conditions of some people create future social costs in the form of crime and ill-health?).

A related theme concerns inequality: is there a widening disparity between rich and poor, between disadvantaged groups and the rest of New Zealand society? These questions raise issues of social equity and the degree of egalitarianism that New Zealand society desires and is achieving. A third theme concerns where New Zealand stands in relation to the other countries with which it has traditionally compared itself. Are the living standards of New Zealanders better or worse than those of people in other developed nations? Has New Zealand been slipping down a ladder of relative living standards?

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3 Social Policy Agency, 1994;
The Benefit Advocacy/Departmental Joint Working Group, 2001.
See also *The Southland Times* 10/6/2002 'Foodbank Users Face Price Rise'.
The Evening Post 11/7/2002 'Families Forced to Forgo Essentials'.
The Evening Standard 6/6/2002 'Poverty Bites Hard on Users of Foodbanks'.

The need for a good measure of living standards

To answer these questions confidently requires data and tools of social measurement that go beyond those historically available. Measures of GDP and GDP per capita, household income etc. do not provide a good picture of the achieved standard of living that New Zealand families enjoy. This has made it difficult for living standard differences between groups to be assessed, and for changes over time to be monitored with any precision.

The ELSI scale, which is used for the first time in this analysis, is designed to help fill a gap in tools for living standard measurement. This report addresses only some of the questions raised above, but the measurement tool that it describes and uses will be of interest and assistance to all with an interest in them.

The ELSI scale

Most research relating to the economic well-being of New Zealanders has focused on assessing poverty. The measurement of poverty involves the use of thresholds to split groups into two categories: those who are and are not in poverty, for different households or family types. This involves using a measure of living standards that places people above or below the threshold that is chosen (see Easton, 1995; Stephens et al, 2000; Krishnan, 1995). These approaches have primarily involved using indirect approaches to measuring living standards or poverty i.e. income and expenditure proxies. Indirect measures (or proxy measures) generally focus on the resources and entitlements that would enable particular goods and services to be obtained, or on current purchasing behaviour (Ringen, 1988). Direct (or outcome) measures are based on asking people how they are actually living in terms of their possessions, activities and how well they get by financially.

The ELSI measure is of the second type. This marks it out from most other research in the area. It is also distinctive in another important respect: it is designed to cover the full range of living standards, from high to low, rather than to distinguish just between those who are above or below a poverty threshold. The ELSI scale itself does not imply where a poverty threshold should be placed.

The development of the ELSI measure is described briefly in the next chapter. However, because the measure is based on a relatively uncommon approach to measuring living standards, a few introductory comments about the approach are relevant at this point. Social scientists and economists most commonly approach the task of measuring individual or family economic well-being through the lens of income or expenditure. When income is used, it is usually adjusted for family or household size. Income-based measures have the advantage of being able to be applied in any research or monitoring context where income data are collected, but they cannot take account of some other factors known to be relevant to an achieved standard of living. These include such things as cost of accommodation, debt repayments, ability to draw on assets when needs cannot be met from current income and assistance from family members and others. Living standards research has shown that differences with respect to these factors can produce large differences in the actual living standards of people with the same income[4]. Some of the results presented in this report reinforce that conclusion.

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4 This may be in part because income measures of living standards ignore the extent to which people use their income in ways that do not contribute to their own living standard. Examples of such uses of income are donations to charity, assistance to extended family members (for example, remittance of funds by Pacific people in New Zealand to family members who have not emigrated), and personal saving (for example, people who live 'below their income' to save intensively for the purchase of a home). Such uses of income do not contribute to the persons current living standard (to the extent that living standard - as distinct from utility - is regarded as being reflected primarily in current consumption).

Income-based measures can be complemented by making use of expenditure information to cover some of the gaps described above, but expenditure information is difficult to collect in a comprehensive way, and brings conceptual problems of its own. The living standards of some people may be affected by factors other than their expenditures; for example, by the home production of food, perks from employment and receipt of assistance from family members.

A living standards measure such as the ELSI scale provides a valuable means of complementing analyses based on income and expenditure data. The ELSI scale measures the extent to which people are doing the sorts of things, consuming the sorts of products and enjoying the sorts of amenities that are commonly understood as being aspects of living standard. The next chapter lists types of activities, consumption items and amenities that are included in the scale.

The aims of the present report

This report is intended to provide a snapshot of the living standards of New Zealanders. It provides an examination of the range of living standards in the population as a whole, and then provides more detailed inspection of four particular groups (which are not mutually exclusive). These groups (Māori, Pacific, families with dependent children and the low-income population) have been selected because they have featured strongly in public debate on issues of social well-being, and have been a focus of social reporting in New Zealand.

This report is descriptive. It seeks to present a picture of current living standards but not to explain that picture in terms of the forces and mechanisms that have given rise to it. Although the earlier work on living standards of older New Zealanders was able to investigate factors underlying differences in living standard for older people, data collected so far for people of working age does not include the same range of potential explanatory factors. This is an area for future research.

The next chapter (Chapter 2), describes the ELSI scale. Chapter 3 provides an overview of the living standards of the total population across a number of social, demographic and financial characteristics. Chapters 4 and 5 summarise the living standards of the Māori and Pacific populations, respectively. Chapter 6 describes the living standards of families with dependent children while Chapter 7 examines the living standards of the population with low incomes. Chapter 8 concludes this report by highlighting pertinent issues requiring a policy focus, which have been drawn out of the results of this research.

The present report is only an initial broad overview of the living standards of New Zealanders. The surveys on which it is based provide a very rich set of data that permit detailed analysis of many important issues that have been touched upon only lightly in this report. There will be continuing analysis of this data, both within the Ministry of Social Development and outside of it, to address these more specific issues. The data set is available to other government agencies and bona fide researchers to conduct their own analyses, whether these are extensions of the ones reported here or are directed towards new questions.

CHAPTER TWO

The Economic Living Standard Index

Introduction

The analysis and results presented in this report are based on data collected in the course of the research project on the living standards of older New Zealanders. As noted in the introduction to this report, that project was initiated by the Super 2000 Taskforce, which commissioned three separate sample surveys. Two were surveys of older New Zealanders: a general sample and a supplementary older Māori sample. In each case, the field data collection was carried out by Statistics New Zealand (SNZ). The third survey was a sample of working-age people with the data being collected by a private survey and research firm, AC Neilson NZ Ltd. For the purposes of the research, older New Zealanders were specified as those aged 65 years and older and working-age people as those aged 18-64 years.

The purpose of the older people's survey was to gather data for analysing the living standards of older New Zealanders. To boost the number of older Māori in the research, a supplementary older Māori survey was undertaken which enabled a detailed examination of the living standards of older Māori. The working-age survey was to enable the living standards of older people to be examined in the wider context of overall New Zealand living standards. Three reports have been published documenting the first analyses[5].

At an early stage of the project on older people, the Ministry decided that the data provided by the surveys should be used as the foundation for a continuing programme of research on living standards. This present report is the first publication to result from that programme. Its work has involved extensive analysis of the survey data to develop a general living standard measure suitable for examining living standards within the population as a whole and sub-groups of the population, and the use of that measure to produce the variety of results that are presented in the report.

5 'Living Standards of Older New Zealanders: A Technical Account 2001', Ministry of Social Policy. 'Living Standards of Older New Zealanders: A Summary 2001', Ministry of Social Policy. 'Ngā Āhuatanga Noho o te Hunga Pakeke Māori: Living Standards of Older Māori 2002', Ministry of Social Development.

The surveys

The following gives a summary of the main features of the three surveys.

The older New Zealanders survey (Statistics New Zealand):

- was administered through the Household Labour Force Survey (HLFS) using the HLFS sampling frame;
- included all households containing a person aged 65 years and over who had recently participated in the HLFS in September 1999, or were participating in the HLFS in March 2000 and were eligible for selection;
- selected one eligible person per household;
- was concerned with 'the civilian, usually resident, non-institutionalised population aged 65 years and over living in permanent private dwellings';
- was conducted between 7 February 2000 and 7 April 2000;
- involved face-to-face interviews about 90 minutes long;
- obtained a sample of 3,060 people aged 65 years and over; and
- achieved a response rate of 68 percent.

The survey of older Māori (Statistics New Zealand)[6]:

- used the superannuation database administered by the Department of Work and Income to obtain a sample;
- used a simple random sample of Māori aged 65-69 years;
- selected one eligible person per household and respondents confirmed that they identified themselves as having Māori ethnicity;
- comprised the usually resident, non-institutionalised New Zealand Māori population aged 65-69 years, living in permanent private dwellings and in receipt of NZS;
- was conducted between 10 April 2000 and 12 June 2000;
- involved face-to-face interviews about 90 minutes long;
- obtained a sample of 542 Māori aged 65-69 years; and
- achieved a response rate of 63 percent.

6 70 was chosen as the upper age limit for sampling from the superannuation database for this population, because data for Māori aged 70 years and over was incomplete in the administrative records.

The survey of the working-age population (AC Neilson):

- involved house-to-house sampling where only one person per household was interviewed;
- included people aged 18-64 years living in permanent private dwellings;
- was conducted between 11 March 2000 and 18 June 2000;
- involved face-to-face interviews about 40 minutes long;
- obtained a sample of 3,682 people aged 18-64 years; and
- achieved a response rate of 60 percent.

To produce the results given in this report, it was necessary for the survey data on older New Zealanders and the working-age people to be aggregated. Weightings[7] were developed that enabled data from the different surveys to be combined together to give unbiased estimates for the population and to permit results to be estimated for the dependent child population[8].

The primary sampling unit for the surveys was the household. From each household, one adult was selected as a survey respondent. The respondent was asked questions both about him/herself and their economic family unit.[9] The implications of this dual focus in the data collection are discussed in the later section on the unit of analysis[10].

The ELSI measure

This report is made possible by the development of a living standards measure, applicable to the general population. The Economic Living Standard Index, or ELSI, is based on what people are consuming, their various forms of recreation and social participation, their household facilities and so on, rather than being calculated from the resources (income, financial and assets) that enable them to do those things (Mack and Lansley, 1985; Nolan and Whelan, 1996; Townsend, 1979).

The development of this scale involved identifying a set of items that individually have a strong relationship to living standards and determining the best way of combining them to produce a scale that is valid for its intended purpose and offers the maximum amount of accuracy.

7 The population is weighted to the usually resident population living in permanent private dwellings as counted in the 2001 Population Census. The weightings procedure is described in the companion report 'Direct Measurement of Living Standards: The New Zealand ELSI Scale'.

8 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). It is acknowledged that different people define child dependency in different ways. The impact of adopting a variety of definitions of child dependency on living standards outcomes can be explored in future research.

9 The economic family unit (EFU) refers to a person who is financially independent or a group of people who usually reside together and are financially interdependent according to current social norms. An economic family unit in practice is either a 'single adult', 'sole-parent family with dependent children', 'two-parent family with dependent children', or a 'couple only family unit'.

10 There are many questions for future research raised by this methodology. Amongst these are the examination of the extent to which the respondent's ELSI score reflects the scores that would be applied to other members of the family, if they had also been interviewed. Another issue is the extent to which the living standards of a multi-family household differs from a single family household. The exploration of these issues is possible within the living standards framework used here, but require the collection of data specifically designed to enable this examination. While not possible with the current data, this is something that could be explored by future research both within and outside the Ministry of Social Development.

The ELSI scale is based on a large number of indicative items about a family's household amenities, personal possessions, social and recreational activities, ability to have preferred foods, access to important services (e.g. medical treatment), and such like. It also includes three general self-ratings, which enable the person to give their own assessment of their standard of living, their satisfaction with their standard of living and the adequacy of their income to meet their everyday needs. Thus, although the majority of the scale items relate to specific activities, possessions, amenities, etc., the resulting scale also reflects people's self-perceptions. The contribution of the self-ratings to the ELSI score is proportionately greater at the higher end of the scale than at the lower end. There is a considerable degree of concordance between the different types of information, this being one of the statistical conditions that was necessary for the scale to be specified[11].

Although the theoretical basis of the ELSI scale is complicated, as is the statistical analysis used to produce it and establish its credentials, the measure itself is simple. It uses information from 40 items, specified in a standard way, that is combined by means of a straightforward procedure to give a numerical score for each person. The full account of the methodology of this measure is provided in the companion report, *Direct Measurement of Living Standards: The New Zealand ELSI Scale (Jensen, et al, 2002)*.

The items in the ELSI measure are summarised in Table 2.1 below. Appendix C provides more detailed information on the items in the ELSI scale and the specification of the scale formula.

11 Amongst the areas for future research and development would be the identification of more direct living standards items which give greater discrimination at the upper end of the scale.

Table 2.1 Items on the ELSI Scale (2000)

Economising items	Ownership restrictions (did not own because of cost)	Social participation restrictions (did not do because of cost)	Self-assessments of standard of living
Less/cheaper meat	Telephone	Give presents to family/ friends on special occasions	Standard of living self-rating
Less fresh fruit/vegetables	Secure locks	Visit hairdresser once every 3 months	Adequacy of income self-rating
Bought second hand clothes	Washing machine	Holiday away from home every year	Satisfaction with standard of living self-rating
Worn old clothes	Heating in main rooms	Overseas holidays once every 3 years	
Put off buying new clothes	Good bed	Night out once a fortnight	
Relied on gifts of clothes	Warm bedding	Have family or friends over for a meal at least once a month	
Worn-out shoes	Winter coat	Space for family to stay the night	
Put up with cold	Good shoes		
Stayed in bed for warmth	Best clothes		
Postponed doctor's visits	Pay TV		
Gone without glasses	Personal computer		
Not picked up prescription	Internet		
Cut back on visits to family/friends	Contents insurance		
Cut back on shopping	Electricity		
Less time on hobbies			
Not gone to funeral			

ELSI intervals

The procedure for combining the information on the items produces a score that can range from 0 to 60. The size of the score indicates how well the person is faring, with a low score indicating a low living standard (implying that the person is not able to have or do things they want to, economises a lot and perceives themselves as doing poorly). A high score indicates a high living standard (implying that the person is able to have or do things they want to, does not economise a lot and perceives themselves as doing well)[12]. The companion technical report gives more details on the scale scores and the specification of the living standards intervals.

To permit the easy presentation of the way in which the scores of groups are distributed across the scale, the range has been divided into seven intervals. These are designated numerically from level 1 (containing those with the lowest living standards) to level 7 (containing those with the highest living standards) [13]. Table 2.3 later in this chapter, gives a summary of the scale scores and intervals.

Labelling the living standards levels

The labels were assigned on the basis of the calibration results (presented later in this chapter). The label chosen for a particular living standard level was intended to provide a simple summary of the living standard picture given by the calibration results for that level.

In presenting results for the ELSI scale, it is convenient to be able to refer to the levels by means of verbal labels. The labels that have been used are the ones suggested in the companion technical report about the scale.

12 The ELSI scale contains relatively more items that are sensitive to discriminating between people in the lower part of the living standards continuum than items that are sensitive to discriminating in the upper part of the continuum. This is partly because the questionnaire was constructed with a priority being placed on maximising lower-end discrimination to ensure the scale's value in studying poverty, and partly because the statistical criteria for determining the suitability of potential ELSI items eliminated a number of those that were more sensitive at the upper end. As a consequence, the scale has some degree of compression in the upper part of the score range. If this were not present, the distribution of scores would have less upwards skew than is observed. It is intended that future work will examine this issue further and explore possibilities for enhancing the item set to reduce upper-end compression. The statistical properties of the scale can be examined further in the companion technical report.

13 While the primary mode of analysis used in this report in based on the 7 aggregated intervals (Levels 1 to 7), the score range can also be more finely divided into 14 intervals (1Lower, 1Upper, 2Lower, 2Upper etc., up to 7Lower, 7Upper). This report does not make use of the 14 intervals.

There is an unavoidable element of arbitrariness in the assignment of such labels, and people will have different opinions about the words that sensibly might be used to characterise the living standards found at the different levels. With these caveats, the labels are as follows:

- 'very restricted' living standard for level 1;
- 'restricted' living standard for level 2;
- 'somewhat restricted' living standard for level 3;
- 'fairly comfortable' living standard for level 4;
- 'comfortable' living standard for level 5;
- 'good' living standard for level 6; and
- 'very good' living standard for level 7.

In some analysis given later in this report, it has been convenient to further aggregate the scale into just four intervals. These are:

- Levels 1 and 2 combined, described as a 'restricted' standard of living;
- Level 3, described as a 'somewhat restricted' standard of living;
- Levels 4 and 5 combined, described as a 'comfortable' standard of living;
- Levels 6 and 7 combined, described as a 'good' standard of living.

This level of aggregation has primarily been used in Chapters 4 and 5 which examine the living standards of the Māori and Pacific populations respectively. The greater aggregation has been necessary due to restrictions in sample size.

Unit of analysis

The ELSI scale was derived from an analysis in which the individual was the unit of analysis. As previously indicated, the data were collected through interviews in which each respondent gave information on his or her circumstances in the context of the economic family unit of which he or she was a member. (In the case of a single person who is not caring for dependent children, the person's economic family unit is simply the person.) Some of the questions that were asked of the respondent (such as those about personal clothing - e.g. possession of a warm winter coat) were particular to the respondent, while others (such as those relating to non-personal household amenities, such as

a washing machine) related to the respondent's economic family unit. In the analysis carried out to develop the ELSI scale, questions of both types were regarded as providing information about the respondent. Thus, for example, the above illustrative items might have led to the respondent being characterised as a person who had a warm winter coat and the advantages of being in a household with a washing machine.

For the purposes of the analysis, the assumption has been made that it is sensible to speak of the living standard of the economic family unit as a whole, and that its living standard is indicated by the ELSI score of the respondent. In other words, the members of the economic family unit are considered to have a broadly common standard of living, which is estimated with reasonable accuracy by the respondent's score.

The assumption of a broadly common standard of living within the economic family units will not always be precisely true. Some economic family units may arrange their affairs so that some members have a lower living standard than the respondent, and others so that some other members have a higher living standard. This will not distort the types of results given in the present report if the departures from the assumption occur in both directions. In that case, through a process of 'swings and roundabouts', the effects will tend to average out. As referred to previously, it could be possible to examine how well this condition holds in future research.

For an economic family unit with dependent children, each child is regarded as having the economic family unit's ELSI score. However, describing a child as having an ELSI score of 37 (say) does not involve making any particular claim about the implications for the child; clarifying the implications will require a different type of research that examines the connection between living standard scores and children's development. In the present context, describing the child as having an ELSI score of 37 is just a shorthand way of saying that the child is in an economic family unit with an ELSI score of 37.

Some of the results (e.g. those in the chapter on families with dependent children) are at the economic family unit level rather than the individual level.

In terms of thinking about the living standards of children, it is possible that some families organise their affairs so that children are at least partly shielded from the restrictions and disadvantage experienced by the adults, as reflected by the ELSI score. It is therefore possible that the picture given by the calibration data of the severity of restrictions experienced amongst those with low ELSI scores, gives an exaggerated account of the likely deleterious effect on children's development and opportunities. There is research to suggest that some parents may tend to make sacrifices to shield their children from the impact of the family's low overall living standards (Middleton et al, 1997; Gordon et al, 2000). This points to the need for caution in inferring a judgement of the implications of low ELSI scores for child well-being.

Calibration of the ELSI scale

The calibration allows interpretation of the score range. It permits a judgement to be made about how the living standard of people at a particular level can reasonably be described.

In order to find a simple way to describe what it means to be at various points on the living standards scale, an analysis was undertaken that identified a set of basic items referred to as 'basics' and another set of items referred to as 'comforts/luxuries'. Examples of the 19 'basic' items include telephone, washing machine, heating for all main rooms, warm bedding, fresh fruits and vegetables, doctor's visits etc. Examples of the 13 'comforts/luxury' items include overseas holidays, holiday away from home, never cutting back on items such as meat or shopping for clothes because of cost.

Basic items related to things whose absence would be widely regarded as implying deprivation. The surveys provided data that permitted the use of several criteria for identifying basic items. Briefly, an item was considered to be a basic if it was wanted by most people in the survey, was considered important by most people in the survey, had high discriminating power in the lower part of the scale (with people in the upper part of the scale being unlikely to lack the item) and was something that is commonly regarded as important to an acceptable standard of living. Application of these criteria produced a set of 19 basic items.

A respondent's score for lacking basics was the sum of the total number of basics that were lacked for reasons of cost, as a proportion of the total number of basics that are wanted from the calibration item set. The score was therefore a measure of the extent to which the respondent was unable to have the basics they wanted. A value of 0.25, for example, indicated that the respondent lacked a quarter of the basics that they wanted but could not have because of the cost.

Comforts and luxuries were conceived as sets of items that many people regard as desirable, but few regard as indispensable; they give the owner a higher standard of living than can be achieved through considering basics alone. As with basics, several criteria were used to identify a set of comfort/luxury items. An item was considered to be a comfort/luxury if it had discriminating power at the upper part of the scale and was something that is commonly regarded as being a comfort or luxury (rather than a basic).

While basics are wanted by almost everyone, preferences are more varied in relation to luxuries. Not everyone wants an overseas holiday, but virtually all want fresh fruit and vegetables. For this reason, the criteria for selecting comforts and luxuries do not include requirements for them to be important to most people or wanted by most people[14].

Based on the above criteria, thirteen items were selected for measuring comforts and luxuries. The procedure used for calculating a respondent's score for attaining comforts followed similar procedures to that used for calculating respondents' basic items score (see Table 2.2).

14 The procedure for selecting items for the ELSI scale involved examining whether each potential item's response pattern across the score range was broadly the same for different subgroups (i.e. Māori and non-Māori, economic family unit's with and without children etc.). Only items with broadly the same response pattern across sub-groups were included in the scale. As a consequence, the two sets of calibration items also have broadly the same pattern across sub-groups.

Table 2.2 Items used in the calibration of the ELSI Scale (2000)

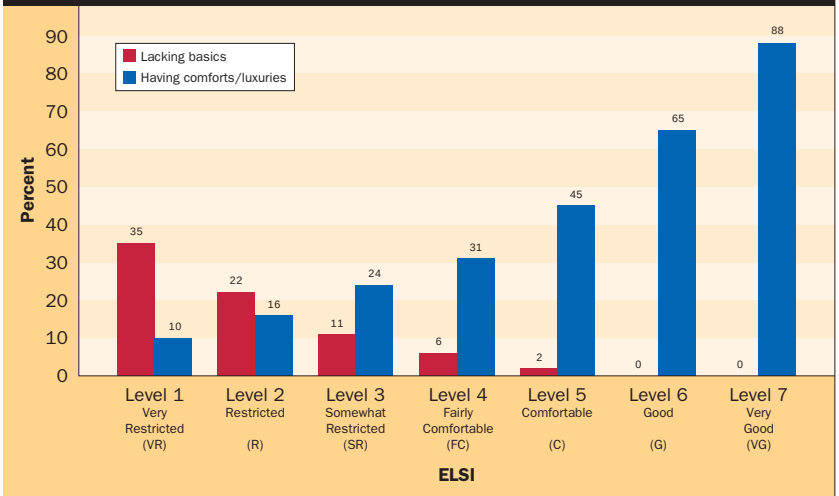
Basics lacked	Comfort/luxuries had
Had less fresh fruit/vegetables because of cost	Never buy less/cheaper meat because of cost
Bought second hand clothes because of cost	Never put off buying new clothes because of cost
Had worn-out shoes because of cost	Never cut back on shopping because of cost
Put up with cold because of cost	Have best clothes for special occasions
Stayed in bed for warmth because of cost	Have pay TV
Postponed doctor's visits because of cost	Have personal computer
Gone without glasses because of cost	Have internet
Not picked up prescription because of cost	Never spend less time on hobbies because of cost
Did not have telephone because of cost	Have holiday away from home every year
Did not have secure locks because of cost	Have overseas holidays once every 3 years
Did not have washing machine because of cost	Standard of living self-rating 'very high'
Did not have heating in main rooms because of cost	Adequacy of income self-rating 'more than adequate'
Did not have good bed because of cost	Satisfaction with standard of living self-rating 'very satisfied'
Did not have warm bedding because of cost	
Did not have winter coat because of cost	
Did not have good shoes because of cost	
Did not have contents insurance because of cost	
Not giving presents to family/friends on special occasions because of cost	
Not gone to funeral because of cost	

The calibration involved, on the one hand, calculating the extent to which people at the various intervals lack the basics they say they want and, on the other hand, calculating the extent to which people at the intervals have the comforts/luxuries they say they want[15]. The rationale for this approach is that people with a very low standard of living can be expected to lack many basics and to be virtually without comforts and luxuries. By contrast, people with a very high standard of living can be expected to have no lack of basics and to have most (or all) of the comforts and luxuries that they want. A person with an ELSI score representing an intermediate living standard can be expected to fall between those extremes - that is, to lack some basics but also to have some comforts and luxuries.

The calibration results on comforts/luxuries and lack of basics are shown in Figure 2.1. People at level 1 lack on average 35 percent of the basics, people at level 2 lack on average 22 percent of the basics, and those at level 3 lack on average 11 percent of the basics. The percentages decline further as living standards rise, and people at level 6 and 7 effectively do not lack any basics. The reverse pattern is found in relation to the comforts/luxuries. People at level 1 have on average only 10 percent of the comforts/luxuries that they want but the percentage rises progressively across the living standard levels and people in level 7 have on average 88 percent of the comforts/luxuries that they want. Even at the lowest living standard level, people still usually have a small number of the comforts that they want. This finding is consistent with other research which suggests that people often make trade-offs in their consumption behaviour (Robins, 1996). Such trade-offs can be the result of people's different tastes, preferences, and priorities, as well as their consumption history (e.g. purchasing a durable comfort item when they had a higher income than they do now).

15 In interpreting the calibration results, it is necessary always to keep in mind that the figures for basics relate to the particular set of basics included amongst the ELSI items (and listed in Table 2.2). The figures don't relate to all of the things that might reasonably be regarded as basics, because the survey questionnaire did not attempt to be exhaustive in its coverage of basics. Similarly, the figures on comforts/luxuries relate to the particular comforts/luxuries included amongst the measured items, not to all of the things that might be regarded as comforts/luxuries. The calibration items should be seen as indicative sets of basics and comforts/luxuries, not comprehensive sets.

Figure 2.1 **Average proportion of population lacking basics and having comforts/luxuries by ELSI score levels 2000**



Concomitant information for calibration

This section describes measures which provide concomitant information helpful to the interpretation of the ELSI scale scores. This concomitant information offers an additional perspective of the meaning of the scores because the items used are not part of the ELSI scale. The items are of three types: serious financial problems, accommodation problems, and the enforced lack of child basics (for economic family units with dependent children).

Serious financial problems

Incidence of serious financial problems was assessed using six items which examined the extent to which the respondent had experienced financial difficulty in the preceding 12 months. The items were:

- couldn't keep up with payments for electricity, gas or water;
- couldn't keep up with payments for mortgage or rent;
- couldn't keep up with payments for such things as hire purchase, credit cards, or store cards;
- borrowed money from family or friends to meet everyday living costs;
- received help in the form of food, clothes or money from a community organisation such as a church;
- pawned or sold something to meet everyday living costs.

Accommodation problems

These items measured the extent to which the respondent had problems with their current accommodation. Analysis of the 15 accommodation items included in the survey suggested that three items (problems with pollution, noise, and other problems) did not fit well with the others, so they were not used. The 12 items that were retained concerned problems with:

- draughts;
- dampness;
- plumbing;
- wiring;
- interior paintwork;
- windows;
- doors;
- the roof;
- piles or foundations;
- exterior paintwork;
- fencing;
- paving.

Child basics

Respondents with children provided information on an additional set of items relating specifically to their children. These items were analysed to identify and exclude ones that had insufficient discriminating power or had different response patterns for different subgroups. Items that were strongly age related (such as ownership of a playstation) were also removed. From the items that remained, a selection was then made of a set of 12 basics specifically relating to children. The selection criteria were the same as the criteria used to select the general set of basics.

The child basics were:

- postponed child's visit to the doctor because of cost;
- postponed child's visit to the dentist because of cost;
- child wore poorly fitting clothes/shoes because of cost;

- did not have suitable wet weather clothing for each child because of cost;
- did not have a pair of shoes in good condition for each child because of cost;
- did not have a child's bike because of cost;
- had not bought children's books because of cost;
- child went without cultural lessons because of cost;
- had limited space for children to study or play because of cost;
- did not have children's friends over for a meal because of cost;
- did not have enough room for children's friends to stay the night because of cost;
- did not have children's friends over for a birthday party because of cost.

The distribution of concomitant information across the living standard scale

The calibration results obtained from these types of concomitant information are shown in Figure 2.2

For financial problems, the pattern is similar to that found for the enforced lack of basics (Figure 2.1). People in level 1 have an average of 47 percent of the listed serious financial problems. The proportion declines progressively across the living standard levels, with people in levels 6 and 7 having an average of 2 percent of the problems[16].

The results on accommodation problems have a similar pattern to those for serious financial problems and lack of basics. The incidence of accommodation problems decreases as living standards increases. At level 1, the average proportion of accommodation problems is 35 percent; by level 7, it has decreased to 4 percent[17].

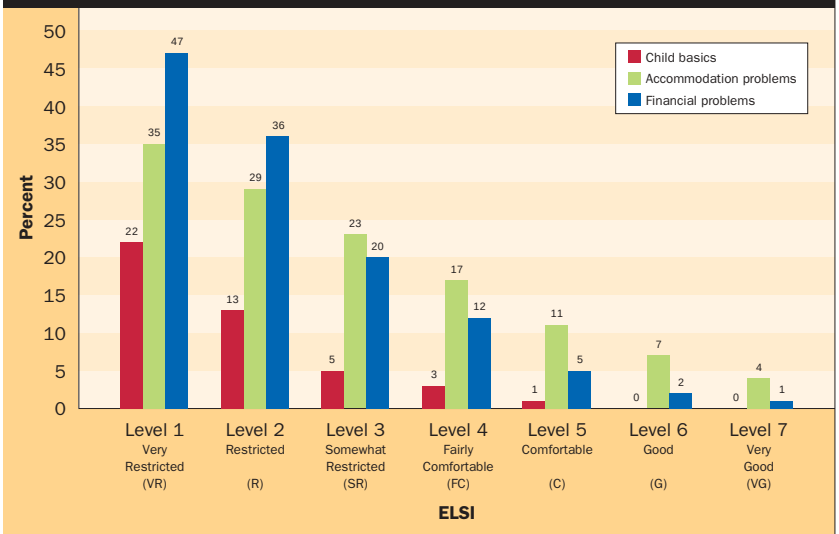
Analysis of the enforced lacks of the child-specific basics shows a similar pattern to that for the primary set of basics - that is to say, the incidence of enforced lacks of child basics decreases as living standards increases. Economic family units with dependent children in level 1 lack an average of 22 percent of the child-specific basics; economic family units in level 5 lack on average 1 percent; and economic family units in 6 and 7 do not effectively have any enforced lack of child basics[18].

16 See Bray (2001) for a discussion of the relationship between financial stress and living standards in Australia.

17 The relatively high incidence of accommodation problems, even at the high end of the living standards range, probably indicates that some affirmative responses to the problem checklist reflect relatively minor problems and/or ones that the respondent did not give priority to having fixed.

18 It is noteworthy that the incidence of enforced lacks of child basics is less, at each living standard level, than the corresponding figure for the primary set of basics. Without further analysis (which has not been attempted) it is not possible to say why this occurs. It is possible that child basics, as a set, provide a more stringent test of hardship than the primary set of basics. It is also possible, as suggested earlier, that poor families tend to shield their children from the worst effects of hardship with the consequence that the children are less exposed to hardship than the adult family members.

Figure 2.2 **Average proportion of population lacking child basics and having financial and accommodation problems 2000**



Combining basics, comforts/luxuries and concomitant information

A clearer sense of the way in which living standards differ from one level to the next is conveyed by combining the results of Figure 2.1 and Figure 2.2 into a single table, given below.

Table 2.3 Calibration summary (2000)

ELSI Score Range	ELSI Level	Calibration Results	Label
0-15	Level 1	Lack 35% of basics Have 10% of comforts/luxuries Have 47% of the financial problems Have 35% of the accommodation problems Lack 22% of the child basics	'Very restricted' living standard
16-23	Level 2	Lack 22% of basics Have 16% of comforts/luxuries Have 36% of the financial problems Have 29% of the accommodation problems Lack 13% of the child basics	'Restricted' living standard
24-31	Level 3	Lack 11% of basics Have 24% of comforts/luxuries Have 20% of the financial problems Have 23% of the accommodation problems Lack 5% of the child basics	'Somewhat restricted' living standard
32-39	Level 4	Lack 6% of basics Have 31% of comforts/luxuries Have 12% of the financial problems Have 17% of the accommodation problems Lack 3% of the child basics	'Fairly comfortable' living standard
40-47	Level 5	Lack 2% of basics Have 45% of comforts/luxuries Have 5% of the financial problems Have 11% of the accommodation problems Lack 1% of the child basics	'Comfortable' living standard
48-55	Level 6	Lack 0.4% of basics Have 65% of comforts/luxuries Have 2% of the financial problems Have 7% of the accommodation problems Lack 0% of the child basics	'Good' living standard
56-60	Level 7	Lack 0% of basics Have 88% of comforts/luxuries Have 1% of the financial problems Have 4% of the accommodation problems Lack 0% of the child basics	'Very good' living standard

Living standard vignettes

An additional way of using the ELSI calibration data is to present a series of brief illustrative case histories (referred to here as vignettes) that are characteristic of economic family units at different living standard levels. This is done below. The vignettes are based on the statistical information concerning access to comforts and restrictions of basics, and the concomitant information regarding serious financial problems, accommodation problems, and restrictions in child basics. Vignettes are presented for economic family units without dependent children, and economic family units with dependent children. The vignettes do not describe particular people or economic family units; rather, they are composite pictures constructed from the statistical results. There are a variety of ways to present an explanation of what it means to be at various intervals on the ELSI scale and the vignettes are but one example. Those not interested in the vignettes presentation should skip over to the next chapter.

Economic family units in Level 1 (ELSI score range 0 to 15, which contains those with lowest living standards)

Statistical Description: At this level people lack on average 35 percent of the basics they want, and have only about 10 percent of the comforts they want. Additionally, they have 47 percent of the serious financial problems, and 35 percent of the accommodation problems. Economic family units with children lack an average of 22 percent of the child basics.

Level 1 Economic family unit without dependent children:
Stephen is a benefit recipient. He is single and lives in a flat with three others. Since leaving school he has been unable to find work. Stephen has very few basics that he wants - he does not own a comfortable bed or have sufficient blankets to keep him warm in winter; he does not own a winter coat, and does not have a good pair of shoes. Instead, he continues to wear an old worn-out pair of shoes. He has no insurance, and economises a lot on fruit and vegetables. He became quite sick during the winter, but was unable to afford a visit to the doctor. Stephen does have one comfort - he enjoys rugby, and plays for his local club. Stephen has a number

Terminology:
For descriptive purposes, Level 1 is characterised in this report as a 'very restricted' standard of living.

of financial problems - he is unable to make the minimum payments for his credit card, he sometimes borrows money from others, and relies on gifts of food and money from his family. Also, the flat that he is sharing is quite run down - as well as being draughty and damp, it has problems with the plumbing, and some of the doors don't close properly.

Level 1 Economic family unit with dependent children:
Catherine is a single mother who has an eight-year-old son; together they live in a house rented from a private landlord. Catherine's only source of income is the Domestic Purposes Benefit; last year she lost her part-time job when the local frozen food factory closed down. Catherine lacks many of the basics that she considers important - she often goes without fresh fruit and vegetables, relies on second-hand clothing, wears worn shoes, and cannot afford contents insurance for her home. She has poor eyesight, but has been putting off getting a new pair of glasses because of the cost. She does not have secure locks on her doors. Finally, she cannot afford to buy presents for her parents or for her sister at Christmas time. The one comfort for her is that she has recently been given a second-hand computer, which her son uses for his school assignments. Catherine has a number of financial problems - she is sometimes unable to pay her electricity bill on time, she is currently behind on her rent, and sometimes cannot make her hire-purchase repayments on time. In addition, she has problems with her accommodation - in particular, problems with the wiring, the outside paintwork, sunken piles, and a broken fence. Finally, she is feeling distressed that her limited finances restrict not only her own life, but also that of her son. Although she has been able to feed and clothe him adequately, he is a very sociable boy who would like to bring his friends home for a meal and to have them stay overnight. She has curtailed these activities because of the strain on her budget, and recently decided that she could not give him the birthday party that he had been hoping for, with invitations to all his friends.

Economic family units in Level 2 (ELSI score range 16 to 23)

Statistical Description: At this level people lack on average 22 percent of the basics they want and have only about 16 percent of the comforts they want. Additionally, they have 36 percent of the financial problems, and 29 percent of the accommodation problems. Economic family units with children lack on average 13 percent of the child basics.

Level 2 Economic family unit without dependent children:
Paul and Rebecca have been living together for just over a year. Both are still studying at university, and Rebecca will complete her degree next year. As neither of them qualifies for the student allowance, they are both dependent on what they receive from the living costs entitlement of the student loans scheme. Both work part-time: Paul at the supermarket and Rebecca as a waitress in a café. They lack some of the basics that they want - they cannot afford to heat their flat adequately, and they have to put up with feeling cold. Their bed is too small for them, and cost recently prevented Paul from going to an old school friend's funeral in another city. They have some comforts and luxuries that they want - Rebecca has a personal computer, which Paul also uses, and they have access to the Internet from home. They have some financial problems - last month they had to borrow some money from Paul's father to pay their rent on time, and they rely on the occasional gift from their parents (for instance, Rebecca's mum took her shopping for some clothes last week). They have quite a few problems with their flat, including broken paving, a leak in the roof, an uneven floor, and windows that do not open.

Level 2 Economic family unit with dependent children:
Matiu and Paula are a married couple with two children who are under the age of five, a boy and a girl. Recently they purchased their first home; an old two bedroom house with a small study and a workshop. A large proportion of their income now goes towards their mortgage repayments. Matiu works as a Human Resource Officer for a small forestry company. Until their first child was born, Paula also worked for the same firm. She has been offered the opportunity to return to work, but has been discouraged from

Terminology:
For descriptive purposes, Level 2 can be characterised as a 'restricted' standard of living.

doing so by the high childcare costs and the resultant small financial advantage that working would bring. Matiu and Paula lack some of the basics that they want - they do not have appropriate locks for their house and neither have a winter coat to keep them warm. Matiu has sometimes postponed visits to the doctor, and at times, failed to pick up prescriptions from the pharmacy. However, they do have several comforts that they want - they have a subscription television service and both have nice clothes for Sunday church. Matiu and Paula have some financial problems - last month they couldn't pay their phone bill or their credit card bill on time. In addition to this, their house needs work to be done on it - they have noticed some dampness through the floor, the kitchen really needs a new coat of paint, and the fence is on a lean. Also, some of the electrical plugs don't always work. With regard to child basics, their son has grown out of his raincoat, and both children have clothes and shoes that are becoming tight because Matiu and Paula have been putting off buying replacements.

Economic family units in Level 3 (ELSI score range 24-31)

Statistical Description: People in this level lack on average 11 percent of the basic items they want and have 24 percent of the comfort items they want. Additionally, they have 20 percent of the financial problems and 23 percent of the accommodation problems. Economic family units with children lack an average of 5 percent of the child basics.

Level 3 Economic family unit without dependent children:
Tony and Suzanne are both middle-aged and live in their own home. Tony has been out of work for about three years as a result of a serious workplace accident; he continues to receive regular treatment, but is unlikely to ever return to full-time work. Their main source of income is from Suzanne's job: she works as a receptionist for a real estate agent. Living on only one income has meant that their mortgage repayments now make a substantial drain on the amount of money they have to spend. They lack several basics that they

Terminology:
Level 3 can be characterised as a 'somewhat restricted' standard of living.

would like - they no longer have contents insurance for their home, and Suzanne has postponed getting new reading glasses. However, they have some of the comforts that they desire - each year they go camping with friends; Suzanne is able to buy some nice clothes, and Tony is able to spend time on his hobbies: wood-carving and glass-blowing. Recently they have had to replace the washing machine, a cost that ran down their finances, so last week they had a garage sale to sell off unwanted possessions to help them meet some of their day-to-day expenses. Their house needs some maintenance work that they have been putting off - they have problems with the plumbing, the interior paintwork, and some of their windows stick.

Level 3 Economic family unit with dependent children:
Frank and Kelesi were both born in Tonga but moved to New Zealand about three years ago, shortly after they were married. Two years ago they had their first child, a son. Frank works at the petrol station, mainly on night shift, and Kelesi works one day a week for a commercial cleaning company. They have had to economise on some basic items that they want - they are unable to heat all their main rooms during winter, so instead just heat the lounge. Also they have an old bed that has begun to sag. They have been intending to replace it, but are presently unable to do so because of the cost. Frank and Kelesi have some comforts and luxuries - they have some nice clothes for special occasions, they have Sky TV, and Kelesi has joined the social netball team associated with their local church. They have one financial problem - they have high repayments for a number of hire-purchases, and sometimes they cannot pay the bill on time. Also, they have several accommodation problems - their flat is draughty, one or two doors do not open properly, and their boundary fence is in need of repair. Finally, although they have been able to provide most of the basics needed by their son, and are building up a small collection of books for him, their flat is not particularly suitable for a family with a child, and provides very little space where he can safely play.

Economic family units in Level 4 (ELSI score range 32 to 39)

Statistical Description: At this level people lack on average 6 percent of the basics they want but have 31 percent of the comforts they want. Additionally, they have 12 percent of the financial problems and 17 percent of the accommodation problems. People with children lack 3 percent of the child basics.

Level 4 Economic family unit without dependent children:
Fiona is 27 years old. She works as a payroll officer in the head office of a bank. For the last year she has been living alone in a house rented from a private landlord. With one exception, Fiona has almost all the basics that she wants - she has been putting off a visit to her optician because of problems she is having with her contact lenses - which she is afraid she may need to replace and would be a major expense for her. She has some of the comforts that she wants - she enjoys cooking and likes being able to afford more expensive cuts of meat; last month she bought a new computer on hire-purchase, and with it she is now able to surf the internet from home. She has just returned from a ten day trip to Sydney where she caught up with some old friends who moved there a couple of years ago. Fiona has one financial problem. She has a large amount of debt on her credit card and she is having difficulty paying this back. Fiona also has some problems with her accommodation - the interior paintwork is shabby and some of the piles have sunk.

Level 4 Economic family unit with dependent children:
Jim is a sole parent with two teenage sons. He works as a car salesperson in the Manawatu, and owns his own home. Jim has most of the basic items that he wants although cost prevented him last month from attending the funeral of his uncle who lived in the South Island. He has some of the comforts that he considers important - he has regular holidays away from home with his children; he has pay TV, and he has a computer with internet access. Jim has one financial problem - electricity and gas bills can be expensive in winter, and he sometimes has difficulty making payments on time. In addition he has being putting off some needed home repairs - replacement of several cracked window panes and

Terminology:
This level can be described as a 'fairly comfortable' standard of living.

some leaky spouting. Jim is unable to afford one child basic - recently his elder son's bike was stolen, and at present Jim isn't able to replace it.

Economic family units in Level 5 (ELSI score range 40 to 47)

Statistical Description: People in this level lack on average 2 percent of the basics they want, and have 45 percent of the comforts they want. Additionally, they have 5 percent of the financial problems and 11 percent of the accommodation problems. Economic family units with dependent children lack 1 percent of the child-specific basics.

Level 5 Economic family unit without dependent children:
Teddy, aged 32, and Leilani, aged 31, live together in a two bedroom flat. Teddy, who comes from England, works in a helpdesk call centre while Leilani does temping work as a PA. They met four years ago when Leilani was living in London on her OE. When Leilani returned to New Zealand last year, Teddy accompanied her. In a few months they intend to marry, something that they are now saving for. They would like to start a family in a couple of years time. They lack almost none of the basics that they want, and have many of the comforts that they desire - they have a computer with internet access; both wear nice clothes; and Teddy has just joined the local tramping club and begun to purchase outdoor gear. They regard their income as more than adequate to meet their everyday expenses. They have no financial problems, and a only a minor problem with their accommodation - a couple of windows rattle in the wind.

Level 5 Economic family unit with dependent children:
Tu and Mary have been married for 18 years. They have two children aged 11 and 14. Tu describes himself as Māori, and Mary describes herself as Pakeha. Twelve years ago they bought their first house. They lack almost none of the basics that they want, and have many of the comforts that they desire - they have regular holidays away, Sky TV, a computer with an internet connection,

Terminology:
Level 5 is described as a 'comfortable' standard of living.

and they are able to buy high quality steak for the barbecue in summer. They feel very satisfied with their standard of living. They have no financial problems. In recent months, Tu has been making use of the fine weather to do quite a lot of work on their house and the only task remaining on his list is the replacement of some rusty roofing iron. Both their children are doing well at school and are able to participate in the activities that they want to. For instance, Mary spends most Saturday mornings driving her elder child and others in his cricket team to the sports ground, as well as cutting the oranges, and washing the team's uniforms after the game. They do not lack any child-specific basics.

Economic family units in Level 6 (ELSI score range 48 to 55)

Statistical Description: At this level people lack a negligible proportion (0.4 percent) of the basics they want and they have 65 percent of the comforts they want. Additionally, they have two percent of the financial problems and 7 percent of the accommodation problems. Economic family units with children lack none of the child basics.

Level 6 Economic family unit without dependent children:
David and Elizabeth have been married for over 40 years. David is 72 and Elizabeth is 68. They have owned their own home freehold for nearly twenty years and are now receiving New Zealand Superannuation, which augments the modest income they receive from some investments. They lack none of the basics that they want, and have almost all of the comforts that they want. They have regular holidays staying with friends and family. David enjoys having time to spend in the garden, and has recently built a hot-house. Elizabeth was recently persuaded by a friend to join a sketching club, and joins in regular excursions to draw buildings of historic interest. They both feel able to purchase new clothes when they want to, including the new suit that David bought for his granddaughter's wedding. In addition to pay TV, they have a personal computer, and access to the internet. They had always

Terminology:
People in this category are described as having a 'good' standard of living.

hoped to go on a major overseas trip. Since childhood Elizabeth has dreamed of seeing the Pyramids; however, they have reluctantly decided that this would make too big a dent in their modest capital. Despite this, they feel their income is more than adequate to meet their needs. They have no financial problems, and their house is generally in good condition; although there are some minor items of section maintenance that need attention.

Level 6 Economic family unit with dependent children:
Glen and Helen have a daughter aged 14 and a son aged 12. Glen is self-employed: he runs a plumbing business; Helen works part-time as a bank teller. They lack none of the basics that they want, and have almost all the comforts that they want - Helen is able to spend time making pottery; she can buy new clothes when she wants to, and can go away on holiday reasonably often. Glen can watch live sport on TV, surf the internet, and go shopping when he feels he wants to buy something. They don't economise on buying the types of food that they like to eat. They regard their income as more than adequate to meet their day-to-day needs. They have no financial problems at all, and only a very minor accommodation problem - although their bathroom is functional, the décor is a little dated. They are rather indulgent towards their children. They have encouraged the musical interests of their daughter, who has regular clarinet lessons, but are concerned that they have been a little too generous in buying skating clothing for their son. Their children lack no child basic items.

Economic family units in Level 7 (Score range 56 to 60, which has those with the highest living standards)

Statistical Description: At Level 7 people lack none of the basics that they want, and have the majority (88 percent) of the comforts they want. Additionally, almost none have any of the listed financial problems, and they have on average only 4 percent of the accommodation problems. Economic family units with children lack none of the child basics.

Terminology:
For descriptive purposes, people in this level can be described as having a 'very good' standard of living.

Level 7 Economic family unit without dependent children:
John and Sue have been married for 31 years. They have two children aged 23 and 26. Their youngest recently left home when she purchased her first house, while their older daughter is 'in between flats' at the moment. John is a branch manager for a large building supplies company; Sue works in an administrative position for a government department. Despite them both having a good income, they had to be quite careful with their money while they supported their children through university. Now that their children have finished studying, and they have finished paying off the mortgage, they are enjoying having more freedom in how they spend their money. They have all the basics, and a lot of the comforts and luxuries that they want. The one exception to this is that they are unable to afford a new boat. They have been using their existing boat for a few years, but would like something bigger. They accept that it will take them a few years to save enough money to buy the type of boat that they want. Overall, they feel they have a high standard of living and their income is more than adequate to meet their needs. They have no financial problems, and their house is in excellent condition.

Level 7 Economic family unit with dependent children:
Toby and Nicola are both in their mid thirties. They have one child aged $2\frac{1}{2}$, a boy. Both are working full-time in professional positions - Toby as a commercial lawyer and Nicola as a project manager. They bought their first home five years ago, and anticipate paying off their mortgage next year. They intend to move into a bigger house before they have their next child. To enable both of them to work full time, it is necessary that their son is in childcare; however, this does not put a dent in their budget. They lack none of the basics, and have nearly all of the comforts that they want - they buy what they want as the need arises. They are very satisfied with their standard of living, and feel they have a high standard of living. Their income is more than adequate to meet their needs. Their accommodation is in excellent condition and they like to keep it this way. For instance, they have just repainted and repapered the lounge after their son drew on the walls with his felt tip pen. They have no financial problems, and are lacking no child-specific basics.

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

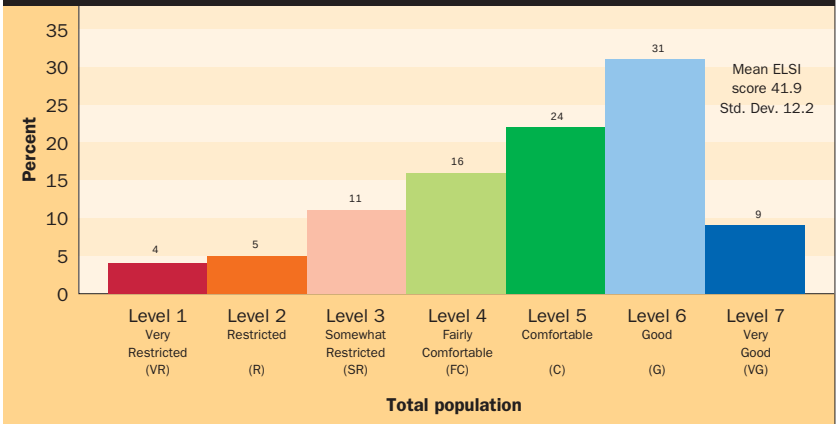
19 From a policy perspective, it is also of interest to examine the composition of various living standard categories, in particular the composition of those in the 'very restricted' to 'somewhat restricted' categories. For those with a particular interest in examining the distribution of the population 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]

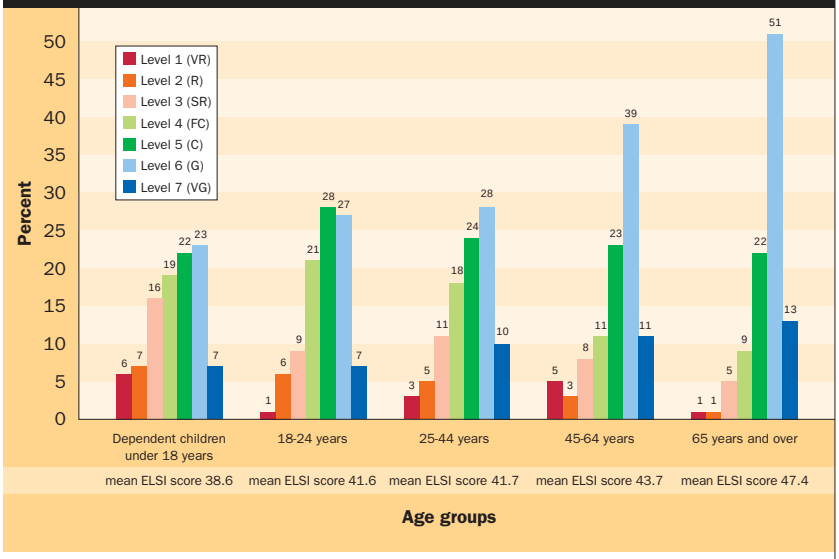
Living standards vary considerably by age. In broad terms, the results here indicate a rise in living standards across the life cycle.

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.

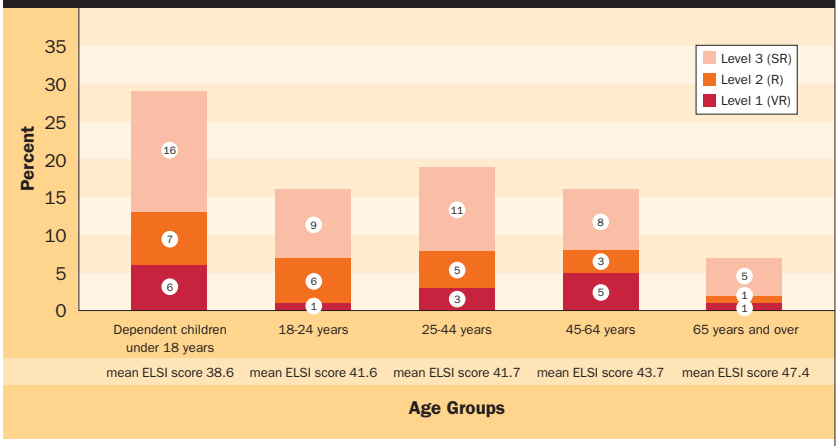
23 A child is defined as a person aged less than 18 years who is dependent and who does not have a partner or child of their own. By contrast, a person aged less than 18 who is self-supporting or has a partner or a child is counted as a separate economic family unit (or part of a separate unit).
The 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

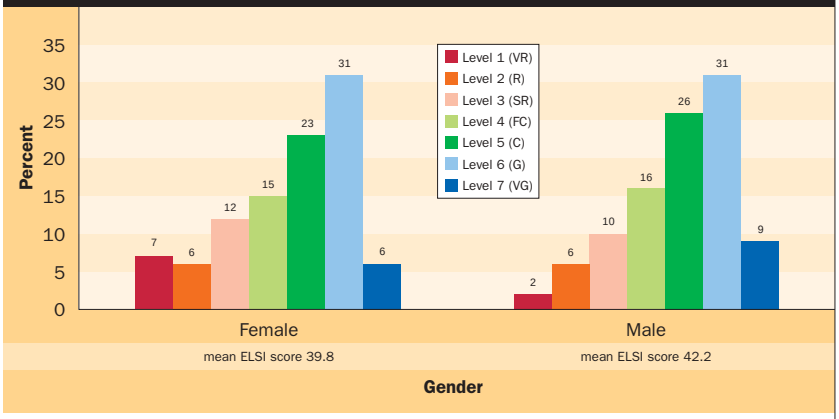
The ELSI scale is primarily a measure for the economic family unit, which means that the score distributions for partnered males and females will essentially be the same, with the exception of small differences associated with sampling and the effects of gender-related responses.

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

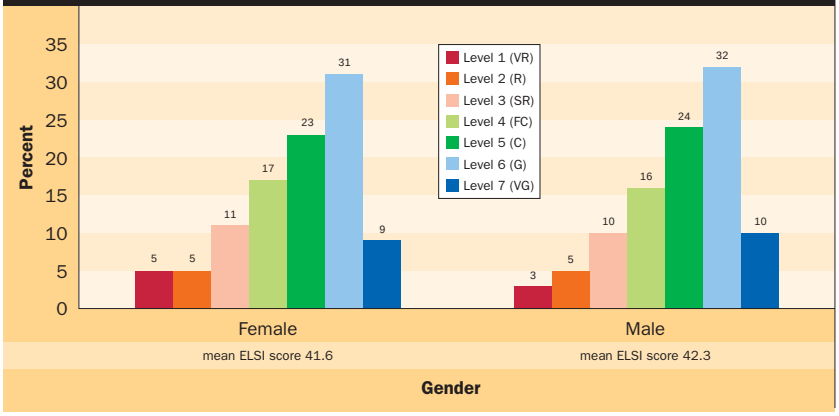
the lower living standards end of the continuum. In 2000, 25 percent of women in single-adult and sole-parent family units had lower living standards (in the level 1 to 3 range) compared with 18 percent of men. A large part of the difference between men and women portrayed here is due to the lower living 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).

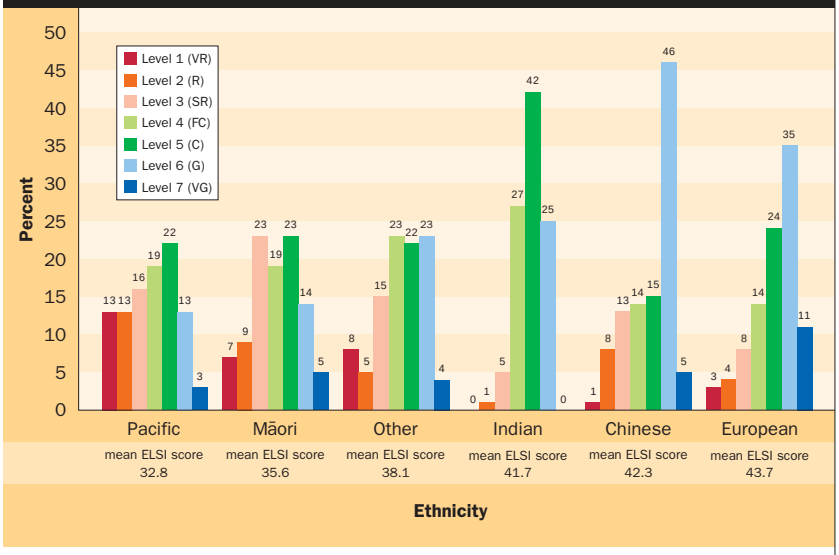
The Indian population appears to be more concentrated into the 'comfortable' range than other groups and under-represented at both extremes of the distribution. This is reflected in the standard deviation in living standard scores for the Indian population being barely half that of the population as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

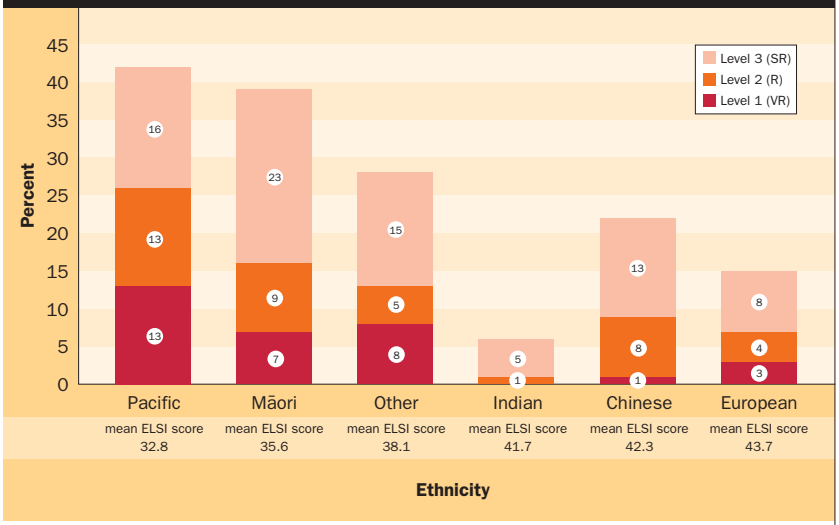
Table 3.2 Mean ELSI scores and mean ELSI scores standardised for age by ethnicity (2000)

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

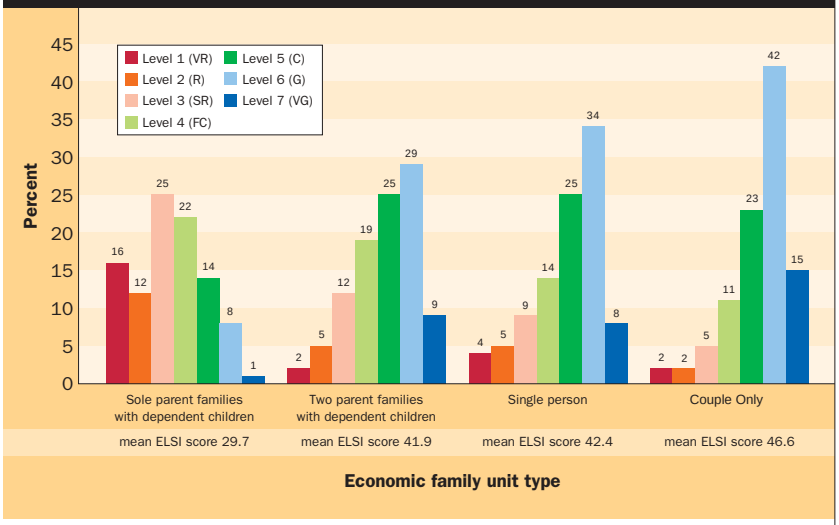


While higher proportions of Māori and Pacific people have ELSI scores that place them at the lower end of the ELSI scale, it is important to remember that the majority of Māori and Pacific people have living standard scores that place them in the 'fairly comfortable' to 'very good' living standards categories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

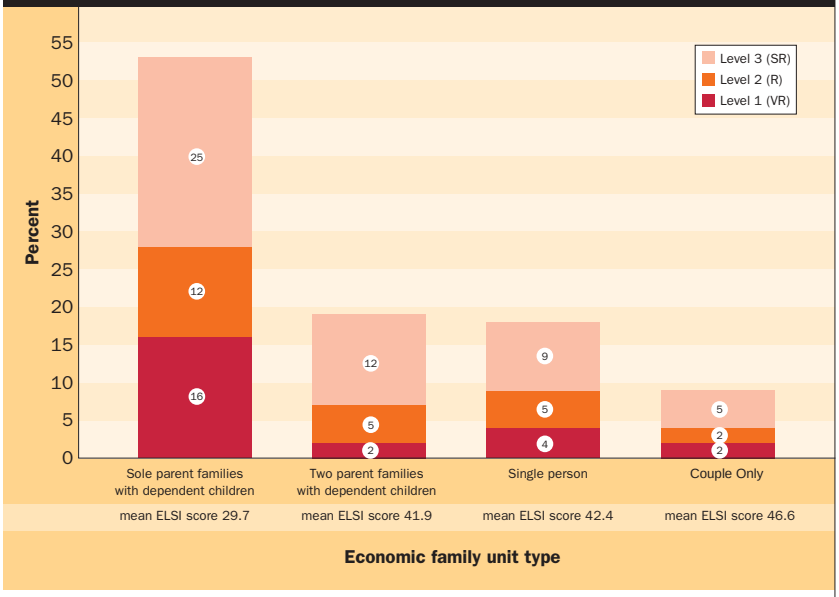


27 The analysis here is based on counts of people in the different economic family units. For example, where we refer to sole-parent families we mean the population in sole-parent families.

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.

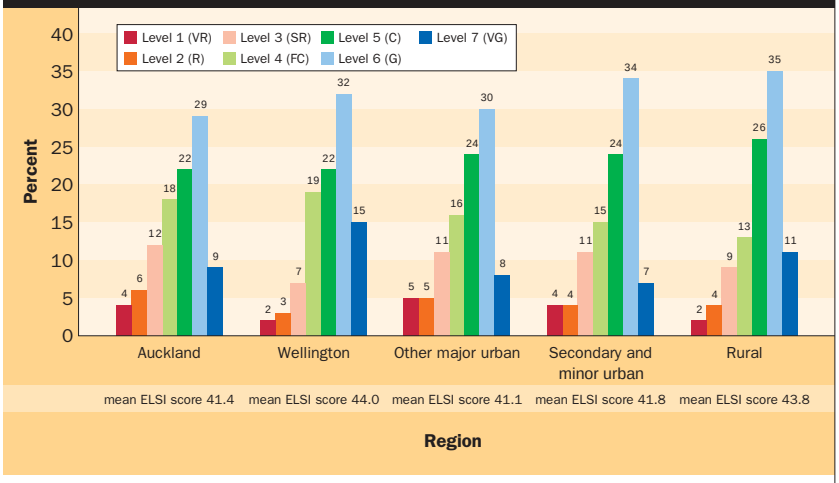
Figure 3.9 Proportion of population in each economic family type experiencing lower living standards (ELSI levels 1-3) 2000



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



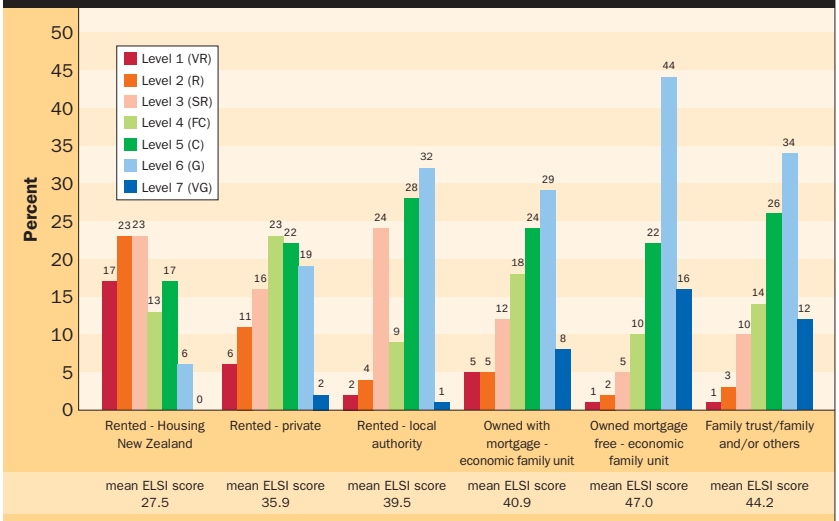
Differences are small between the broad geographic categories available. The results are consistent with data from other sources (e.g. 2001 Population Census) showing that Wellingtonians have a relatively high socio-economic profile. Although data from the Population Census and other sources show that 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.

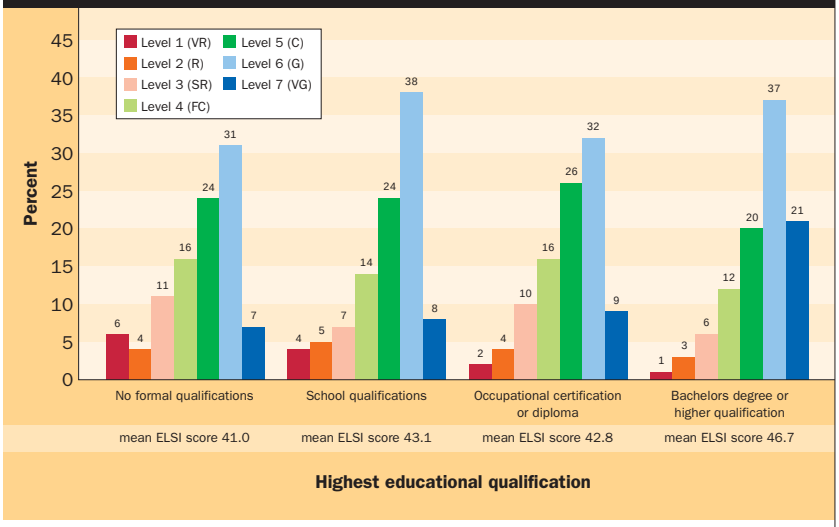
For the population as a whole, education is associated with living standard differences and there is a broad correspondence between educational level and living standard across the groups examined in the preceding analysis. For example, Māori and Pacific people, who have lower ELSI averages, have comparatively 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

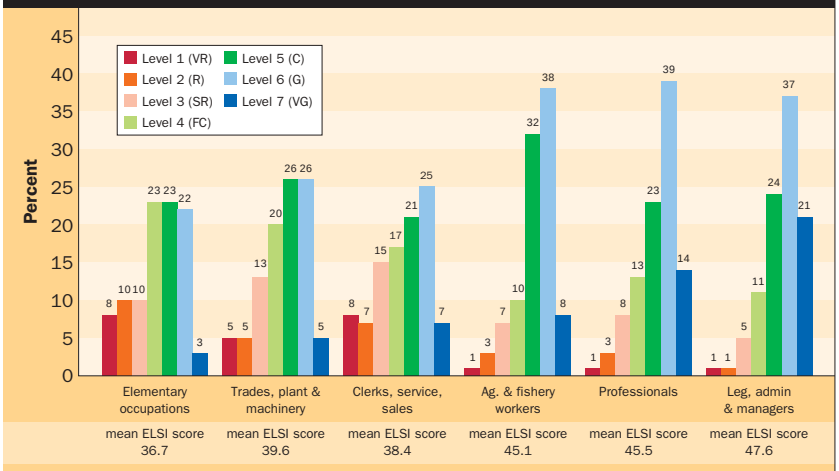
* The standardisation procedure applies the age distribution of the total adult population to each qualification group.

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.

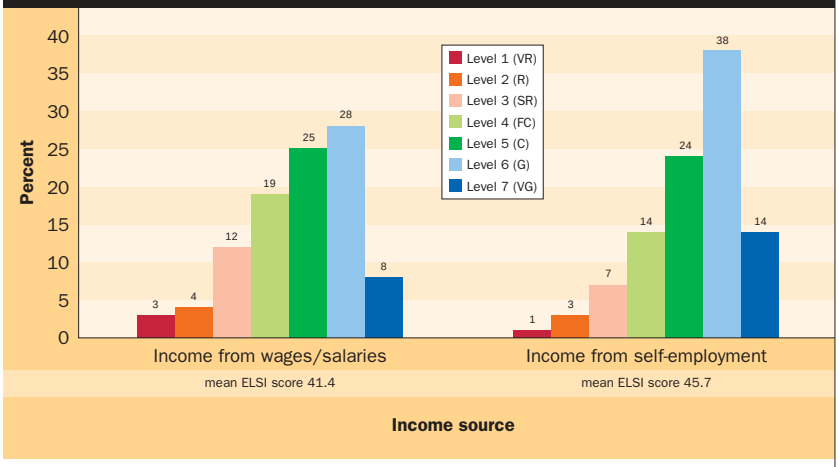
33 The NZSEI consists of an index of occupations classified according to the New Zealand Standard Classification of Occupations 1990 (NZSCO90). The NZSCO90 is a skills based classification, grouping together occupations with similar skills requirements. The NZSEI is modelled on the International Socioeconomic 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

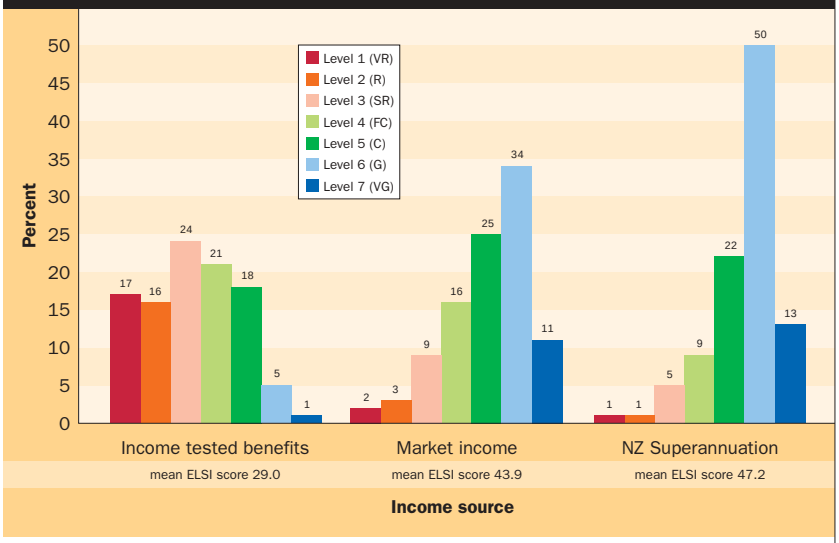
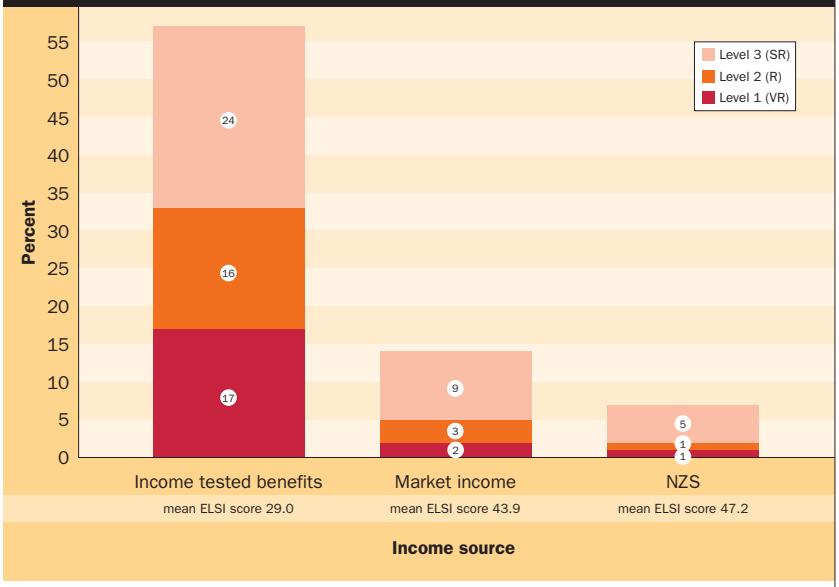


Figure 3.16 shows that income-tested beneficiaries were four times more likely than those receiving market incomes to have lower living standards in the levels 1 to 3 range. In total, 57 percent of those in receipt of income-tested benefits had scores placing them in one of the three categories from '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].

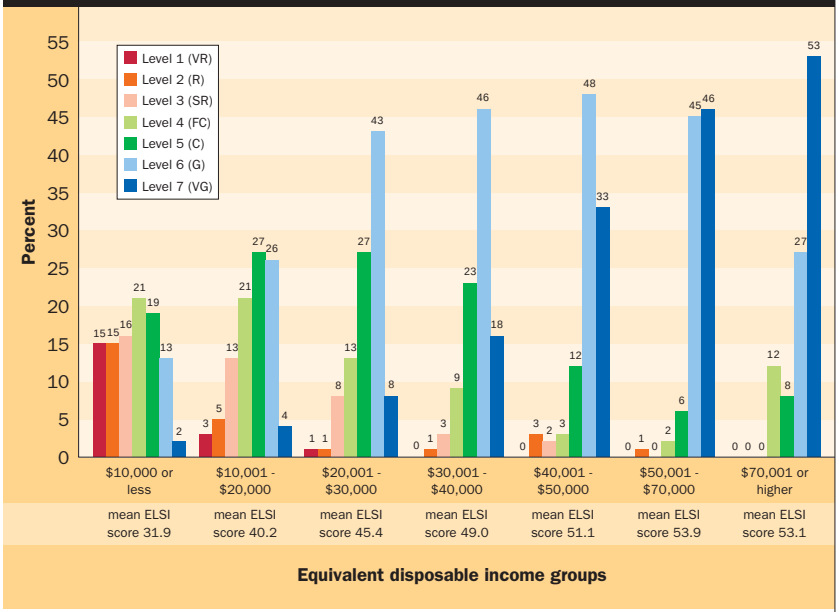
People living in economic family units with an equivalent disposable income less than $10,000 have a higher than average representation at the very low (level 1) end of the living standards scale. Nobody with an equivalent disposable income above $30,000 is at the bottom end of this scale. Those with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

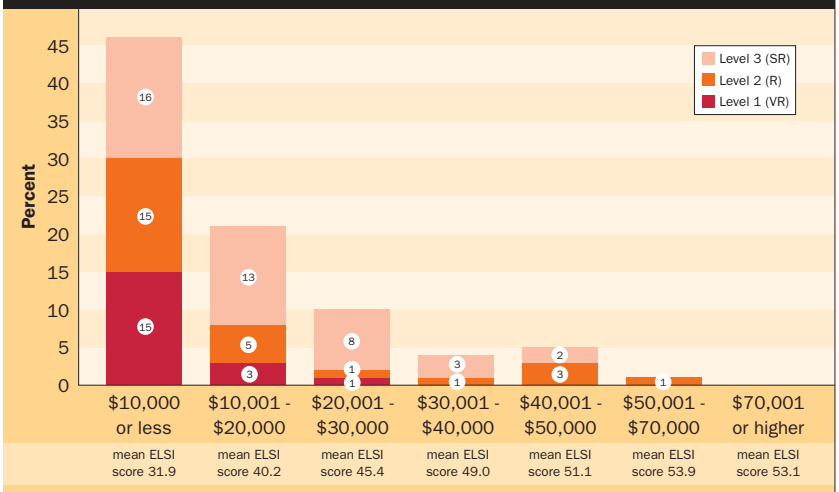
While the risk of lower living standards increases with reducing income, some of the population with low incomes have favourable living standard scores. In 2000, up to 15 percent of the population with equivalent disposable incomes of $10,000 or less per annum had living standard scores in the levels 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]

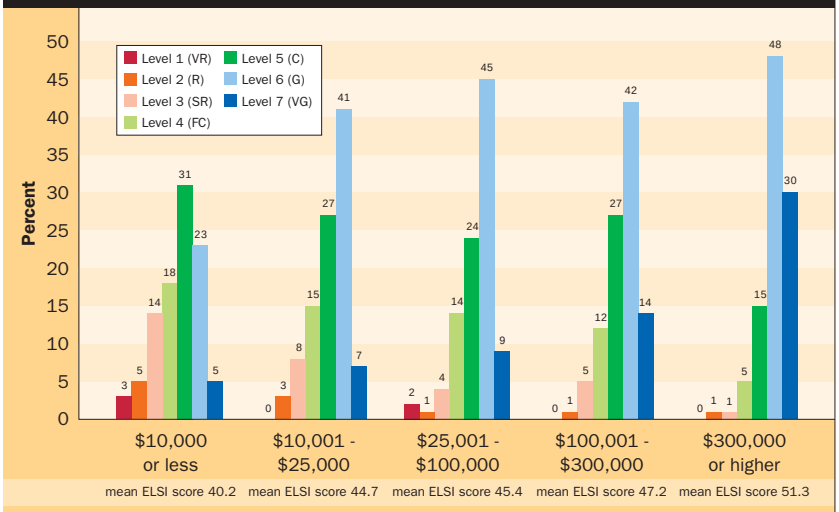
Assets can influence living standard indirectly by their effects on levels of income, as savings and investments can raise living standards by being progressively run down (spent) to permit a higher level of consumption than would otherwise have occurred. There is also likely to be a direct effect in 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



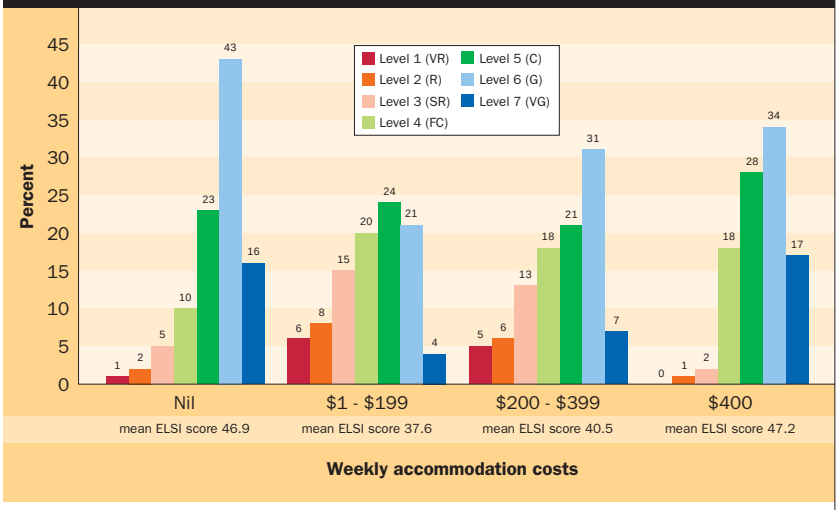
Accommodation costs

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.

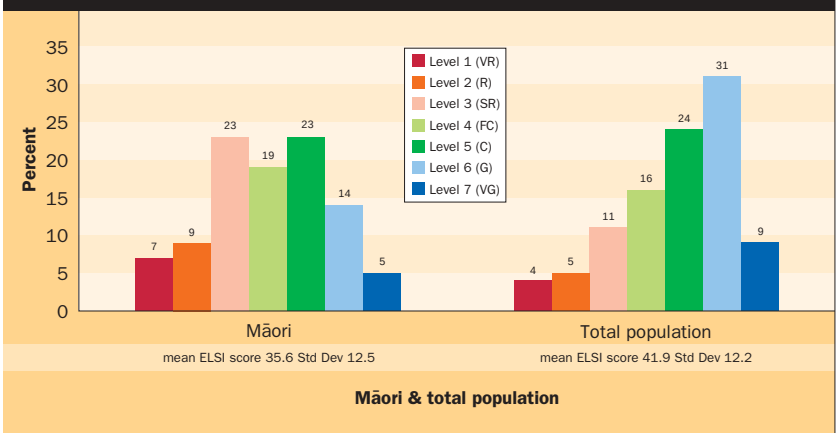
The analysis presented here is based on individuals who identified Māori as one of their ethnic groups in the survey[43].

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).

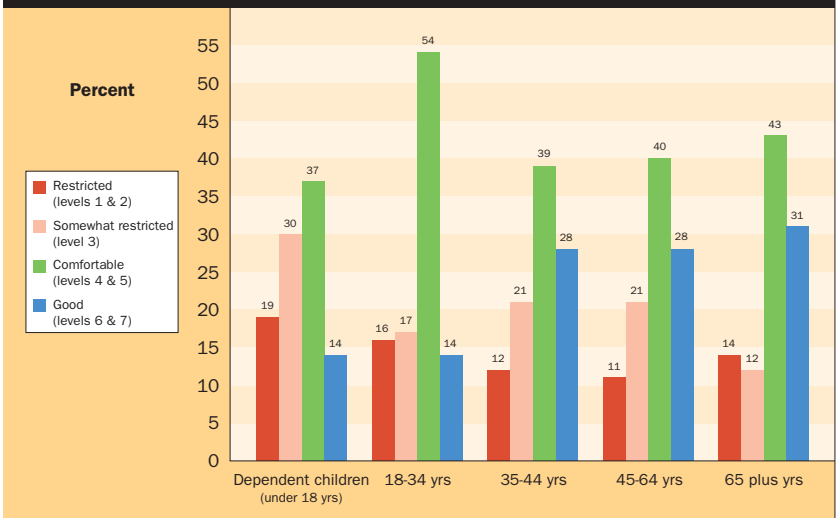
The fact that older Māori do not have better living standards than Māori in other age groups (as demonstrated by the ELSI scale), mirrors the results of the Material Well-being Scale reported in the study of the living standards of older Māori. That study identified three sets of factors that operated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

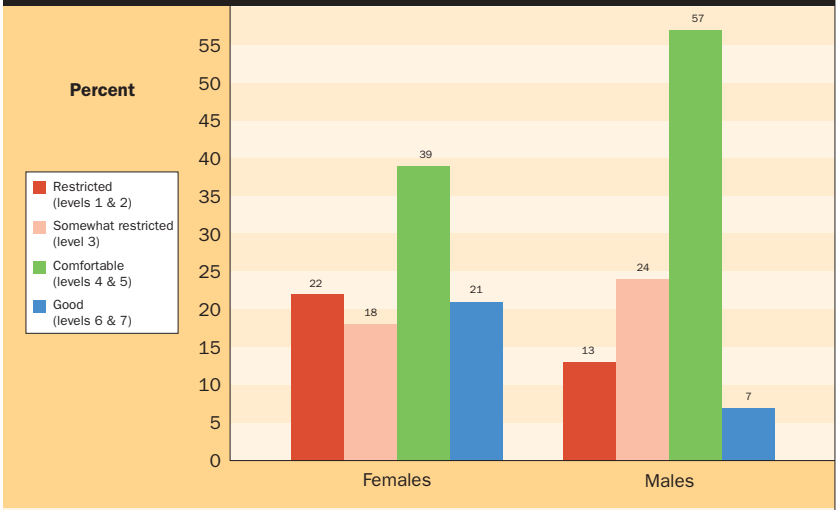
Gender

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.

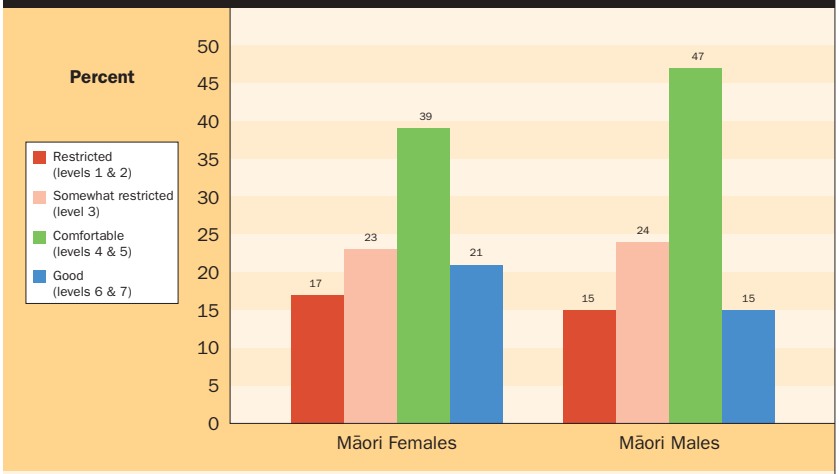
Figure 4.3 Distribution of living standards for Māori aged 18 years and over in single person and sole parent economic family units by gender 2000



	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



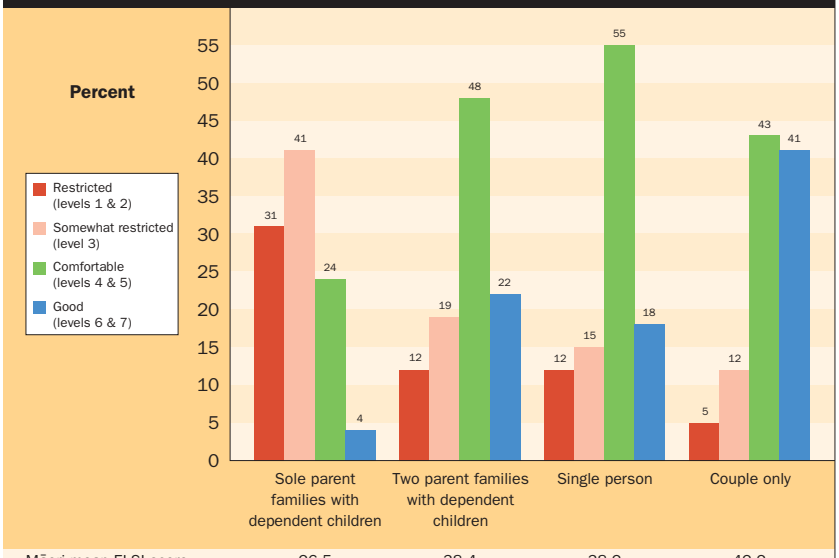
Māori mean ELSI score	35.6	35.7
Total mean ELSI score	41.6	42.3

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



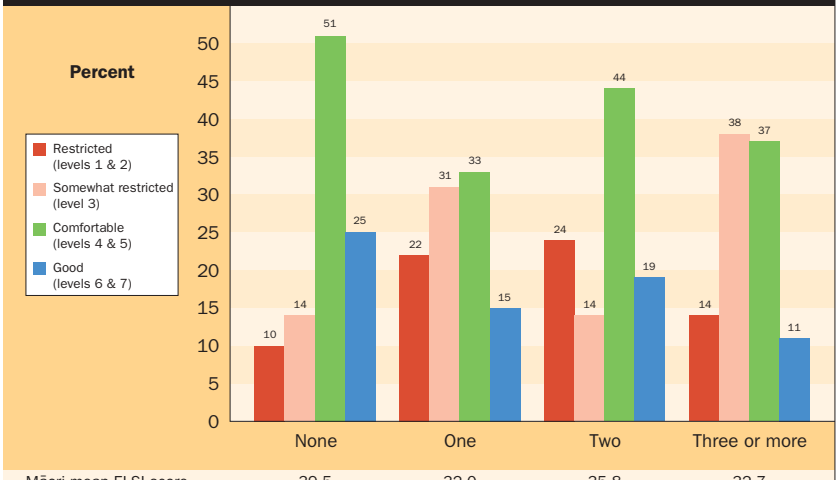
	Sole parent families with dependent children	Two parent families with dependent children	Single person	Couple only
Māori mean ELSI score	26.5	38.4	38.2	42.2
Total mean ELSI score	29.7	41.9	42.4	46.6

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



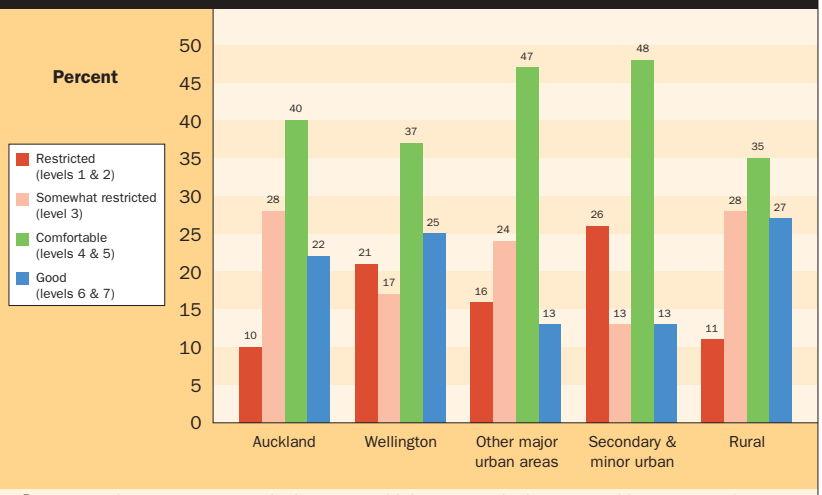
	None	One	Two	Three or more
Māori mean ELSI score	39.5	32.0	35.8	32.7
Total mean ELSI score	43.6	39.7	40.1	38.0

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



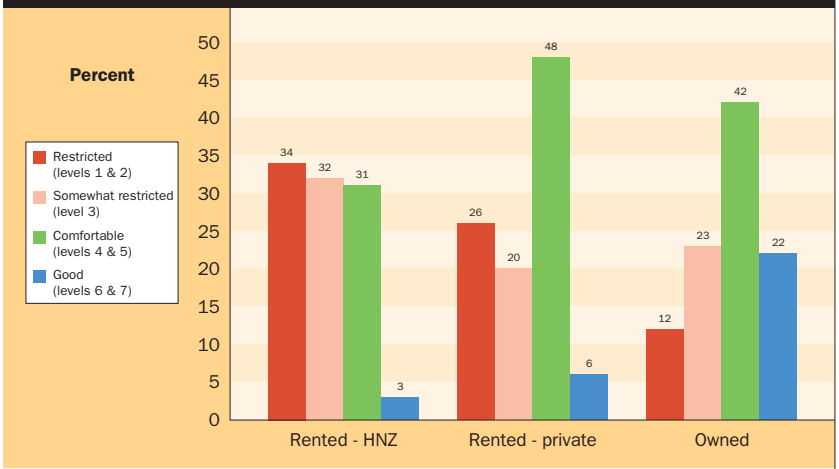
	Auckland	Wellington	Other major urban areas	Secondary & minor urban	Rural
Māori mean ELSI score	37.3	36.8	34.6	33.5	37.1
Total mean ELSI score	41.4	44.0	41.1	41.8	43.8

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



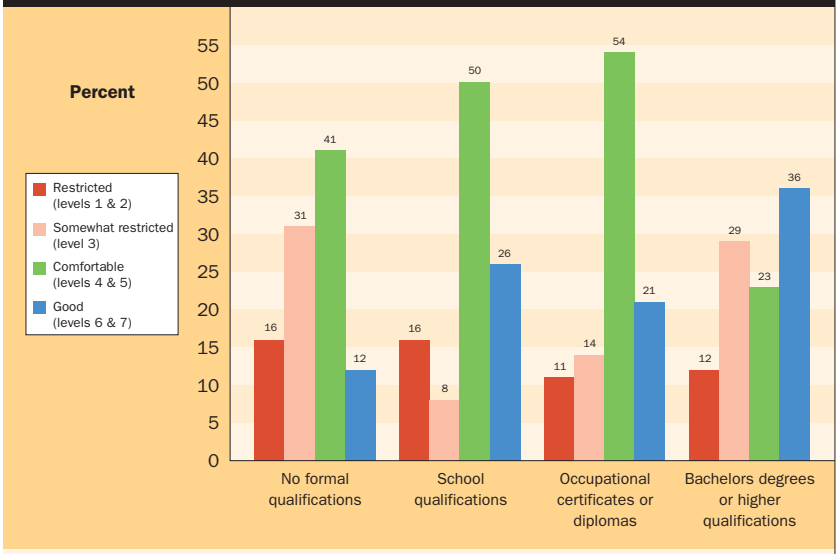
	Rented - HNZ	Rented - private	Owned
Māori mean ELSI score	27.8	32.0	37.1
Total mean ELSI score	27.5	36.0	43.1

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);

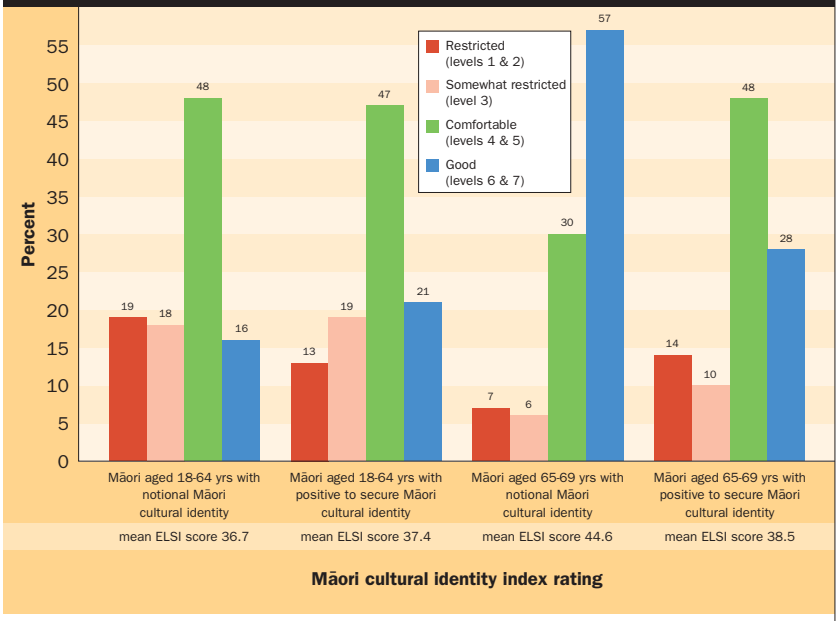
- Do you have a financial interest in Māori land (i.e. as an owner, part/potential owner or beneficiary)? (Yes/No/Not sure/don't know);
- In general, would you say your contacts are with ...(Mainly Māori...No Māori);
- How would you rate your overall ability with Māori language? (Excellent...Poor).

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



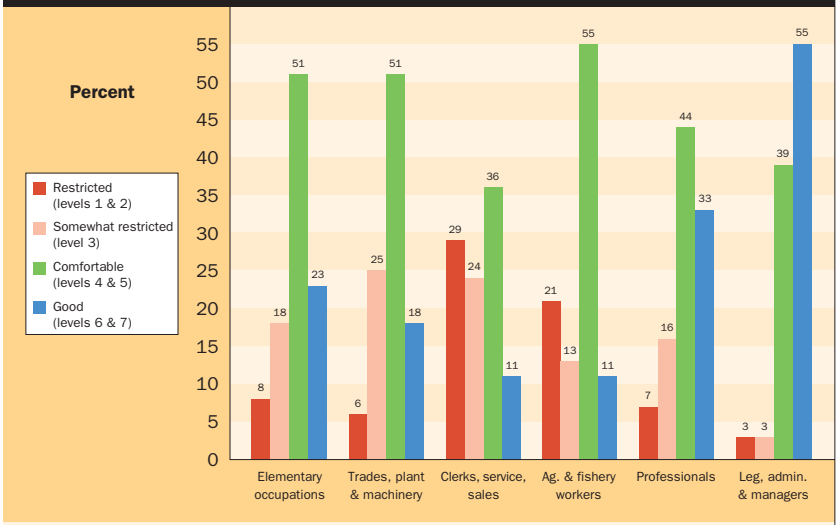
The majority of Māori in both age groups (91 percent for those aged 18-64 years and 81 percent for those aged 65-69 years) had a positive to secure identity with Māori culture as measured by the Māori cultural identity index. It is note-worthy that the percentage is higher for Māori aged 18-64 years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

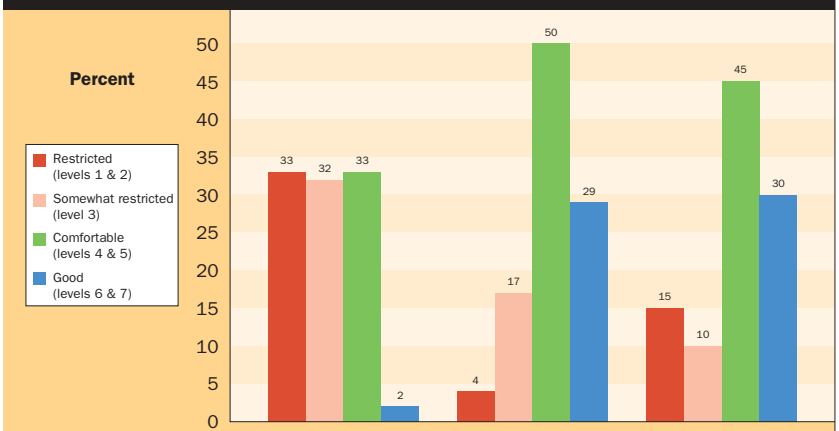


	Elementary occupations	Trades, plant & machinery	Clerks, service, sales	Ag. & fishery workers	Professionals	Leg, admin. & managers
Māori mean ELSI score	37.8	37.5	31.1	37.5	41.9	47.5
Total mean ELSI score	36.7	39.6	38.4	45.1	45.5	47.6

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:

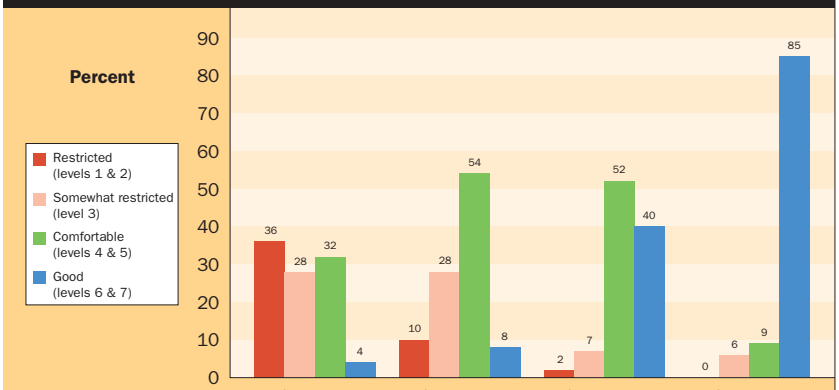
- net annual income;
- savings and investments;
- accommodation costs;
- economic life events and stresses;
- the number of children raised or supported.

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

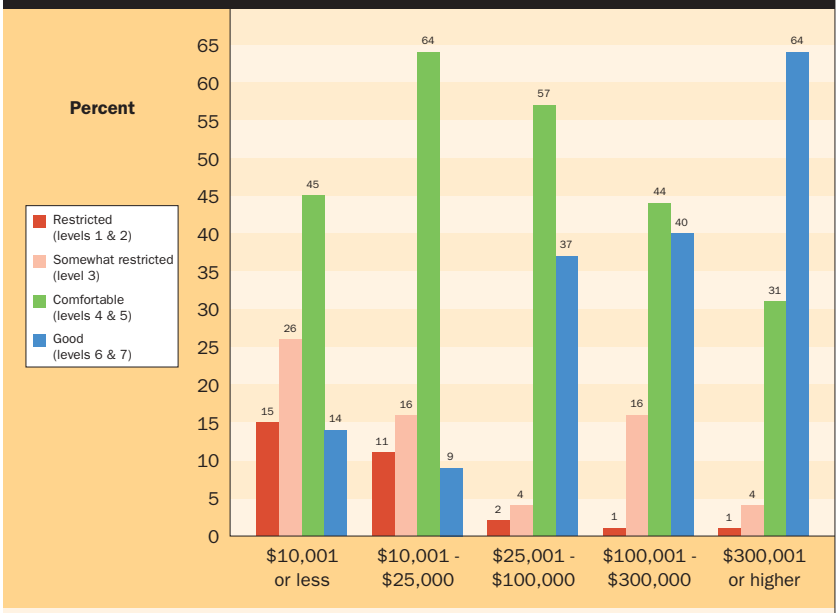


	$10,000 or less	$10,001 - $20,000	$20,001 - $40,000	$40,001 or higher
Māori mean ELSI score	27.6	34.9	45.1	52.7
Total mean ELSI score	31.9	40.2	46.8	52.3

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



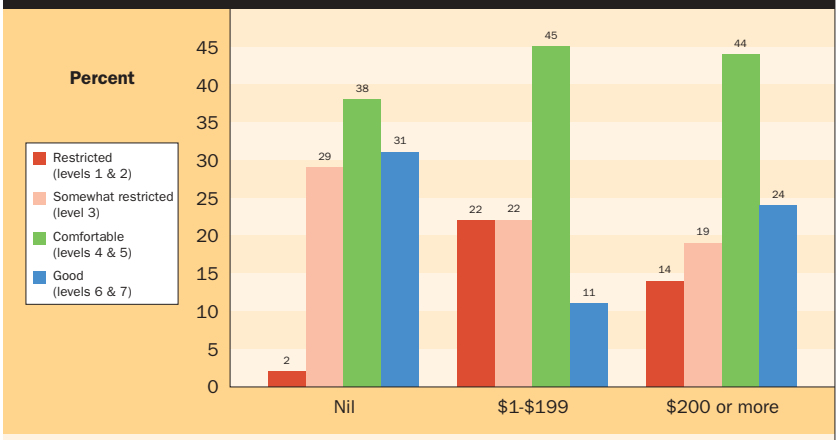
	$10,001 or less	$10,001 - $25,000	$25,001 - $100,000	$100,001 - $300,000	$300,001 or higher
Māori mean ELSI score	35.3	38.5	43.2	44.4	49.2
Total mean ELSI score	40.2	44.7	45.4	47.2	51.3

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.

CHAPTER FIVE

The living standards of the New Zealand Pacific population

Introduction

New Zealand went through a period of industrial expansion after World War II. European immigration and the rural-to-urban migration of Māori, who filled low skilled positions in secondary sector industries, occurred in response to the high labour demand generated by the expanding urban secondary sector. To help meet that demand, workers from the Pacific Islands were recruited as a supplementary source of labour for low skilled areas of work.

By the mid-1970s, economic conditions started to deteriorate and workers from the Pacific Islands came to be perceived quite widely as both an economic and social liability, encouraging stigmatisation and political scapegoating (Krishnan et al, 1994). Pacific Islands workers had been actively recruited into certain sectors of the New Zealand economy and primarily occupied low-skilled and low-waged positions in the manufacturing industries. Few attempts had been made to increase the range of occupations and industries in which Pacific Islands workers were employed.

The concentration of Pacific Islands workers in low-waged, low-skilled manufacturing jobs left them in a vulnerable position in the 1980s, as economic recession, restructuring and unemployment had a disproportionately harsh impact on the parts of the economy in which they were concentrated.

Although Pacific people in New Zealand have tended to be stereotyped as a single homogeneous group, they make up a diverse population, comprising people from many different birthplaces and ethnicities whose adaptations to life in New Zealand have been as varied as their origins. In the 2001 Population Census, 6 percent of the New Zealand population were of Pacific Islands ethnicity[51] and 40 percent of this population were born in the Pacific Islands. Over half (58 percent) of the Pacific population are second or third generation New Zealanders[52]. The experiences of this population differ from those of their forebears who immigrated to New Zealand.

Unfortunately, the number of survey respondents of Pacific ethnicity is only 237, [53] which makes unfeasible the sort of disaggregation that the preceding comments indicate as being highly desirable. The best that can be done is to pool these respondents for statistical purposes

51 The Pacific population is defined in terms of total responses to the ethnicity question in the 2001 Population Census.

52 The remaining 2 percent were either born in countries outside of NZ or Pacific countries or had inadequately specified birthplace and could not be coded.

53 There were 237 respondents of Pacific ethnicity in the survey. There were also 323 Pacific children in the economic family units of the Pacific respondents. Ethnicity is based on total responses to the ethnicity question. For example, if any adult respondent or child of the respondent had a Pacific ethnic group specified as one of their ethnicities, they are counted as part of the Pacific ethnic group. Refer to chapter 2 for further information on unit of analysis and the ELSI scale.

and give a broad overview of the living standards of the admittedly artificial grouping thus created. It is hoped that future reporting of the living standards of Pacific peoples will not have to be made under such a severe limitation.

As a further reflection of the small number of Pacific respondents, the results are presented using the four category classification 'restricted' (levels 1 and 2 combined), 'somewhat restricted' (level 3), 'comfortable' (levels 4 and 5 combined) and 'good' living standards (levels 6 and 7 combined). It has been necessary to aggregate many of the other variables used in the analysis and in some cases this has meant that only average living standard scores across some variables are given. Beneath most of the graphs presented in this chapter, a table of average ELSI scores is provided for Pacific people and for all people, to enable comparisons to be made between the living standards of Pacific people and those of the general population.

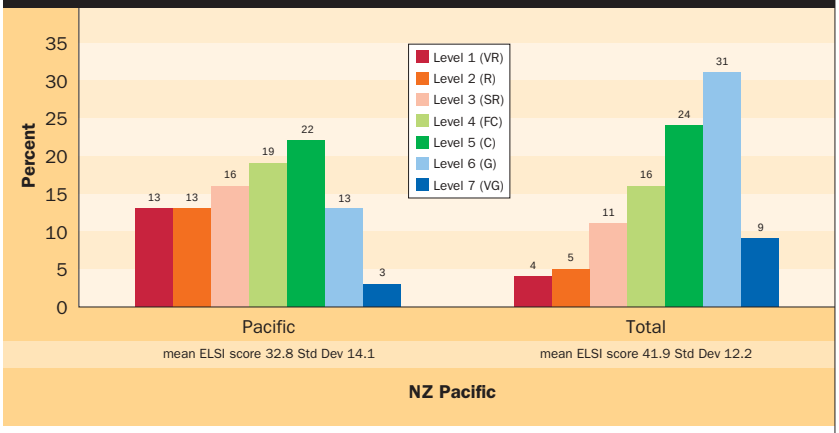
The analysis presented here is based on individuals who identified a Pacific ethnic group as one of their ethnic groups in the survey[54].

Overall distribution

The New Zealand Pacific population is characterised by very low ELSI scores. Their ELSI distribution shows a disproportionate concentration at the lower living standards end of the scale (see Figure 5.1). The New Zealand Pacific population has the lowest average living standard score of all the ethnic groups examined. This position remains when average living standard scores are adjusted to take into account their youthful age structure. Pacific people are three times more likely than the general population to have living standards scores which place them at the 'very restricted' end of the ELSI continuum, and are three times less likely to have 'very good' living standards.

54 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 respondent weights to represent the adult population and child weights to represent the children in the respondent's economic family unit.

Figure 5.1 Living standards distribution of the NZ Pacific population 2000



Variation in the living standard of Pacific people across demographic and social groups [55]

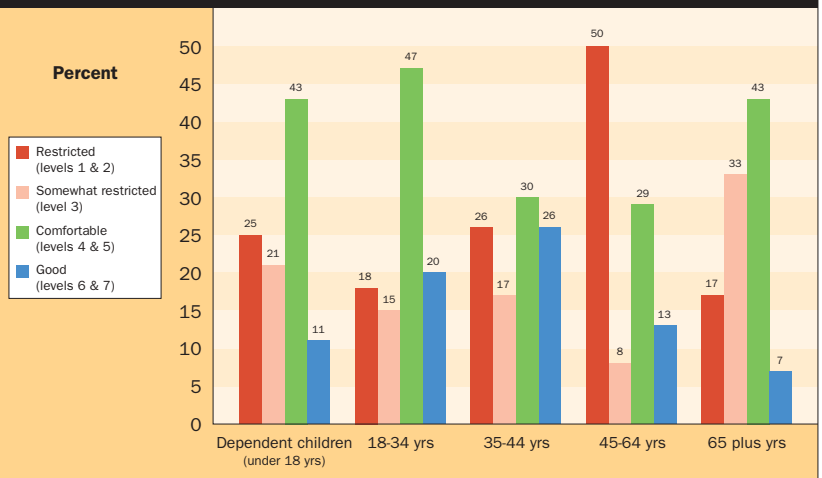
As in the total population, Pacific people's living standard scores vary according to their position on a range of variables that span social characteristics, gender, region and life-cycle. However, the patterns of variation that are observed for Pacific people do not always resemble those found for the population as a whole.

Age

Unlike the total population, there is no clear pattern of increasing living standard scores with increasing age amongst the Pacific population. The lowest average living standards are found amongst Pacific people aged 45-64 years who have a mean ELSI score of 26.0 compared to the total population score of 43.7 for that age group. They are followed by Pacific people aged 65 years and over and children under 18 years of age. The highest average scores are found amongst those aged 18-34 years. The variations by age are possibly likely to reflect the fact that 18-34 years olds are more likely to be second generation New Zealanders and older Pacific people are more likely to be first generation New Zealanders. Furthermore, older Pacific people were disproportionately affected by economic restructuring and high unemployment in the late 1980s and early to mid 1990s. The overall results however, suggest substantially lower living standards across all age groups (see Figure 5.2).

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

Figure 5.2 Living standards of NZ Pacific population by age 2000

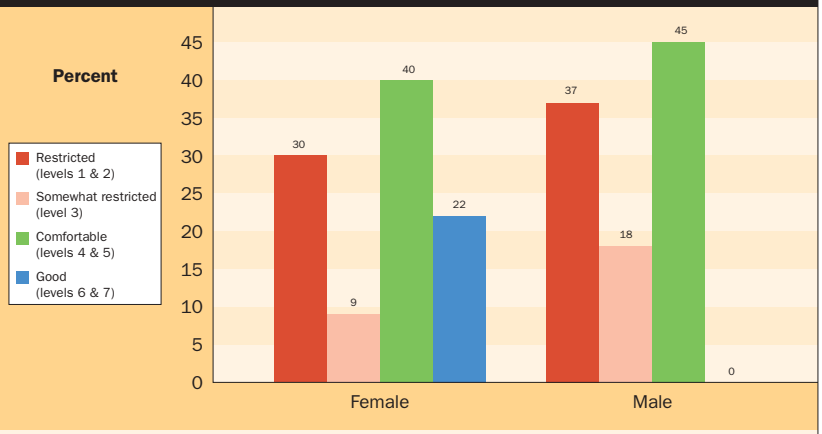


	Dependent children (under 18 yrs)	18-34 yrs	35-44 yrs	45-64 yrs	65 plus yrs
Pacific mean ELSI score	31.9	36.7	35.0	26.0	31.6
Total mean ELSI score	38.6	41.4	42.2	43.7	47.4

Gender

One difference from the pattern found for the total population was that Pacific men who were in single person or sole parent economic family units had substantially lower living standards scores than Pacific women in single person or sole parent economic family units (see Figure 5.3).

Figure 5.3 Living standards of NZ Pacific adults in single person and sole parent economic family units by gender 2000

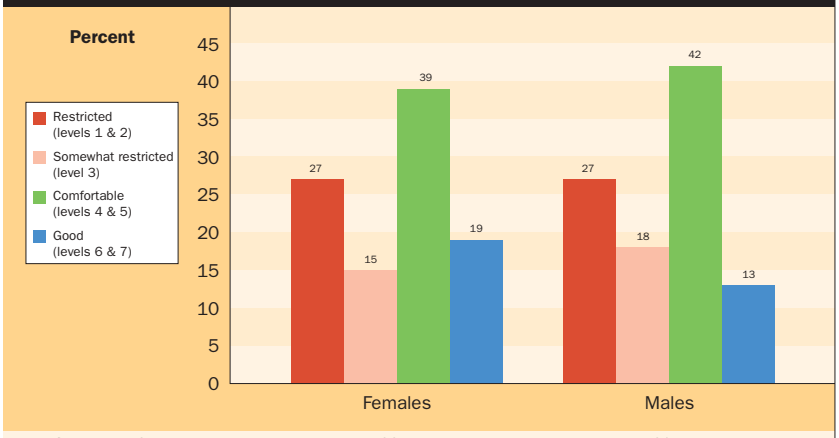


	Female	Male
Pacific mean ELSI score	35.0	29.3
Total mean ELSI score	39.8	42.2

This pattern remains consistent when these economic family units are separated out into single person and sole parent economic family units. The average ELSI score for Pacific men in single person economic family units was 30.6 and sole parent economic family units was 17.2. In comparison, the average ELSI score for Pacific women in single person economic family units was 35.5 and sole parent economic family units was 32.3. Possible reasons for this pattern are not obvious, but may include better educational achievement amongst Pacific women when compared with Pacific men and the higher proportions of Pacific women relative to Pacific men who are employed in higher skilled occupations (Statistics New Zealand, 2002).

When single people and couples are combined, however, there is very little variation in the living standards distribution of the Pacific population by gender. In contrast to the total population, slightly more Pacific males compared with Pacific females have scores that place them towards the 'restricted' to 'somewhat restricted' end of the scale and slightly more Pacific females compared with Pacific males are located at the upper living standards end of the scale (see Figure 5.4).

Figure 5.4 Living standards of NZ Pacific population by gender 2000

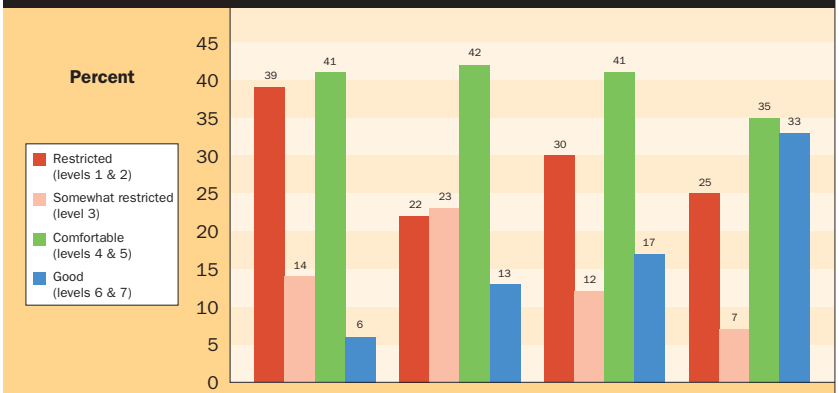


	Females	Males
Pacific mean ELSI score	33.5	32.1
Total mean ELSI score	41.6	42.3

Economic family unit type

As for the population as a whole, people in sole-parent families amongst the Pacific population have lower ELSI scores than those in other family types. The difference in average scores between those in sole-parent families and those in other family types is smaller for Pacific people than for the total population. This is partly a reflection of the lower living standards of this population across all family types (see Figure 5.5).

Figure 5.5 Living standards of NZ Pacific population by economic family unit type 2000



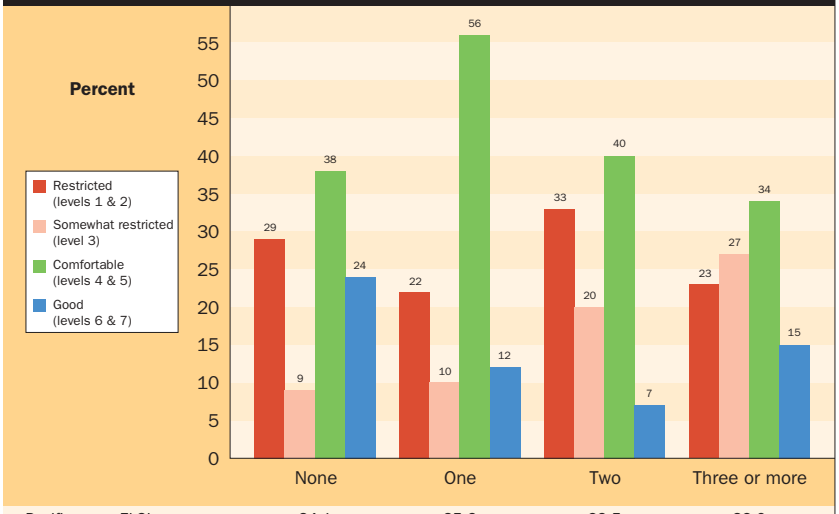
	Sole parent families with dependent children	Two parent families with dependent children	Single person	Couple only
Pacific mean ELSI score	27.2	33.4	33.9	34.3
Total mean ELSI score	29.7	41.9	42.4	46.6

Number of dependent children [56]

The number of dependent children amongst the Pacific population showed no clear influence on Pacific living standard scores. The most obvious pattern was that the Pacific population had lower scores than found for the total population, regardless of the number of dependent children that were in the economic family unit (see Figure 5.6).

56 This is based on the under 65 population only.

Figure 5.6 Living standards of NZ Pacific population by number of dependent children in the economic family unit 2000



	None	One	Two	Three or more
Pacific mean ELSI score	34.1	35.6	29.5	32.0
Total mean ELSI score	43.6	39.7	40.1	38.0

Region

The New Zealand Pacific population is largely urbanised and the majority (69 percent) reside in the Auckland region. Despite this concentration, Table 5.1 shows that Pacific people living in the Auckland region have lower average living standards than Pacific people living in other regions.

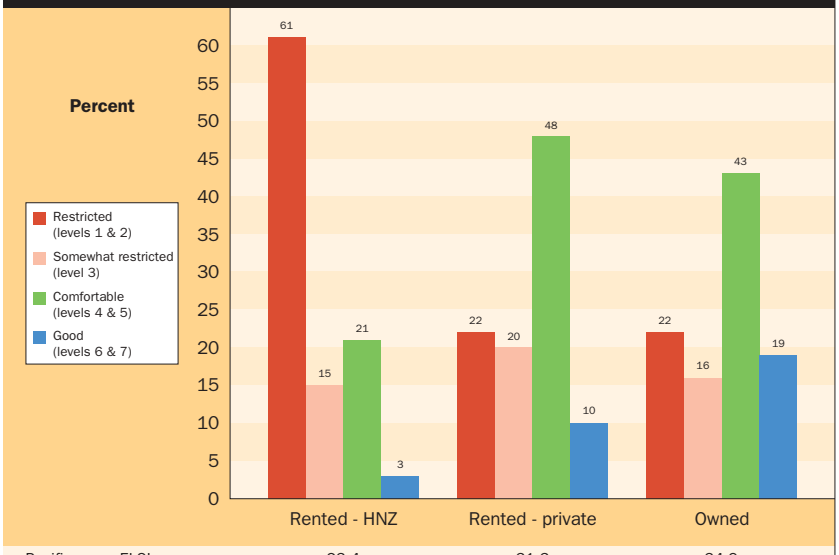
Table 5.1 Average living standards of New Zealand Pacific population by region (2000)

Regions	Pacific ELSI mean	Total ELSI mean
Auckland	30.6	41.4
Other regions	37.8	42.2
Total	32.8	41.9

Housing tenure [57]

The average ELSI score for Pacific people who owned their homes (with or without a mortgage) was higher than it was for those who rented. Pacific people who rented from Housing New Zealand had the lowest average score with the majority of this group being placed in the 'restricted' living standards category (see Figure 5.7). The average living standard score for the Pacific population renting from HNZ was also lower than for the total HNZ population. Amongst Pacific people who owned their own homes the average score was substantially lower than that found for the total home-owning population.

Figure 5.7 Living standards of NZ Pacific population by housing tenure 2000



	Rented - HNZ	Rented - private	Owned
Pacific mean ELSI score	23.4	31.3	34.9
Total mean ELSI score	27.5	36.0	43.1

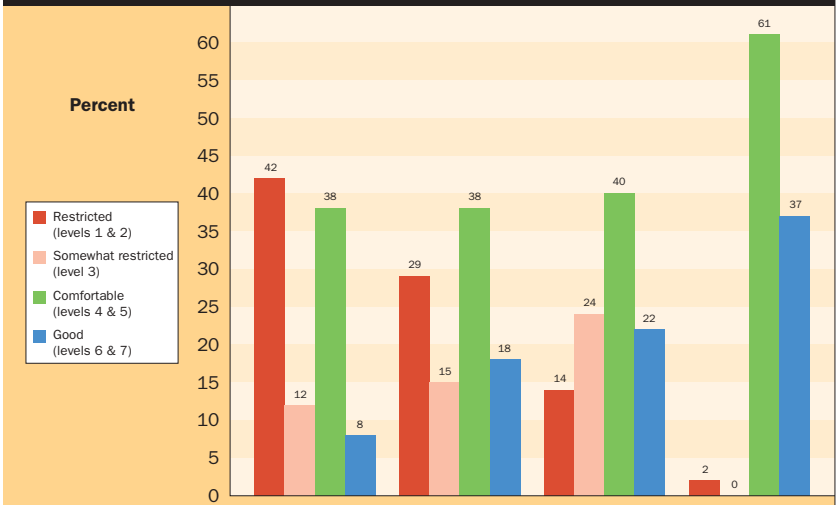
Education

Average living standard scores of the Pacific population aged 18 years and over increased from 29.8 for those with no formal qualifications to 44.6 for those with bachelors degrees or higher qualifications. Although this pattern is similar to the one for the total population, ELSI scores were much lower, on average, than they were for the total population, irrespective of qualification level (see Figure 5.8). The

57 Rented - private category includes those who rent from local authorities as less than 1 percent of Pacific people rent from local authorities. 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 Pacific population and the need for low income family housing has meant that this population does not feature amongst those in local authority rentals.
The owned category includes those who own with or without a mortgage as well as those who own as part of a family trust.

difference between the average ELSI score for Pacific people and for total population, however, declined as the qualification levels increased, with the difference being lowest for those with bachelors degrees or higher qualifications.

Figure 5.8 Living standards of NZ Pacific population aged 18 years and over by highest educational qualification 2000



Pacific mean ELSI score	29.8	32.1	37.1	44.6
Total mean ELSI score	41.0	43.1	42.8	46.7

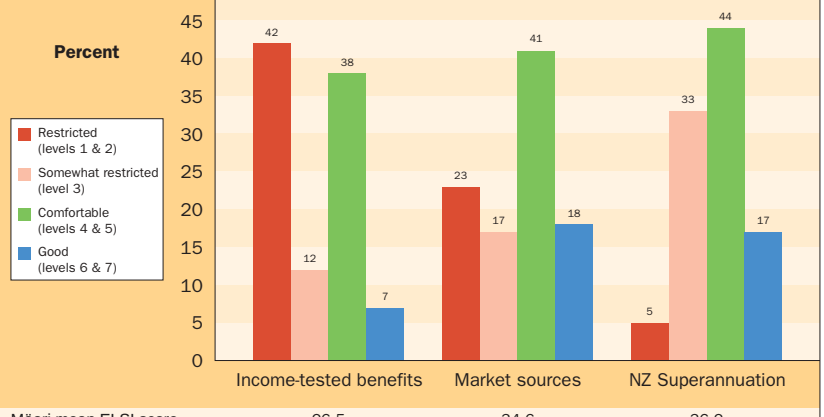
Income source [58]

Pacific people in receipt of income-tested benefits had lower average ELSI scores than those in receipt of market incomes. This is the same as the pattern for the total population. Where Pacific people differed from the total population was that those in receipt of New Zealand Superannuation did not have markedly better living standards (on average) than those in receipt of market income. Pacific Superannuitants had a much lower average ELSI score than Superannuitants generally (the averages being 36.2 and 47.2 respectively) (see Figure 5.9). The difference between average living standards of the Pacific population and those of the total population was smallest between those in receipt of income-tested benefits and greatest amongst New Zealand Superannuitants.

58 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.

Figure 5.9 Living standards of NZ Pacific population by income source 2000



Māori mean ELSI score	26.5	34.6	36.2
Pacific mean ELSI score	29.0	43.9	47.2

Living standards of Pacific population by financial characteristics

Chapter 3 has shown that income, asset position and accommodation costs are associated with the living standards of the wider New Zealand population and are also likely to be associated with the living standards of the Pacific population in New Zealand. A variety of other factors which are not examined are also likely to be associated with Pacific living standards. These factors include support from other family members and the wider ethnic community but also responsibilities to family, church and community that cause some income to be diverted out of the household. In some cases, this is likely to involve transfers of income beyond New Zealand.

Income

The average ELSI score for Pacific people increases from 25.9 for those with equivalent disposable incomes of $10,000 or less to 42.4 for those with incomes of $20,000 or more (see Table 5.2).

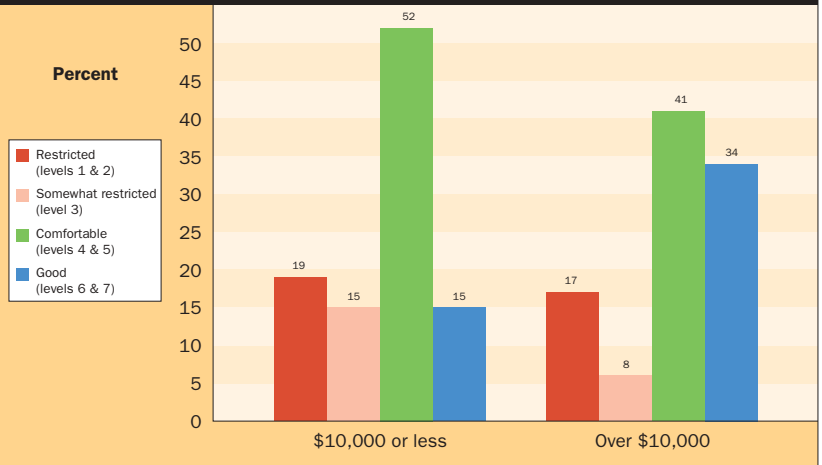
Table 5.2 Average living standards of Pacific population by equivalent disposable incomes of the economic family unit (2000)

Equivalent disposable income	Pacific ELSI mean	Total ELSI mean
$10,000 or less	25.9	31.9
$10,001 - $20,000	30.4	40.2
$20,001 or higher	42.4	47.9

Asset position [59]

In general, Pacific people with assets over $10,000 in value had higher living standard scores than those with assets under $10,000 (see Figure 5.10). However, the differences in average ELSI scores between Pacific people with high and low assets were lower than for the total population (a difference of 3 compared with a difference of 7, respectively). The living standard differences for Pacific people should however be treated with caution due to small effective sample sizes, producing high confidence intervals.

Figure 5.10 Living standards of NZ Pacific population by asset position 2000



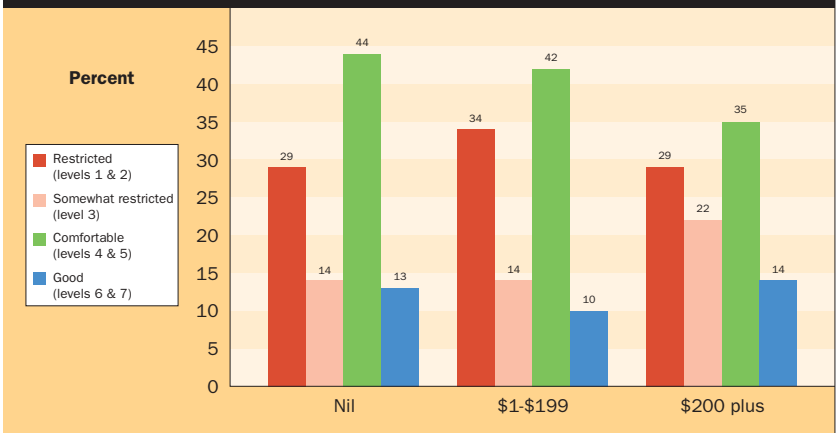
	$10,000 or less	Over $10,000
Pacific mean ELSI score	36.7	39.7
Total mean ELSI score	40.2	47.0

59 A substantial group of Pacific people (55 percent) did not specify a response for this variable and it is likely that non-response is not randomly distributed across the ELSI categories.

Accommodation costs

Unlike the total population, those with no accommodation costs were not much better off than those with accommodation costs (see Figure 5.11). The results of each accommodation cost category reflect the lower living standard of this population as a whole. There does not appear to be any relationship between accommodation costs and livings standards for this population. However, this does not mean that accommodation costs are not a source of hardship for some individuals, as is suggested by anecdotal evidence[60]. It is likely that Pacific people are subject to many sources of hardship with the result that those with no accommodation costs are no better off due to other sources of hardship. These may include reliance on benefits, over-crowded living circumstances etc.

Figure 5.11 Living standards of NZ Pacific population by weekly accommodation costs 2000



	Nil	$1-$199	$200 plus
Pacific mean ELSI score	32.9	30.3	30.6
Total mean ELSI score	46.9	37.6	41.8

60 *New Zealand Herald* 8/06/2002 'Living conditions breed illness'. *The Evening Post* 23/08/2001 'Clash of opinion on rental housing'. New Zealand Press Association 20/10/1999 'Housing a failure, national co-operative strategy needed'. *The Dominion* 24/09/1999, 'Survey details hardship due to high housing cost'.

Summary

The distribution of living standard scores for the Pacific population is skewed more to the lower end of the scale than it is for the total population. Of all the major ethnic groups in New Zealand, the Pacific population has the lowest ELSI scores. This disadvantaged position remains even when living standards are adjusted for age.

Amongst the Pacific population, the relationship between living standard score and gender is quite different from that nationally, with slightly more Pacific males than Pacific females having lower living standards. The relation between living standard and age also departs from the national pattern, with disadvantage amongst Pacific people being pronounced at both ends of the life cycle, in childhood and old age.

As with other ethnic groups, Pacific people in sole-parent families have particularly low scores. Other Pacific people who have lower living standards include those in receipt of income-tested benefits, those who lack formal qualifications and those with low incomes and assets. However, even those in employment and in receipt of market incomes have low ELSI scores when compared with all employed people. The difference in average living standard score between Pacific people and the total population is lowest for those with bachelors degrees or higher qualifications, and highest for those with no formal qualifications.

Data limitations have meant that it has not been possible to provide a more extensive analysis of the living standards of the Pacific population. Such an analysis would give recognition to the various distinct Pacific ethnic groups and would examine the contribution of birthplace and duration of residence to variations in living standards.

However, the analysis that has been possible has been able to demonstrate the extent to which the average living standards of Pacific people in New Zealand fall below those of the population as a whole.

CHAPTER SIX

Families with dependent children[61]

Introduction

Over the past twenty years there have been changes in the composition and situation of many New Zealand families that have affected their material and social well-being. Fewer families now reflect traditional male bread-winner/female home-maker family structures. Sole-parent families have come to form a larger proportion of all families, there are more multi-family households, many containing sole-parent families, and a higher proportion of families use state income support.

This chapter will describe how the ELSI scores of families with dependent children distribute along the scale. It differs in two respects from other chapters. The unit of reporting is the economic family unit rather than individuals, and the characteristics and circumstances that it highlights are those with a particular relevance to those families with dependent children[62]. The chapter also differs from others in offering an analysis of the types of consumption restrictions that children with different living standard scores might face. For this particular analysis, the unit of reporting is the child.

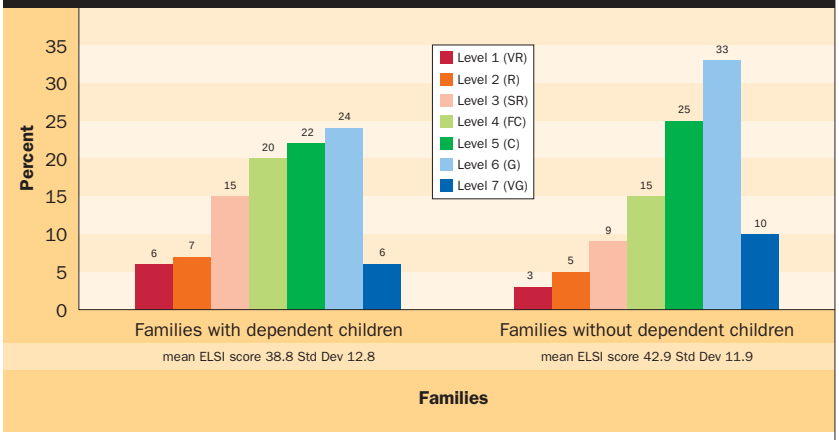
Overall distribution

The overall distribution of living standard scores for families with dependent children is skewed toward the higher living standard categories, with 42 percent having scores that placed them in the 'fairly comfortable' or 'comfortable' categories of the scale and 30 percent having scores that placed them in the 'good' or 'very good' living standards categories. Conversely, 28 percent of New Zealand families with dependent children had scores placing them at the lower end of the scale in the three categories from 'somewhat restricted' to 'very restricted'. This latter proportion is in particular contrast to the scores obtained for economic family units without children. Only 17 percent of this group had scores that placed them in the lower (levels 1 to 3) end of the scale. The mean ELSI score for families with dependent children is four points lower than it is for families without dependent children (38.8 compared with 42.9). Figure 6.1 shows that families without dependent children are also more strongly clustered in the higher scale categories.

61 This chapter is based entirely on the under 65 population.

62 As stated, the unit of reporting is the economic family unit. A reference to families with dependent children means the number or proportion of families with dependent children. Economic family units of the respondent are weighted to represent the population of economic family units with one or more working age people. 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). Refer to chapter 2 for further information on unit of analysis and the ELSI scale.

Figure 6.1 **Living standards distribution of families with and without dependent children amongst the population aged under 65 years 2000**



Variations in living standards across demographic and social groups

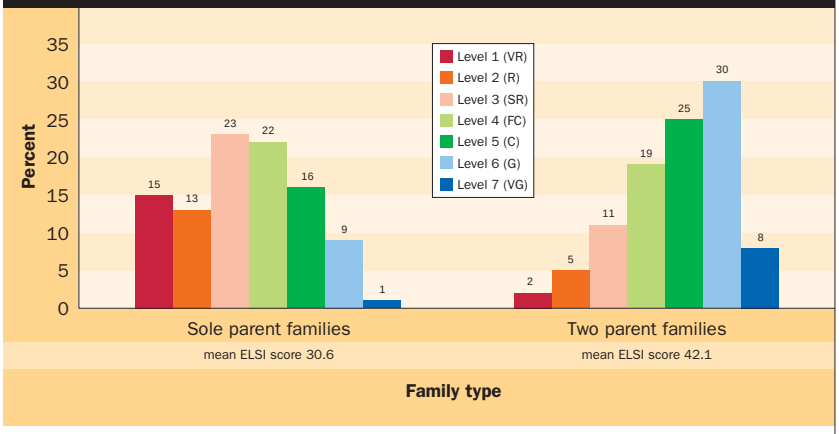
As for the total population, the living standard scores of families with dependent children vary by a number of social and demographic characteristics. The following sections examine this variation according to type of family, ethnicity, number of dependent children, age of youngest child, age of mother and income source of the family and educational status of the respondent parent.

Family type

Figure 6.2 provides a stark illustration of the difference between sole parent and two-parent families in the way that their ELSI scores are distributed. Twenty-eight percent of sole-parent families had scores that placed them in the bottom two categories of the scale, and a further 23 percent had scores that placed them in the third 'somewhat restricted' category. Only 7 percent of two-parent families had scores that placed them in the bottom two categories, and 11 percent in the 'somewhat restricted' category. At the other end of the scale, only 10 percent of sole-parent families had scores that placed them in the 'good' or 'very good' living standards categories. This compares with 38 percent of two-parent families.

Sole-parent families had an average living standard score of 30.6 (which is in the 'somewhat restricted' score interval) while two-parent families had an average score of 42.1 (in the 'comfortable' score interval).

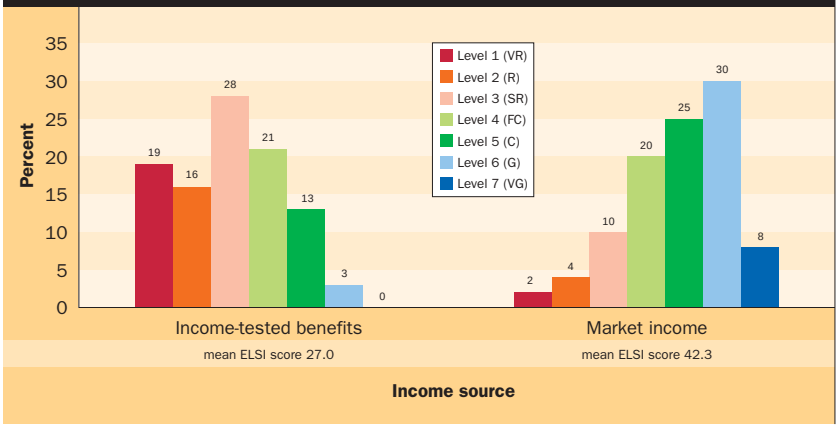
Figure 6.2 Living standards of families with dependent children by family type 2000



Income source [63]

As for the total population, families with dependent children who were in receipt of an income-tested benefit had much lower average living standard scores than families who received market income. The difference in ELSI means between them was 15.3, which is very large. Figure 6.3 shows that beneficiary families were at least five times more likely to have 'restricted' or 'very restricted' living standard scores than market income families.

Figure 6.3 Living standards of families with dependent children by income source 2000



63 The above analysis divides the population into two 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 who were not in the above category 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. 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.

Table 6.1 suggests that it is the considerable overlap between source of income and family composition that underlies the results portrayed in the previous two graphs. The table makes clear that there are large differences in mean ELSI scores between economic family units that receive income from benefit or market sources, regardless of whether they are one-parent or two-parent families. These differences in mean range between 10.6 and 17.6. At the same time, the majority of sole-parent families (68 percent) received income from benefit sources whereas the majority of two-parent families received income from market sources (95 percent).

The overall lower living standard distribution for families with dependent children is not so much due to the presence of children, since two-parent families have similar mean ELSI scores as those without children. It is also not so much the fact of sole parenthood, but that this is so strongly associated with receipt of income-tested benefits. It appears that much of the reason why families with dependent children tend to have a lower mean ELSI score than families without dependent children may be due to the relatively large proportion of all families with dependent children (29 percent) that are sole parent ones in the 2000 Living Standards Survey.

Table 6.1 Living standards of economic family units by income source and presence of dependent children amongst the population aged under 65 years (2000)

Economic family unit type		Income-tested benefits	Market income
Sole parent families	% of sole-parent families Mean ELSI score	67.9% 27.3	32.1% 37.9
Two-parent families	% of two-parent families Mean ELSI score	4.4% 25.3	95.2% 42.9
Economic family unit with no children	% of families with no dep. children Mean ELSI score	20.8% 33.0	76.3% 45.4
Total	% of all economic family units Mean ELSI score	21.4% 31.1	76.5% 44.5

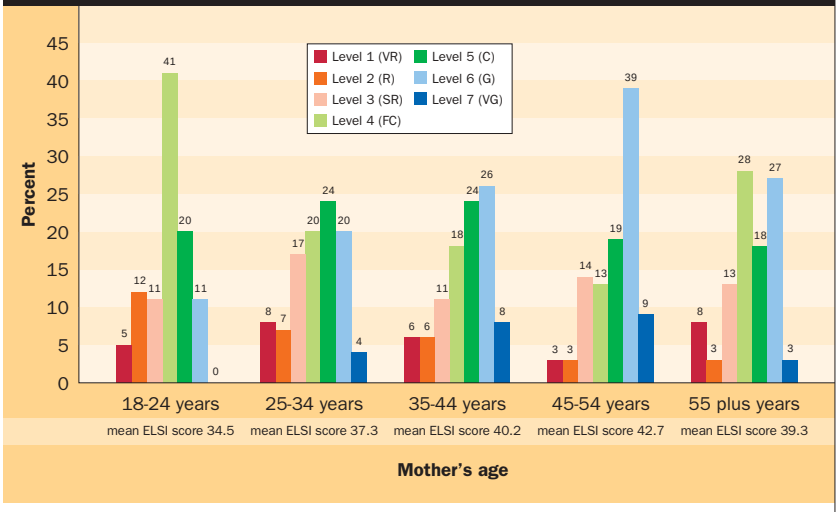
Age of mother

As for the total population, mean ELSI scores tend to rise as the age of mother rises. This pattern is found across the first four age groups shown in Figure 6.4 (below), but does not hold for the fifth group

(mothers aged 55 years and older), which shows a drop in the ELSI mean. Average living standard scores increase from 34.5 for families with very young mothers (18-24 years) to 42.7 for families with older mothers (45-54 years). The results for older mothers aged 55 years and over need to be treated with caution as they are based on a small effective sample size (19) giving rise to a large confidence interval.

These results on age need to be interpreted with some caution. Careful multivariate analysis will be required to determine what the independent contribution of age is to variation in ELSI scores. The patterns observed here may not be the result of age alone. For example, young mothers may be less likely to have high educational qualifications or significant workforce experience.

Figure 6.4 Living standards of families with dependent children by age of mother 2000



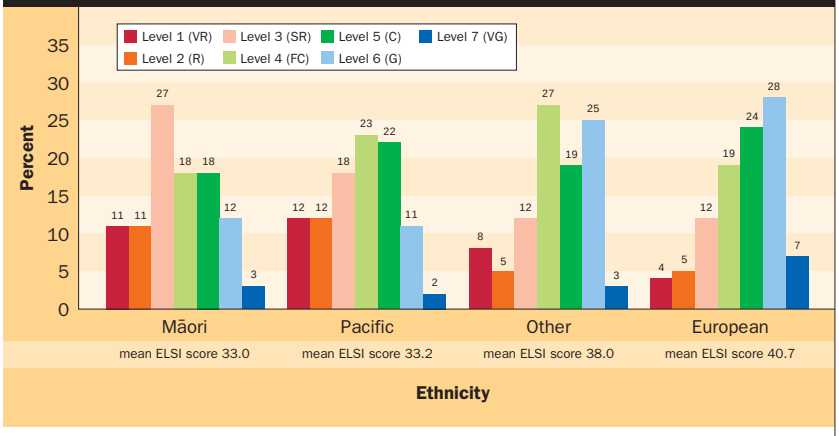
Ethnicity [64]

The overall scores of Māori families with dependent children are considerably lower than those of other groups, with almost half (49 percent) of Māori families with children having scores that place them at the lower end of the scale (levels 1 to 3) (see Figure 6.5). A high proportion (42 percent) of Pacific families with dependent children have similarly low scores. This compares with 25 percent of other non-European families and 21 percent of European families with dependent children. Only 15 percent of Māori families and 13 percent of Pacific

64 Family 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, it is counted as a family with Pacific ethnicity. This procedure is followed for all the ethnic groups, therefore the ethnic categories are not mutually exclusive.

families with children have living standard scores that place them in the top two categories. This compares with 28 percent of other non-European families and 35 percent of European families with children. Māori and Pacific families with dependent children had an average living standard score of 33.0 and 33.2 respectively, between 5 and 8 points lower than the average for other non-European families (38.0) and European families (40.7). It is note-worthy that Māori and Pacific families with dependent children have similar average living standard scores, whereas for the total Pacific population, the average living standard score is lower than it is for the total Māori population. This is due to the very low average scores of Māori sole parents. It is worth noting that half of all Māori families with dependent children are sole-parent families. This compares with 31 percent for Pacific families and 29 percent for all families with dependent children. Furthermore, 81 percent of Māori sole-parent families with dependent children receive income-tested benefits. This compares with 68 percent of Pacific sole-parent families and 68 percent of all sole-parent families with dependent children.

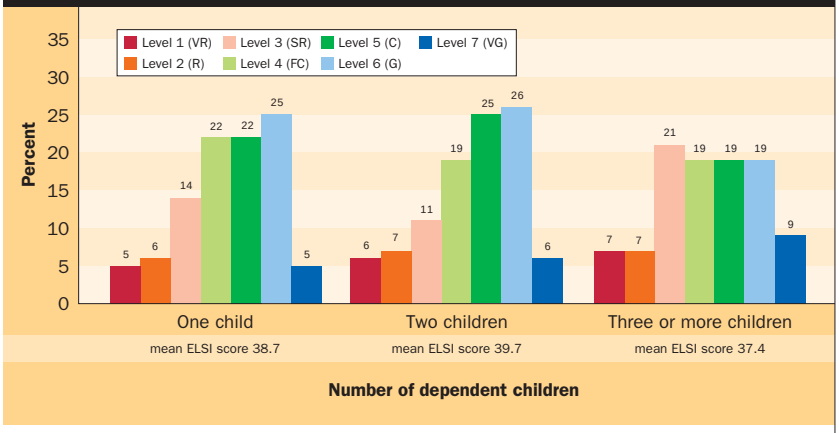
Figure 6.5 Living standards of families with dependent children by ethnicity 2000



Number of dependent children

Average ELSI scores do not differ greatly by the number of dependent children in a family. Very similar living standard distributions are found for families with one child and families with two children. For families with three or more children, the distribution is rather flatter, but the average is similar (see Figure 6.6).

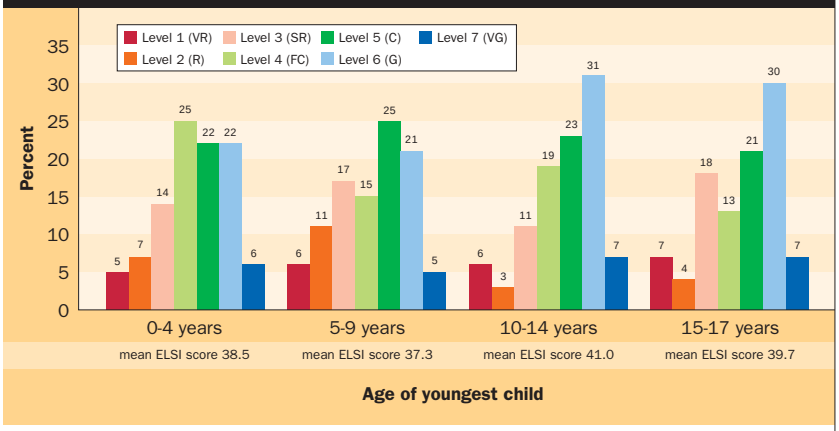
Figure 6.6 Living standards of families with dependent children by number of dependent children 2000



Age of youngest child

Families with children under the age of 10 were less likely than those with a youngest child over the age of 10 years to have living standards in the 'very good' living standards category of the scale. Only 28 percent of families with a youngest child aged 0-4 years and 26 percent of those with a youngest child aged 5-9 years had 'good' or 'very good' living standards. This compares with 37-38 percent for other families with dependent children whose youngest child was 10 years or older. For the first two groups of families, the average ELSI scores were each around 38, while for the two groups where the youngest child was 10-14 years and 15-17 years, the averages were around 41 and 40 respectively (see Figure 6.7). A combination of factors - e.g. the cost of childcare for younger children, younger age of mother, lower employment rates of mothers with young children and families with young children being earlier in the asset acquisition cycle - could be associated with the lower living standard scores of those with younger children.

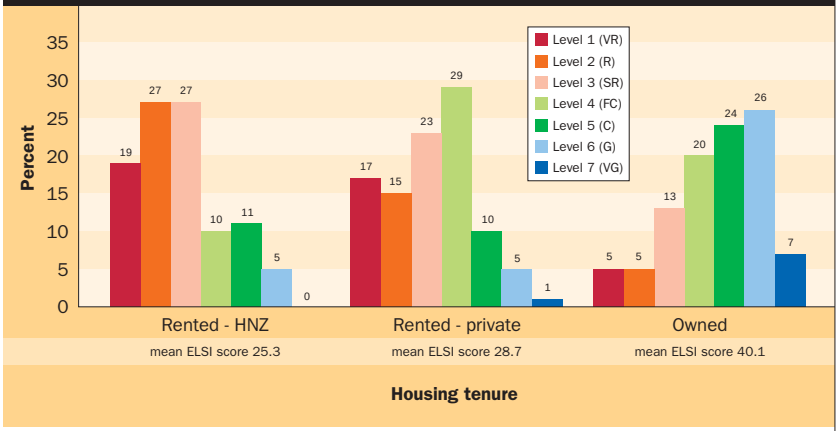
Figure 6.7 Living standards of families with dependent children by age of youngest child 2000



Housing tenure

Amongst families with dependent children, the lowest ELSI scores were found amongst those in Housing New Zealand rental accommodation. They were followed by families who rented privately. Families with dependent children who owned their own homes (with or without a mortgage) were much more likely to have an average ELSI score in the 'comfortable' range. For other families with dependent children, the average ELSI score was in the 'somewhat restricted' range of the scale (see Figure 6.8).

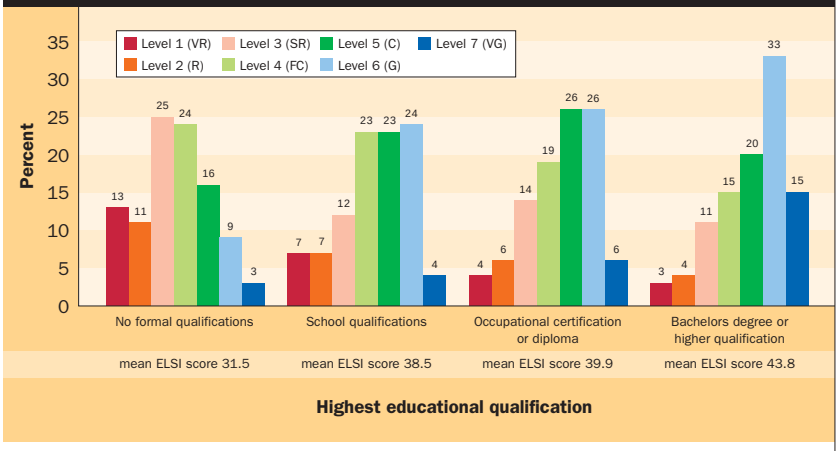
Figure 6.8 Living standards of families with dependent children by housing tenure 2000



Qualifications of respondent parent [65]

The highest qualification of the respondent parent has a consistent relationship with the living standard scores for families with dependent children. The average ELSI score steadily increased from 31.5 for respondents who had no formal qualifications to 43.8 for respondents with a bachelors degree or higher qualifications (see Figure 6.9).

Figure 6.9 Living standards of families with dependent children by the highest educational qualification of the respondent parent 2000



Living standards of families with dependent children by financial characteristics

As with the total population, the average living standard scores of families with dependent children differed according to income position, asset accumulation and accommodation costs. The broad patterns of association are essentially the same as for the total population (see Table 6.2). There is a clear relationship between income and living standards for families with dependent children with average ELSI scores increasing from 27.0 for the bottom income group to 52.9 for the top income group. There is also a consistent relationship between ELSI and asset position for families with dependent children, with average ELSI scores increasing from 36.5 to 49.4 between the bottom and top asset group. Similarly, families with no accommodation costs and those with very high accommodation costs had higher average ELSI scores than families in the middle of the range of accommodation costs who tended to have lower average ELSI scores.

65 In the living standards survey, a question on the highest educational qualification held was asked of the respondent. In the case of families with dependent children, this person may have been the mother or the father of the dependent children in the family unit.

Table 6.2 Average living standard scores for families with dependent children by financial characteristics (2000)

Financial characteristics	Mean ELSI scores	
	Families with dependent children	Total population
Equivalent disposable income:		
$10,000 or less	27.0	31.9
$10,001-$20,000	37.3	40.2
$20,001-$40,000	46.8	46.8
$40,001 or higher	52.9	52.3
Asset position $*		
$10,000 or less	36.5	40.2
$10,001-$25,000	41.3	44.7
$25,001-$100,000	42.4	45.4
$100,001-$300,000	45.2	47.2
$300,001 or higher	49.4	51.3
Accommodation costs:		
Nil	43.2	46.9
$1-$199	35.4	37.6
$200-$399	38.4	40.5
$400 plus	46.4	47.2

* A substantial proportion of families with dependent children (37 percent) did not specify a response for this variable and it is likely that non-response is not randomly distributed across the ELSI categories.

Restrictions in consumption experienced by children

The elimination of child poverty is regarded as a fundamental social policy goal all over the world. Concern with child poverty stems partly from a humanitarian desire to prevent suffering amongst children and from the knowledge that there are costs for society associated with child poverty (arising from impaired health and educational achievement, together with poorer employment prospects in adulthood and lower incomes). Ending this cycle of poverty is therefore an important object of policy, in the interest of both efficiency and social justice (which demands that children's fortunes should not be determined solely by those of their parents) (Mayer, 2002).

In seeking to better understand how low family living standards can adversely affect children's development and achievement, it is helpful to examine explicitly the restrictions on children's activities and care that occur.

The following table gives an indication of what life is like for children in families with ELSI scores that place them at different points on the scale. Children have been grouped into the four broad living standard categories from 'restricted' (levels 1 and 2 combined), 'somewhat restricted' (level 3), 'comfortable' (levels 4 and 5 combined), and 'good' living standards (levels 6 and 7 combined). Just to recap, in 2000, 13 percent of all dependent children were in the 'restricted' category, 16 percent were in the 'somewhat restricted' category, 41 percent were in the 'comfortable' category while 30 percent were in the 'good' living standards category. Table 6.3 examined the propensity for children in each living standard category to experience a constraint in consumption of the item examined. For example, 31 percent of children in the 'restricted' category were in families where there was not suitable wet weather clothing for each child because of cost. This compares with 7 percent of children in the 'somewhat restricted' category, 3 percent of children in the 'comfortable' category and no children in the 'good' living standards category.

Constraints on consumption of child-specific goods and services are experienced by a greater proportion of children with ELSI scores that place them at the lower end of the scale. For those with scores that place them in the 'restricted' or 'somewhat restricted' categories of the scale, it is at least twice as likely that they will experience postponement of trips to the doctor or dentist or not have suitable wet weather clothing. It is also at least twice as likely that books (including school books) will go unbought, computers or internet access will be unavailable at home, school outings will be skipped, cultural lessons and sports involvement forgone, and childcare services will go unpurchased (see Table 6.3).

Table 6.3 Constraints in consumption experienced by children by their standard of living (2000)

	'Restricted' living standards (levels 1 and 2) %	'Somewhat Restricted' living standards (level 3) %	'Comfortable' living standards (levels 4 and 5) %	'Good' living standards (levels 6 and 7) %
Items not obtained/Activities not participated in because of cost				
Suitable wet weather clothing for each child	31	7	3	0
A pair of shoes in good condition	17	3	1	0
Child's bike	24	9	4	0
Play station	29	23	9	1
Personal computer	59	29	20	2
Internet access	59	30	19	3
Pay for childcare services	28	13	8	1
Have children's friends over for a meal	13	5	2	0
Have enough room for children's friends to stay the night	15	2	2	1
Have children's friends to a birthday party	14	3	2	0
Items of consumption cut back on (a little or a lot) because of cost				
Not gone on school outings	51	23	7	1
Not bought school books/supplies	38	18	5	1
Not bought books for home	58	38	17	3
Postponed child's visit to the doctor	31	13	3	0
Postponed child's visit to the dentist because of cost	18	10	4	2
Child went without glasses	9	8	1	0
Child went without cultural lessons	54	41	20	4
Child's involvement in sports limited	54	34	13	1
Child wore bad fitting clothes or shoes	57	31	13	3
Children share a bed	21	18	3	0
Limited space for children to study or play	45	28	12	5

Summary

Families with dependent children generally have a distribution of ELSI scores that is broadly similar in shape to that for the total population. Their average ELSI score falls in the 'fairly comfortable' range of the scale. However, average ELSI scores are appreciably lower for families with dependent children than they are for the population as a whole. Families with younger children have somewhat lower scores (on average) than do families with older children.

Sole-parent families tend to have much lower living standard scores, with around half of these families being placed in the 'somewhat restricted' to 'very restricted' categories of the scale. Only a small proportion of sole-parent families have scores that place them at the upper living standards end of the scale.

Children with scores that place them at the lowest level of the ELSI scale (who are predominantly children in sole-parent families) are much more likely than other children to experience constraints that may adversely affect their health, education and general development.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CHAPTER SEVEN

Living standards of the low-income population

Introduction

Over the past 15 years, the characteristics of the bottom third of the income distribution have changed. Sole-parent families with dependent children, income-tested beneficiaries and unemployed people have come to make up a greater proportion of those with incomes that place them in the bottom third of the distribution. Factors which have contributed to this include New Zealand's economic performance and its effect on the demand for labour. Rising unemployment in the late 1980s and early 1990s and the 1991 cuts to income-tested benefits combined to further reduce the incomes of many low-income New Zealand families (Mowbray 2001).

Over the past decade there has been keen interest in how those with low incomes have been faring. Most of this work has dealt with the shape of the income distribution, the characteristics of those whose incomes fall below particular thresholds, and changes in the incomes of particular sub-groups of the population in relation to others (Podder and Chatterjee, 1998). This type of work provides useful information on trends and can be based on routinely collected statistical information (for example, information collected by Statistics New Zealand's regular Household Economic Survey). Its limitation is that it does not recognise that families with the same income can have differing living standards (resulting from differences in their levels of financial assets, levels of debt etc.), and it does not take account of differences in incomes among those below a particular income threshold (Krishnan et al, 2002). Relatively little New Zealand work has attempted to make an explicit link between particular income levels and the real world implications that a particular income level might have for an achieved standard of living[66].

66 One exception has been the work of Stephens, Waldegrave and Frater, who have employed family focus groups to establish the face validity of income levels below which their recipients might reasonably be expected to be experiencing difficulty (see Stephens,R., et al, 'Measuring poverty in New Zealand', Social Policy Journal Issue 5, Ministry of Social Policy, Wellington, 1995).

The analysis in this chapter examines the living standard scores of those in economic family units whose equivalised disposable incomes place them in the bottom third of the distribution of equivalent income. Because of the policy interest in low-income families, this group has been further sub-divided into three mutually exclusive groups:

- those in economic family units where there was receipt of an income-tested primary 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[67];
- those in economic family units who are in neither of the above two categories and who therefore received their income primarily from market sources.

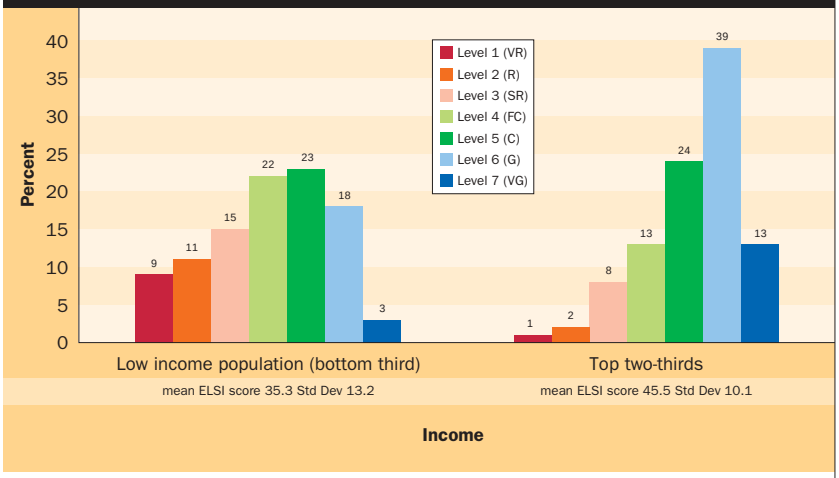
Adopting a definition of 'low-income' inevitably involves a degree of arbitrariness. The lower the threshold, the greater will be the contrast with the rest of the population but the smaller will be the size of the low-income group, limiting scope for further analysis. The decision to focus on the bottom third was made to provide sufficient cases for further breakdowns to be possible and to ensure that the situation of the resulting sub-populations could be examined.

67 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.

Overall distribution

There are no surprises in the finding that there is a large contrast in the living standards distribution of those in the bottom third of the income distribution and the top two-thirds of the income distribution. Those in the bottom third had appreciably lower living standard scores than those in the top two-thirds (see Figure 7.1). Amongst those in the bottom third of the income distribution, 35 percent had scores on the ELSI scale that placed them in the lowest three categories of the seven category scale, 45 percent had scores that placed them in the 'fairly comfortable' or 'comfortable' category of the scale and 21 percent had scores that placed them in the 'good' or 'very good' living standards categories of the scale. Contrasting proportions for those with equivalised incomes that placed them in the top two-thirds of the income distribution were 11 percent, 37 percent and 52 percent respectively.

Figure 7.1 Living standards distribution by equivalent disposable income 2000

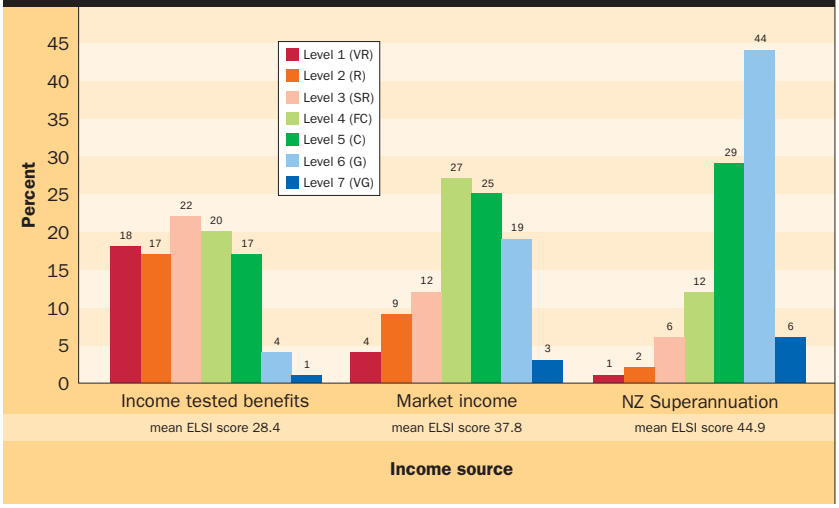


Income source

While the living standard scores of those in the bottom third of the income distribution were considerably lower than in the top two-thirds, there was wide variation between the scores of those in the bottom third depending on their source of income. Overall, those receiving income-tested benefits had lower scores than those receiving market income, who in turn had lower scores than those receiving New Zealand Superannuation. For those in receipt of income-tested benefits, 57 percent had ELSI scores that placed them in one of the three lowest scale categories. This proportion decreased to 25 percent for those in receipt of market income and declined further to 9 percent for those in receipt of New Zealand Superannuation. Only 5 percent of those receiving benefit income had ELSI scores that placed them in the 'good' or 'very good' living standards categories of the scale. This proportion increased to 22 percent for those receiving market income and increased further to 50 percent for those receiving New Zealand Superannuation (see Figure 7.2).

Those on income-tested benefits had an average ELSI score that was substantially below the national average (13 points lower). In contrast, those receiving New Zealand Superannuation had an average ELSI score that was somewhat higher than the national average (44.9 compared with 41.9) (refer to Chapter 3 for discussion on the living standards of older New Zealanders).

Figure 7.2 Living standards of the bottom third of the income distribution by income source 2000



Relationship between living standards and financial circumstances in the low-income group

The previous section of this chapter has shown that there is considerable variation in the living standards of those in the bottom third of the equivalent disposable income distribution.

The question naturally arises as to what factors are associated with this variation. Earlier work on the living standards of older New Zealanders identified income, accommodation costs, tenure, asset position and education as being factors associated with variations in living standards amongst older New Zealanders. Previous chapters have shown that these factors are associated with variation in living standards found amongst the population as a whole.

The following analysis examines this issue by standardising average living standard scores for the factors identified above to see how much of the variation in living standards amongst the three low-income groups remains after standardisation. It is likely that at least some of these factors are interrelated, not only with each other, but also with a wide range of factors that have not been captured by the current working-age data. Consequently the results reported below can only be regarded as exploratory.

Income

The majority (72 percent) of the low-income population who are receiving income-tested benefits have equivalent disposable incomes under $10,000. This proportion falls to 52 percent for those receiving market income and falls sharply to 9 percent for low-income NZS recipients. Standardising average living standard scores for variations in income between these three groups reduces the difference between the highest mean ELSI score and the lowest mean ELSI score from 16.5 to 13.2 (see Table 7.1). This suggests that differences between those receiving their income from each source do not just reflect the level of income received.

Table 7.1 Distribution of low-income population by equivalent disposable income (2000)

		$10,000 or less	$10,000 - $20,000	Total	Mean ELSI score standardised for income[68]
Low income - benefits	Population proportion	72.1%	27.9%	100.0%	
	Mean ELSI score	27.6	30.5	28.4	29.5
Low income - market	Population proportion	52.1%	47.9%	100.0%	
	Mean ELSI score	37.2	38.4	37.8	37.8
Low income - NZS	Population proportion	9.1%	90.9%	100.0%	
	Mean ELSI score	43.5	45.0	44.9	42.7
Total low income	Population proportion	51.7%	48.3%	100.0%	
	Mean ELSI score	31.9	39.0	35.3	

68 The standardisation process used here has the effect of adjusting the ELSI score to the values they would have had if there were no differences in equivalised income. The purpose is to get an indication of the extent to which the observed living standard differences between the three groups are simply a reflection of income differences between the groups. The standardisation is subject to certain assumptions that probably are not met exactly. However, prior experience suggests that it serves to give a useful broad indication of the extent to which factors other than income are likely to be operating to influence living standards. The standardisation is based on the linear regression between ELSI and the log of equivalised disposable income (EDY). The logarithmic transformation of income was applied because prior analysis had shown that relationship between ELSI and EDY is approximately logarithmic. ELSI scores were adjusted on the assumption that the incremental change in income would produce a consequential incremental change in the ELSI score of a size determined by the gradient of log (EDY) in the regression equation. ELSI scores were adjusted to the estimated value they would have had if all incomes had been the same, with the common income set at the level that resulted in no change in the mean of ELSI for the population. The extent to which the standardisation is realistic is dependent on several considerations that influence it in opposite ways. The measures used (especially the income measure) are known to contain errors. This, of itself, would weaken the standardisation. However, the procedure takes account of only one of many factors that almost certainly affect living standards. Because many of these factors (e.g. assets, income of parents) are known to be correlated with income, the income variable will "pick up" some of their explanatory power, giving it the appearance of being more important than it is. That is to say, the regression will overestimate the importance of income, producing a higher estimate than it would have done if other relevant variables had been included. This, of itself, would result in an "over-adjustment" (i.e. one that was inflated). On balance, the latter effect probably outweighs the former, but this is speculative.

Accommodation costs

The majority of low-income NZS recipients (83 percent) had no accommodation costs while the majority of the other two low-income groups had accommodation costs. Two-thirds (66 percent) of low-income beneficiaries had accommodation costs between $1 and $200 per week while a further 13 percent had weekly costs of $200 or more per week.

Overall ELSI means fall with rising accommodation costs for all three low-income groups. When accommodation costs are taken into account, the difference between the highest and lowest mean ELSI score reduces from 16.5 to 12.7 (a substantial reduction) suggesting that accommodation costs are associated with living standards for the low-income population (see Table 7.2).

Table 7.2 Distribution of low-income population by weekly accommodation costs (2000)

		Nil	$1 - $199	$200 or more	Total	Mean ELSI score standardised for housing costs*
Low income- benefits	Population proportion	21.3%	65.8%	12.9%	100.0%	
	Mean ELSI score	35.2	26.4	25.3	28.4	29.6
Low income-market	Population proportion	32.3%	43.0%	24.7%	100.0%	
	Mean ELSI score	44.0	35.4	32.7	37.8	38.3
Low income-NZS	Population proportion	83.2%	16.1%	0.7%	100.0%	
	Mean ELSI score	46.0	39.5	41.5	44.9	42.3
Total low income	Population proportion	38.7%	46.3%	15.0%	100.0%	
	Mean ELSI score	43.0	30.7	30.3	35.3	

* The standardisation procedure used here applies the accommodation cost distribution of the total low-income population to each of the three low-income groups and thereby produces an average ELSI score standardised for accommodation costs.

Another means of examining the relationship between housing costs and living standards is to use an indicator of affordability. A commonly used indicator of affordability is a ratio of housing cost outgoings to income. High housing costs relative to income are often associated with severe financial difficulties, especially among low-income families, and can leave families with insufficient income to meet other basic needs such as food, clothing, transport, medical care and education. The ratio reported here is the same as that reported in the 2001 Social

Report (Ministry of Social Policy, 2001). Amongst the low-income population, there is a clear relationship between housing cost outgoings to income (OTI) and living standards. Those with OTI greater than 30 percent of income tended to have lower average living standard scores than those with OTI less than 30 percent of income (see Table 7.3).

Table 7.3 Mean ELSI scores by housing cost outgoings to income (OTI) ratio (2000)

	OTI <=30%	OTI >30%
Low income - benefit	30.2	26.1
Low income - market	41.2	31.3
Low income - NZS	45.4	38.9
Total low income	38.6	28.8

Housing tenure

The majority of low-income NZS recipients (92 percent) owned their own homes. Low-income benefit recipients were the least likely to own their homes with or without a mortgage (69 percent) while 79 percent of the low-income market group also owned their homes with or without a mortgage.

Of note in Table 7.4 is the very low living standard scores of those renting from Housing New Zealand, particularly amongst the low-income benefit and low-income market populations. This is primarily due to the selection-bias associated with HNZ rentals which are allocated on the basis of need (refer to discussion in Chapter 3 on HNZ tenancies). Standardising for housing tenure made very little difference to the mean ELSI scores of the three groups, or to the difference between the highest and lowest mean ELSI scores amongst the three groups.

Table 7.4 Distribution of low-income population by tenure circumstances (2000)

		Rented - HNZ	Rented - Private	Owned*	Total	Mean ELSI score standardised for housing tenure**
Low income- benefits	Population proportion	6.1%	24.6%	69.4%	100.0%	
	Mean ELSI score	23.8	27.7	29.1	28.4	28.6
Low income-market	Population proportion	5.0%	16.0%	79.0%	100.0%	
	Mean ELSI score	25.6	35.5	39.0	37.8	37.7
Low income-NZS	Population proportion	2.9%	5.6%	91.5%	100.0%	
	Mean ELSI score	37.9	42.1	45.3	44.9	44.4
Total low income	Population proportion	5.0%	17.4%	77.6%	100.0%	
	Mean ELSI score	26.0	31.4	36.8	35.3	

* Includes owned with or without a mortgage and owned family trust, family and/or other.

** The standardisation procedure used here applies the housing tenure distribution of the total low-income population to each of the three low-income groups and thereby produces an average ELSI score standardised for housing tenure.

Asset position

Two different variables are available to examine asset position, i.e. the number of assets owned excluding the family home and the value of assets excluding the family home[69]. In this analysis both these variables have been examined as they both seem to affect living standard scores.

Asset value

Average living standard scores for all three groups generally increase as the value of assets increases. The difference between the highest and lowest mean ELSI scores reduces slightly from 16.5 to 14.9 once standardised for asset value (see Table 7.5).

Table 7.5 Distribution of low-income population by value of assets (2000)

	Not Spec	$10,000 or less	$10,001-$25,000	$25,001-$100,000	$100,001-$300,000	$300,001- or more	Total	Mean ELSI score standardised for asset value*
Low income- benefits								
Population proportion	61.4%	25.5%	3.2%	6.9%	2.5%	0.5%	100.0%	
Mean ELSI score	25.6	31.3	35.1	35.6	36.5	41.9	28.4	29.9
Low income-market								
Population proportion	36.3%	33.7%	4.6%	9.7%	9.3%	6.5%	100.0%	
Mean ELSI score	32.6	40.7	43.5	37.3	41.4	42.5	37.8	36.9
Low income-NZS								
Population proportion	36.0%	30.7%	14.6%	12.6%	4.8%	1.2%	100.0%	
Mean ELSI score	43.9	44.1	45.2	47.5	47.9	50.7	44.9	44.8
Total low income								
Population proportion	46.5%	29.8%	6.0%	9.1%	5.6%	3.0%	100.0%	
Mean ELSI score	30.5	38.1	42.5	39.5	41.6	43.1	35.3	

* The standardisation procedure used here applies the asset distribution of the total low income population to each of the three low-income groups and thereby produces an average ELSI score standardised for asset value.

69 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.

Number of owned assets

In the living standards survey, respondents were asked how many assets they owned with the exception of the family home. Out of the low-income groups, low-income beneficiaries were the most likely to have no assets and the least likely to have three or more assets. Between 12 and 16 percent of low-income NZS and the low-income market groups had three or more assets, compared with only 5 percent of the low-income benefit group.

The overall pattern shows that average living standard scores for all three groups steadily increase as the number of assets increases. Standardising the mean ELSI scores for number of assets substantially reduces the difference between the highest and lowest mean ELSI scores from 16.5 to 13.3 (see Table 7.6).

Table 7.6 Distribution of low-income population by number of owned assets (2000)

	Nil	One	Two	Three or more	Total	Mean ELSI scores standardised for number of assets*
Low income-benefits						
Population proportion	58.5%	28.5%	7.9%	5.2%	100.0%	
Mean ELSI score	25.4	29.3	37.2	43.8	28.4	30.5
Low income-market						
Population proportion	31.8%	32.4%	19.8%	16.1%	100.0%	
Mean ELSI score	31.5	40.0	39.3	43.6	37.8	36.9
Low income-NZS						
Population proportion	20.1%	45.2%	22.2%	12.4%	100.0%	
Mean ELSI score	40.4	44.7	46.8	49.6	44.9	43.8
Total low income						
Population proportion	40.4%	33.3%	15.4%	10.9%	100.0%	
Mean ELSI score	28.7	37.6	41.0	45.0	35.3	

* The standardisation procedure used here applies the asset distribution of the total low income population to each of the three low-income groups and thereby produces an average ELSI score standardised for asset number.

Education

Those in the low-income benefit population tend to have lower levels of educational qualification. In 2000, 32 percent had no formal qualification and a further 25 percent had only school level qualifications. Only 10 percent had bachelors degrees or higher qualifications. Amongst the low market income population, 15 percent had no formal qualifications while 41 percent had school level qualifications. Half (50 percent) of all low-income NZS people had no formal qualifications (reflecting the general distribution of those aged 65 years and over towards lower levels of formal education).

ELSI scores for the market income and NZS members of the low-income population, increase substantially for those who have some qualifications. For low-income beneficiaries, however, there is very little variation in scores between those with no qualifications and those with more substantial qualifications.

Table 7.7 indicates that standardising mean ELSI scores for educational qualifications only results in a slight reduction in mean scores for the two groups (from 16.5 to 14.8).

Table 7.7 Distribution of low-income population aged 18 years and over by highest educational qualification (2000)

	No formal quals	School qualification	Occupational certificates and diplomas	Bachelors degrees or higher quals	Total	Mean ELSI score standardised for educational qualification*
Low income-benefits						
Population proportion	32.3%	24.7%	33.0%	10.0%	100.0%	
Mean ELSI score	30.8	32.2	28.3	31.3	28.4	30.6
Low income-market						
Population proportion	14.6%	41.4%	33.2%	10.8%	100.0%	
Mean ELSI score	33.4	41.6	38.8	39.1	37.8	38.1
Low income-NZS						
Population proportion	50.2%	31.9%	16.6%	1.3%	100.0%	45.4
Mean ELSI score	43.9	46.1	45.7	47.5	44.9	
Total low income						
Population proportion	30.7%	32.8%	28.6%	7.9%	100.0%	
Mean ELSI score	37.1	40.3	35.6	36.1	35.3	

* The standardisation procedure used here applies the educational distribution of the total low-income population to each of the three low-income groups and thereby produces an average ELSI score standardised for education level.

Summary of relationship between living standards and the factors examined

Table 7.8 summarises the variation within the bottom third of the income distribution that is associated with different income sources. Low-income NZS recipients have the highest average standard of living within this group, low-income benefit recipients have the lowest, while the low market income group have average scores in the middle of the range between these two groups.

Overall results suggest that standardising average living standard scores for accommodation costs makes the highest contribution in terms of reducing the distance between the highest average living standard score (i.e. low-income NZS recipients) and the lowest living standard score (i.e. low-income benefit recipients).

The distance between the average living standard scores for the low-income benefit population and the low-income market population is reduced the most by standardising for the number of assets owned. The distance between the scores of the market income and NZS members of the low-income group is reduced the most by standardising for accommodation costs.

Broadly, it is possible to say that the living standard differences between the low- income benefit, market and NZS subgroups appear in part to be associated with differences between those groups in housing costs, assets and income, but not (to any great extent) differences in education or housing tenure position. Of note here is the fact that the greater impact on living standards is made by housing cost rather than housing tenure and points to the danger of simply inferring costs and living standard outcomes from tenure alone.

A further interesting result is that standardising for number of assets makes a larger difference than standardising for asset value.

At a purely speculative level, there are two possible reasons which can be proposed for this. Firstly, obtaining information about asset value can be very difficult in a survey, especially when it is only possible to ask a small number of questions. It is therefore possible that the information on asset value is understated and that it is easier for people to provide an account of what assets they have. Asset number is, however, highly associated with asset value and this to some extent

overcomes the limitations of asset value. Secondly, it is possible that the number of assets is quite a strong indicator of sophistication about financial matters and skills in money management. Therefore, it may be acting as a rough proxy for the money management skills and abilities of the respondent[70].

Table 7.8 Comparison of average living standards scores standardised for a variety of factors (2000)

Bottom third of the income distribution	Mean ELSI score	Mean ELSI score standardisd for net equivalent income	Mean ELSI score standardised for housing cost	Mean ELSI score standardised for tenure type	Mean ELSI score standardised for number of assets	Mean ELSI score standard-ised for asset value $	Mean ELSI score standardised for educational qualification
Low income - benefit	28.4	29.5	29.6	28.6	30.5	29.9	30.6
Low income - market	37.8	37.8	38.3	37.7	36.9	36.9	38.1
Low income - NZS	44.9	42.7	42.3	44.4	43.8	44.8	45.4
Difference between highest and lowest mean scores (i.e. benefit and NZS)	16.5	13.2	12.7	15.8	13.3	14.9	14.8
Difference between benefit and market	9.4	8.3	8.7	9.1	6.3	7.0	7.5
Difference between market and NZS	7.1	4.9	4.0	6.7	7.0	7.9	7.3

70 This raises the question of how much of the living standards variation is accounted for by considering all these factors together. An initial regression analysis showed that the factors that we have examined here other than income source (i.e. income, accommodation costs, tenure, education and asset position), taken together, account for about 16 percent of the living standards variation in the low income population. When income source (i.e. low income benefit, low income market, low income NZS) is added to the regression equation (using dichotomous dummy variables), the amount of living standards variation accounted for increases to 25 percent. This is a substantial increase in variation explained. This indicates that the factors examined only partly account for the living standards differences between the low income groups, and that income source continues to account for a substantial part of the variation in the low- income population. This may be due to the income source acting as a proxy for unmeasured variables that influence living standards (e.g. amount and quality of household utilities, skills and abilities in financial management, support from others, lifestyle, stability etc.). This may also be due to weaknesses in the measured variables (e.g. asset position may not have been well captured by the variables used to measure it).

Summary

This chapter has shown that while there can be substantial variation in living standards amongst those with low incomes, income itself only accounts for a part of this variation. Of the three low-income groups examined, the most at risk of low living standards appear to be those who receive income tested benefits. Low-income New Zealand Superannuitants appear to be more likely to have comfortable living standards while low-income groups receiving market income appear to be in the middle of these two groups, with higher living standards than the former and lower living standards than the latter.

Variations in living standard scores between these three low-income groups appear in part to be associated with differences in housing costs, asset position and income. Differences in housing tenure and education levels don't seem to be as strongly associated with living standard differences between them.

The identification of factors that underlie differences in living standards is of great relevance to social policy directed at reducing poverty, and will be an important focus of future living standards research. This research will be directed at not just ascertaining what factors play a role, but their relative importance and the ways in which they interact. This task will require collecting data on a wider range of variables than those used above. These variables might include information on:

- past experiences of economic misfortune;
- the effects of marital dissolution, relationship formation and re-formation;
- levels of debt;
- the extent to which there is support from other family members (which could raise living standards);
- the extent to which family responsibilities cause some income to be diverted to assisting people outside the household (and could lower living standards);
- the extent to which there is persistence of poverty;
- the extent to which there are resources (financial and other) which buffer against the effects of low income;
- health status differences and the impact of health care costs;

- the extent to which there is buffering provided by resources available in neighbourhoods, schools and the local community environment;
- effects of unavoidable costs such as childcare costs;
- differences in location that may give rise to variations in prices, unavoidable transport costs etc.

The analysis given in this chapter goes a small way towards examining some of the factors that may explain variation in living standards below a defined income threshold. The next phase of the living standards research programme will focus on improving our understanding of the multitude of factors that underlie this variation.

CHAPTER EIGHT

Concluding comments

This report has presented a picture of living standards for the New Zealand population that is without close precedent in the field of New Zealand living standards research. This has been made possible by the first use of the ELSI scale, a new tool that promises a substantial advance in our ability to measure living standards.

Key findings from this report show that:

- There is considerable variation in living standards across different groups.
  - o Higher average living standards 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 self-employment income;
    - – 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);
  - o Lower average living standards are found amongst:
    - – children (especially those in sole-parent families receiving an income-tested benefit);
    - – Māori and Pacific people;
    - – those in clerical, service, sales, trade or elementary occupations;
    - – those receiving income-tested benefits;
- There is a strong relationship between living standards and financial position (as indicated by variables such as income, assets and accommodation costs).
- Although the analysis has not been directed towards trying to explain living standard differences, the results indicate that differences are associated with a variety of factors that are interconnected in complex ways. Income is prominent amongst these factors but, of itself, may account for only part of the variation.

- Despite the strength of the relationship between living standards and financial position, there is still considerable variation in living standards among those in similar financial circumstances.
- The results provide compelling support for the widely held view that Māori have below-average living standards.
- The pattern of differences between Māori population sub-groups isn't entirely the same as those found for the population overall. A particular difference is that living standard scores for older Māori are no higher than they are for other Māori age groups, whereas for the population overall, living standards are higher for older people.
- Of all the major ethnic groups in New Zealand, the Pacific population has the lowest ELSI scores.
- Amongst Pacific people, lower living standards are pronounced at both ends of the life cycle, in childhood and old age.
- The ELSI average for families with dependent children is lower than for the population as a whole. The lower living standards of families with dependent children is primarily a result of the lower living standards of sole-parent families with dependent children who are in receipt of income-tested benefits. Sole-parent families account for approximately 29 percent of all families with dependent children. Of this group, 68 percent are in receipt of income-tested benefits.
- Children with scores at the lower ('very restricted' or 'restricted') end of the scale (who are predominantly children in sole-parent families) are much more likely than other children to experience constraints that may adversely affect their health, education and general development.
- There is substantial variation in living standards amongst those with low incomes. Of the three low income groups examined (i.e. low-income receiving NZS, low-income receiving income-tested benefits and low-income receiving market income), those most at risk of lower living standards appear to be those who receive income-tested benefits.

- Low-income New Zealand Superannuitants appear to be more likely to have comfortable living standards while low-income people receiving market income have living standards that (on average) fall between those of Superannuitants and income-tested beneficiaries. Variation between these three groups is associated with differences in housing costs, asset position and income, but these alone do not appear to wholly account for it. Differences in housing tenure and education levels don't seem to be as strongly associated with living standard differences between the three low-income groups.

Because the ELSI tool is new, with the present report being the first occasion of its use, it is of interest to compare the picture that emerges from its use with the conventional wisdom that has developed from many years of analysing other types of information and from anecdote, press stories and political debate.

Many of the findings accord with conventional wisdom. The ELSI scores imply that the majority of New Zealanders do indeed enjoy a satisfactory standard of living. No surprises are offered by the results showing the higher living standards of those with higher levels of education or higher status occupations (especially professional occupations); nor by the results showing the lower living standards of domestic purposes beneficiaries (together with those reliant on other types of income-tested benefits), or those of Māori or Pacific ethnicity (although in the case of the last mentioned group the size of the effect is greater than may have been anticipated, with Pacific people having an average living standard substantially below that of Māori).

However, while Māori and Pacific populations have lower overall living standards, there is a considerable degree of within-group variation in living standards within these populations.

ELSI scores that indicate that New Zealand Superannuitants enjoy a relatively favourable standard of living also reinforce the results of the 2001 study that focused on older people and used a living standard measure developed specifically for older people.

In contrast, other results of the present work indicate the need to question some elements of conventional wisdom. A striking example is the range of living standards found for people on lower incomes. This group shows a very wide range of living standards, despite

beneficiaries, people with low market incomes and Superannuitants having quite similar income levels.

Similarly, the variation in standard of living that is found within different age groups underscores the danger of using simple life-cycle models to account for variation in standard of living between those of different ages.

Some of the findings in this report have important implications for government social policy. It is not the purpose of this report to offer prescriptions, but it is useful to flag some of these implications as they provide an illustration of the relevance of this type of living standards research to social policy:

- The low living standards of beneficiary children (who are predominantly in sole-parent families) provide an argument for giving priority to policies that support positive outcomes for such children and that protect them against disadvantages that might compromise their development. The results reported suggest that policy initiatives will need to reflect a multiple perspective that has regard not just for direct income support, but also for income from secure employment, support for the parenting role, and support that underpins health and educational development for children regardless of the circumstances of their parents.
- The generally favourable living standards of older New Zealanders suggest that current support arrangements are meeting the needs of the majority of New Zealand Superannuitants. This does not reduce the need for policies to ensure the well-being of all Superannuitants. It is important to recognise that the generally favourable picture for older New Zealanders does not hold for older Māori or older Pacific people (who are numerically too few to have much effect on overall results). The results also point to the importance of low housing cost (whether this is achieved through home ownership or other means), and the prior accumulation of an asset base. Those who do not have these advantages in retirement fare rather less well.
- The results in the report vividly reinforce previous knowledge concerning the higher prevalence of disadvantage amongst Māori and Pacific people. The results underline the importance of a strong focus being maintained on finding effective ways of reducing these disparities.

A comprehensive understanding of what drives differences in living standards will require the contribution of a variety of inter-related factors to be disentangled. These include family composition and life-stage, financial circumstances, state of health, disabilities, socio-economic position, abilities, lifestyle, and so on. Drawing out the interdependency of such factors, their contribution to living standards, and the pathways through which they exert their effect will require the progressive creation of knowledge over time. The results presented in this report are an outcome of the Ministry of Social Development's continuing programme of research on living standards. Next in the programme is a major population survey that will collect, among other things, information on the sort of explanatory factors outlined above so that a start can be made on disentangling their contribution to living standards. While the present work has focused on what patterns of differences exist, the next stage will advance our knowledge of why these differences exist.

It is unlikely that any single study will answer all questions. The surveys on which the current report has been based comprise a very rich set of data that will support analyses of issues that have been touched upon only lightly in the current report. While the Ministry will itself be carrying out further analyses, it cannot claim to have the expertise or the resources to exhaust the potential of either the data collected so far or the data that will be collected in the future. The Ministry values collaboration in research and welcomes approaches from other agencies and bona fide researchers to use the data being collected through its living standards programme to address other related issues and to contribute to debate on living standards. For example, the data includes information on the health of older New Zealanders that could be analysed in relation to a range of other issues in the context of living standards.

While the results that are reported here are interesting in themselves, they also strengthen the knowledge base on which social policy rests. Appropriate measures of outcomes and their distribution within the population are essential to informed debate on issues such as poverty, inequality and inter-ethnic and inter-generational equity. The authors believe that the ELSI scale shows considerable promise as a measurement tool for this purpose. The ultimate proof of this lies in the utility of ELSI to other researchers and to future research.

These results of ELSI's first application will be immediately useful in assessing priorities and improving the effectiveness of social assistance policy. They represent a step up in our understanding of social assistance needs, the types of assistance that might have the greatest effect, and the ways in which such assistance might best be targeted.

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Characteristics of population by living standards categories

Table A.1 Demographic and social characteristics of the population and of those with lower and higher living standards 2000

	'Restricted' Living standards (levels 1 & 2) %	'Somewhat Restricted' Living standards (level 3) %	'Comfortable' Living standards (levels 4 & 5) %	'Good' Living standards (levels 6 & 7) %	Total Population %
Demographic characteristics					
Age groups					
Dependent children (under 18 years)	38.2	37.9	27.2	18.9	25.9
18-24 years	8.9	9.0	13.3	9.0	10.7
25-44 years	31.6	32.2	33.2	29.6	31.5
45-64 years	18.7	16.0	17.6	24.8	20.5
65plus years	2.6	4.8	8.7	17.6	11.4
Total	100.0	100.0	100.0	100.0	100.0
Gender					
Male	47.5	46.5	49.8	51.1	49.8
Female	52.5	53.5	50.2	48.9	50.2
Total	100.0	100.0	100.0	100.0	100.0
Ethnic groups[71]					
Māori	25.5	30.2	15.1	6.2	14.0
NZ Pacific	17.7	8.9	6.0	2.3	5.8
Chinese	2.0	2.3	1.4	2.4	2.0
Indian	0.2	0.7	2.4	0.9	1.4
Other	5.6	5.2	4.3	2.5	3.8
European	58.4	61.8	78.4	90.2	79.7
Economic family unit type					
Sole parent families	34.1	24.6	9.6	2.4	10.4
Two parent families	30.8	41.4	42.4	35.2	38.4
Couple only	9.4	11.6	21.8	35.4	25.1
Single person	25.7	22.5	26.2	27.0	26.1
Total	100.0	100.0	100.0	100.0	100.0

71 Ethnicity is based on total responses to the ethnicity question, therefore the ethnic categories are not mutually exclusive.

Table A.1 (continued)

	'Restricted' Living standards (levels 1 & 2) %	'Somewhat Restricted' Living standards (level 3) %	'Comfortable' Living standards (levels 4 & 5) %	'Good' Living standards (levels 6 & 7) %	Total Population %
Social characteristics					
Regions					
Auckland	29.9	30.4	27.6	25.7	27.3
Wellington	5.6	6.2	9.4	10.5	9.2
Other major urban	39.0	33.5	33.2	31.2	32.9
Minor urban	15.7	17.2	15.7	16.3	16.1
Rural	9.7	12.7	14.1	16.3	14.4
Total	100.0	100.0	100.0	100.0	100.0
Housing tenure					
Owned - family trust/family and/or other	5.1	9.6	10.7	12.0	10.6
Owned - family unit	63.2	69.3	75.2	82.2	76.4
Rented - private	21.1	15.4	12.0	5.2	10.4
Rented - local authority	0.2	0.8	0.3	0.3	0.4
Rented - HNZ	10.4	4.9	1.7	0.3	2.3
Total	100.0	100.0	100.0	100.0	100.0
Higher educational qualifications of population aged 18 years and over					
No formal qualifications	27.9	25.9	21.3	17.5	20.5
School qualifications	33.3	23.8	29.1	30.8	29.7
Occupational cert. dips.	30.0	40.2	37.4	32.2	34.8
Bachelors degree or higher qualifications	8.7	10.1	12.2	19.5	15.0
Total	100.0	100.0	100.0	100.0	100.0

Table A.2 Economic and financial characteristics of the population and of those with lower and higher living standards

	'Restricted' Living standards (levels 1 & 2) %	'Somewhat Restricted' Living standards (level 3) %	'Comfortable' Living standards (levels 4 & 5) %	'Good' Living standards (levels 6 & 7) %	Total Population %
Major occupational groups of employed population aged 18-64 years					
Leg., Adm. & Managers	3.4	6.9	13.4	20.7	15.1
Professionals and technicians	14.0	21.5	24.7	34.5	27.7
Agric. and Fisheries	4.8	6.9	10.0	10.4	9.5
Clerks, Service, Sales	31.3	25.8	16.5	12.7	16.9
Trades, plant, machinery	35.7	34.4	30.1	19.1	26.3
Elementary occupations	10.7	4.6	5.3	2.7	4.5
Total	100.0	100.0	100.0	100.0	100.0
Financial characteristics					
Income from market sources (self-employment or wages and salaries)					
Income received from self-employment	24.4	25.1	35.0	47.2	38.5
Income received from wages and salaries only	75.6	74.9	65.0	52.8	61.5
Total	100.0	100.0	100.0	100.0	100.0
Income source					
Income-tested benefits	58.8	35.3	15.6	2.2	16.0
New Zealand Superannuation	3.2	5.3	9.6	18.9	12.4
Market sources	38.0	59.5	74.8	79.0	71.6
Total	100.0	100.0	100.0	100.0	100.0
Weekly accommodation costs					
Nil	10.1	17.0	27.4	47.5	32.9
$1 - $199	62.6	55.2	43.9	24.4	38.9
$200 - $399	26.5	26.6	22.0	20.9	22.5
$400 plus	0.8	1.2	6.6	7.1	5.7
Total	100.0	100.0	100.0	100.0	100.0

Table A.2 (continued)

	'Restricted' Living standards (levels 1 & 2) %	'Somewhat Restricted' Living standards (level 3) %	'Comfortable' Living standards (levels 4 & 5) %	'Good' Living standards (levels 6 & 7) %	Total Population %
Equivalent disposable income groups					
$10,000 or less	57.6	27.1	17.0	5.9	17.0
$10,001-$20,000	34.9	52.7	47.9	29.4	39.6
$20,001-$30,000	4.5	15.9	21.1	25.6	21.0
$30,001-$40,000	1.0	3.6	11.4	21.6	13.9
$40,001-$50,000	1.6	0.8	1.8	9.5	4.9
$50,001-$70,000	0.5	0.0	0.6	7.3	3.3
$70,001 or higher	0.0	0.0	0.2	0.7	0.4
Total	100.0	100.0	100.0	100.0	100.0
Asset position					
$10,000 or less	67.7	61.1	42.0	19.9	34.0
$10,001-$25,000	9.2	13.6	13.6	13.2	13.2
$25,001-$100,000	15.4	11.1	18.8	22.4	19.8
$100,001-$300,000	4.6	12.6	19.1	23.1	19.9
$300,001 or higher	3.1	1.6	6.5	21.3	13.1
Total	100.0	100.0	100.0	100.0	100.0

Summary of effective sample sizes and confidence intervals

Procedure for estimating effective sample sizes and confidence intervals

For each sub-population for which results have been reported, estimates are provided below for:

* the mean ELSI score for the sub-population ($\bar{X}$)
* the lower and upper limits of the 95% confidence interval for the ELSI mean (LCL ⟷ UCL), and
* the effective sample size for the sub-population (n') - i.e. the sample size, under a simple random sampling design, that would give the same statistical power as the data obtained through the complex designs employed for sampling the working age and older person populations.

Estimating effective sample sizes

Effective sample size has been estimated using the equation given below. The derivation of the equation is set out in Appendix D of the report posted on the Ministry of Social Development's web site (reference: www.msd.govt.nz/publications/livingstandards.html). Appendix D has not been included in the printed report.

Definitions:

For a particular sub-population (e.g. Māori)

$n_1 \equiv$ number of respondents from the Survey of Working Age People (SWAP)

$N_1 \equiv$ size of the sub-population who are in the SWAP population (i.e. are of working age, not in institutions, etc.)

$n_2 \equiv$ number of respondents from the Survey of Older People (SOP)

$N_2 \equiv$ size of the sub-population in the SOP population (i.e. are older people, not in institutions, etc.)

f_1 and f_2 are the sampling fractions for the SWAP and SOP samples. That is:

$f_1 \equiv n_1 / N_1$ and $f_2 \equiv n_2 / N_2$.

Then k is the ratio of the sampling fractions. That is,

$k \equiv f_1 / f_2$.

$\bar{X}_1$, $\bar{X}_2$ and $\bar{X}$ are (respectively) the ELSI means for the sub-population members who are in the SWAP populations, the sub-population members who are in the SOP population, and the sub-population as a whole. Similarly, S_1, S_2, and S are the variances of the ELSI scores of those three groups. These means and variances are estimated from the sample results using the respondent weights for estimating population statistics.

deff´ represents the common design effect for variables that are components of ELSI scores.

Then, as set out in Appendix D of the web report, the effective sample size, (n'), for the sub-population is estimated as:

$$n' = \frac{(n_1 + kn_2)\left(n_1 S_1^2 + kn_2 S_2^2 + n_1 (\bar{X}_1 - \bar{X})^2 + (\bar{X}_2 - \bar{X})^2\right)}{n_1 S_1^2 + k^2 n_2 S_2^2} \Big/ deff'$$

The value for the common design effect was derived from a set of 247 observed design effects. The value used was the upper quartile of the observed design effects. This is a more conservative procedure than using the median value of the observed effects. The procedure gave $deff' = 1.50$.

f_1 and f_2 are the same for all sub-populations reported. f_1 was calculated as the number of SWAP respondents divided by the size of SWAP population, with the latter number being derived from Census results. Similarly, f_2 was calculated as number of SOP respondents divided by the size of the SOP population (derived from Census results). The consequent value obtained for k (the ratio of f_1 to f_2) was 4.52.

As noted previously $\bar{X}_1$, $\bar{X}_2$, $\bar{X}$, S_1 and S_2 are estimated from the sample results using the respondent weights.

Estimating confidence intervals of ELSI means

The confidence interval of the ELSI mean, $\bar{X}$, is calculated in the conventional way using the standard deviation of the mean, estimated as $S/\sqrt{n'}$ (where S - the standard deviation of sub-population ELSI scores - is obtained from sample results using the respondent weights). Thus the lower and upper limits of the 95% confidence interval are calculated as $\bar{X} \pm 1.96(S/\sqrt{n'})$.

Confidence Intervals for ELSI Mean
Chapter 3 - Total Population

Sub-population	Text reference	mean	Confidence Interval		Effective sample size n'	Standard deviation S
			LCL	UCL		
Population	**Fig 3.1**	**41.95**	**41.49**	**42.40**	**3,182**	**12.21**
Children						
Under 18- Children	Fig 3.2	38.59	37.83	39.36	1,098	12.97
Age Group						
18 to 24 years	Fig 3.2	41.61	40.32	42.90	256	10.53
25 to 44 years	Fig 3.2	41.71	41.05	42.36	1,275	11.88
45 to 64 years	Fig 3.2	43.70	42.87	44.53	901	12.76
65+	Fig 3.2	47.42	47.04	47.80	1,993	8.72
Gender & Single/sole parent						
Males - Single/sole parent	Fig 3.4	42.17	41.14	43.20	484	11.56
Females - Single/sole parent	Fig 3.4	39.77	38.87	40.66	856	13.38
Gender						
Males	Fig 3.5	42.33	41.69	42.96	1,377	12.00
Females	Fig 3.5	41.57	41.00	42.14	1,807	12.40
Ethnicity						
Māori	Fig 3.6	35.64	34.30	36.98	338	12.54
Pacific	Fig 3.6	32.85	30.50	35.20	139	14.12
European	Fig 3.6	43.66	43.22	44.10	2,630	11.40
Chinese	Fig 3.6	42.30	38.67	45.94	39	11.53
Indian	Fig 3.6	41.71	39.43	43.99	35	6.93
Other	Fig 3.6	38.08	35.79	40.36	113	12.40
Family Type						
Couple only	Fig 3.8	46.60	45.99	47.22	1,024	10.07
Couple with children	Fig 3.8	41.93	41.17	42.69	835	11.22
One parent family	Fig 3.8	29.66	28.13	31.20	273	12.92
Single person	Fig 3.8	42.38	41.67	43.10	1,056	11.85
Region						
Auckland	Fig 3.10	41.35	40.41	42.30	672	12.49
Wellington	Fig 3.10	44.04	42.84	45.23	331	11.09
Other major urban	Fig 3.10	41.14	40.41	41.86	1,160	12.62
Secondary and minor urban	Fig 3.10	41.79	40.84	42.74	615	12.01
Rural	Fig 3.10	43.76	42.68	44.84	418	11.24
Housing Tenure						
Family trust+family+other	Fig 3.11	44.23	43.28	45.17	464	10.42
Owned with mortgage	Fig 3.11	40.86	40.07	41.65	952	12.38
Owned mortgage free	Fig 3.11	47.05	46.45	47.64	991	9.56
Private Landlord	Fig 3.11	35.91	34.92	36.90	592	12.28
Local Authority	Fig 3.11	39.47	37.01	41.93	76	10.92
Housing NZ (HNZ)	Fig 3.11	27.47	25.56	29.37	170	12.67

Sub-population	Text reference	mean	Confidence Interval		Effective sample size n'	Standard deviation S
			LCL	UCL		
Highest Qualifications Attained						
No school qual	Fig 3.12	41.05	40.19	41.90	830	12.55
School qual	Fig 3.12	43.08	42.29	43.87	867	11.88
Occupational cert or dip	Fig 3.12	42.83	42.16	43.50	1,070	11.16
Bachelors degree or high	Fig 3.12	46.70	45.71	47.69	435	10.54
Major Occupational Groups						
Leg, Admin & Mang	Fig 3.13	47.60	46.58	48.62	323	9.39
Prof, Ass Prof & Technician	Fig 3.13	45.52	44.73	46.31	639	10.19
Clerks & Service and Sale	Fig 3.13	38.44	37.16	39.73	418	13.38
Ag and Fishery Worker	Fig 3.13	45.05	43.80	46.30	228	9.60
Trades & Plant and Machinery	Fig 3.13	39.60	38.61	40.60	577	12.22
Elementary Occupations	Fig 3.13	36.72	34.15	39.29	107	13.60
Receipt of Market Income						
Self-employment Income	Fig 3.14	45.68	44.94	46.41	739	10.17
Wages/Salary	Fig 3.14	41.36	40.78	41.93	1,526	11.53
Income Source						
Income-tested Benefit	Fig 3.15	28.95	27.75	30.16	440	12.85
NZ Superannuation (NZS)	Fig 3.15	47.24	46.77	47.71	1,366	8.82
Market	Fig 3.15	43.94	43.47	44.40	1,941	10.55
Disposable Income						
Loss-$10,000	Fig 3.17	31.92	30.65	33.18	451	13.70
$10,001-$20,000	Fig 3.17	40.20	39.62	40.78	1,457	11.29
$20,001-$30,000	Fig 3.17	45.41	44.70	46.12	581	8.74
$30,001-$40,000	Fig 3.17	48.96	48.18	49.73	376	7.63
$40,001-$50,000	Fig 3.17	51.15	49.87	52.42	145	7.83
$50,001-$70,000	Fig 3.17	53.88	52.70	55.05	99	5.96
$70,001 or more	Fig 3.17	53.12	49.61	56.63	19	7.76
Asset Position						
$10,000 or less	Fig 3.19	40.17	39.39	40.95	797	11.25
$10,001-$25,000	Fig 3.19	44.65	43.65	45.65	319	9.09
$25,001-$100,000	Fig 3.19	45.42	44.56	46.29	449	9.34
$100,001-$300,000	Fig 3.19	47.22	46.40	48.03	400	8.34
$300,001 or more	Fig 3.19	51.27	50.38	52.17	268	7.47
Accommodation Costs						
Nil	Fig 3.20	46.89	46.36	47.42	1,220	9.46
$1-$199	Fig 3.20	37.60	36.87	38.34	1,145	12.69
$200-$399	Fig 3.20	40.48	39.42	41.53	536	12.49
$400 +	Fig 3.20	47.19	45.54	48.84	102	8.51

Sub-population	Text reference	mean	Confidence Interval LCL	Confidence Interval UCL	Effective sample size n'	Standard deviation S
Economic family unit Type and Age Groups						
Couple 18-24	Table 3.1	39.69	36.25	43.13	43	11.56
Couple Children 18-24	Table 3.1	34.71	31.20	38.22	32	10.13
One Parent 18-24	Table 3.1	32.88	29.08	36.68	27	10.14
Single 18-24	Table 3.1	42.87	41.28	44.46	153	10.05
Couple 25-29	Table 3.1	45.13	42.43	47.83	68	11.36
Couple Children 25-29	Table 3.1	39.17	36.46	41.89	75	12.02
One Parent 25-29	Table 3.1	23.49	19.88	27.10	37	11.25
Single 25-29	Table 3.1	41.25	38.77	43.73	71	10.68
Couple 30-34	Table 3.1	44.74	42.19	47.29	62	10.25
Couple Children 30-34	Table 3.1	40.18	38.56	41.81	165	10.65
One Parent 30-34	Table 3.1	25.52	21.53	29.51	47	13.90
Single 30-34	Table 3.1	43.02	39.83	46.21	62	12.81
Couple 35-55	Table 3.1	47.23	46.10	48.36	305	10.05
Couple Children 35-55	Table 3.1	43.20	42.27	44.12	543	11.00
One Parent 35-55	Table 3.1	31.57	29.56	33.57	154	12.69
Single 35-55	Table 3.1	39.10	37.33	40.87	249	14.22
Couple 55-64	Table 3.1	46.38	44.94	47.82	215	10.78
Couple Children 55-64	Table 3.1	-	-	-	-	-
One Parent 55-64	Table 3.1	-	-	-	-	-
Single 55-64	Table 3.1	40.87	38.19	43.55	107	14.16
Couple 65-74	Table 3.1	47.28	46.64	47.92	669	8.44
Couple Children 65-74	Table 3.1	-	-	-	-	-
One Parent 65-74	Table 3.1	-	-	-	-	-
Single 65-74	Table 3.1	44.60	43.60	45.60	467	10.98
Couple 75+	Table 3.1	49.10	48.16	50.04	257	7.66
Couple Children 75+	Table 3.1	-	-	-	-	-
One Parent 75+	Table 3.1	-	-	-	-	-
Single 75+	Table 3.1	48.68	48.12	49.25	581	6.97

Confidence Intervals for ELSI Mean
Chapter 4 - Māori Population

Sub-population	Text reference	mean	Confidence Interval		Effective sample size n'	Standard deviation S
			LCL	UCL		
Total	**Fig 4.1**	**41.95**	**41.49**	**42.40**	**3,182**	**12.21**
Māori	**Fig 4.1**	**35.64**	**34.30**	**36.98**	**338**	**12.54**
Children						
Māori Children Under 18	Fig 4.2	33.16	31.31	35.00	176	12.48
Total Children Under 18	Fig 4.2	38.59	37.83	39.36	1,098	12.97
Age Group						
Māori 18-34 Yrs	Fig 4.2	36.35	34.66	38.05	155	10.77
Māori 35-44 Yrs	Fig 4.2	38.67	35.72	41.63	83	13.70
Māori 45-64 Yrs	Fig 4.2	38.33	35.03	41.63	65	13.61
Māori 65+ Yrs	Fig 4.2	38.01	35.04	40.97	79	13.41
Total 18-34 Yrs	Fig 4.2	41.41	40.64	42.18	843	11.40
Total 35-44 Yrs	Fig 4.2	42.15	41.27	43.03	688	11.80
Total 45-64 Yrs	Fig 4.2	43.70	42.87	44.53	901	12.76
Total 65+ Yrs	Fig 4.2	47.42	47.04	47.80	1,993	8.72
Gender & Single/sole parent						
Māori Males - Single/sole parent	Fig 4.3	35.44	32.96	37.91	59	9.69
Māori Females - Single/sole parent	Fig 4.3	34.73	32.21	37.25	116	13.83
Total Males - Single/sole parent	Fig 4.3	42.17	41.14	43.20	484	11.56
Total Females - Single/sole parent	Fig 4.3	39.77	38.87	40.66	856	13.38
Gender						
Māori Males	Fig 4.4	35.72	33.69	37.74	135	11.99
Māori Females	Fig 4.4	35.56	33.77	37.36	203	13.08
Total Males	Fig 4.4	42.33	41.69	42.96	1,377	12.00
Total Females	Fig 4.4	41.57	41.00	42.14	1,807	12.40
Family Type						
Māori Couple only	Fig 4.5	42.19	39.11	45.26	64	12.56
Māori Couple with children	Fig 4.5	38.45	36.18	40.72	100	11.58
Māori One parent family	Fig 4.5	26.46	24.14	28.78	78	10.48
Māori Single person	Fig 4.5	38.18	36.07	40.29	100	10.73
Total Couple only	Fig 4.5	46.60	45.99	47.22	1,024	10.07
Total Couple with children	Fig 4.5	41.93	41.17	42.69	835	11.22
Total One parent family	Fig 4.5	29.66	28.13	31.20	273	12.92
Total Single person	Fig 4.5	42.38	41.67	43.10	1,056	11.85

Sub-population	Text reference	mean	Confidence Interval LCL	Confidence Interval UCL	Effective sample size n'	Standard deviation S
Number of Children						
Māori no children	Fig 4.6	39.52	37.54	41.49	127	11.37
Māori 1 Child	Fig 4.6	31.97	28.94	34.99	68	12.73
Māori 2 Children	Fig 4.6	35.85	32.28	39.41	56	13.61
Māori 3+ Children	Fig 4.6	32.72	29.62	35.81	52	11.39
Total no children	Fig 4.6	43.59	42.97	44.22	1,338	11.70
Total 1 Child	Fig 4.6	39.71	38.49	40.94	369	12.01
Total 2 Children	Fig 4.6	40.13	38.99	41.26	455	12.35
Total 3+ Children	Fig 4.6	37.95	36.36	39.54	273	13.41
Region						
Māori Auckland	Fig 4.7	37.31	34.21	40.41	55	11.69
Māori Wellington	Fig 4.7	36.85	31.76	41.93	34	15.02
Māori Other major urban	Fig 4.7	34.60	32.54	36.65	123	11.63
Māori Secondary and Minor urban	Fig 4.7	33.48	30.73	36.24	81	12.66
Māori Rural	Fig 4.7	37.06	33.21	40.91	48	13.66
Total Auckland	Fig 4.7	41.35	40.41	42.30	672	12.49
Total Wellington	Fig 4.7	44.04	42.84	45.23	331	11.09
Total Other major urban	Fig 4.7	41.14	40.41	41.86	1,160	12.62
Total Secondary and Minor urban	Fig 4.7	41.79	40.84	42.74	615	12.01
Total Rural	Fig 4.7	43.76	42.68	44.84	418	11.24
Housing Tenure						
Māori Owned	Fig 4.8	37.11	35.29	38.93	184	12.58
Māori Rented (private)	Fig 4.8	32.04	30.02	34.06	115	11.06
Māori Rented (HNZ)	Fig 4.8	27.77	24.35	31.19	40	11.10
Total Owned	Fig 4.8	43.06	42.59	43.53	2,393	11.73
Total Rented (private)	Fig 4.8	36.02	35.06	36.98	629	12.25
Total Rented (HNZ)	Fig 4.8	27.47	25.56	29.37	170	12.67
Highest Qualifications						
Māori No school qual	Fig 4.9	32.68	30.43	34.93	120	12.57
Māori School qual	Fig 4.9	38.99	36.36	41.61	75	11.63
Māori Occupational cert or dip	Fig 4.9	38.99	36.93	41.04	120	11.47
Māori Bachelors degree or high	Fig 4.9	39.48	34.18	44.78	24	13.33
Total No school qual	Fig 4.9	41.05	40.19	41.90	830	12.55
Total School qual	Fig 4.9	43.08	42.29	43.87	867	11.88
Total Occupational cert or dip	Fig 4.9	42.83	42.16	43.50	1,070	11.16
Total Bachelors degree or high	Fig 4.9	46.70	45.71	47.69	435	10.54

Sub-population	Text reference	mean	Confidence Interval		Effective sample size n'	Standard deviation S
			LCL	UCL		
Cultural Identity Index						
Māori (18-64) Notional	Fig 4.10	36.66	32.59	40.73	27	10.71
Māori (18-64) Positive/Secure	Fig 4.10	37.37	35.91	38.84	276	12.41
Māori (65-69) Notional	Fig 4.10	44.60	41.92	47.28	69	11.44
Māori (65-69) Positive/Secure	Fig 4.10	38.55	37.01	40.19	292	13.01
Occupational Groups						
Māori (18-64)Leg, Admin & Mang	Fig 4.11	47.52	44.16	50.88	24	8.41
Māori (18-64)Prof, Ass Prof & Tech	Fig 4.11	41.87	38.50	45.23	47	11.74
Māori (18-64)Clerks & Service	Fig 4.11	31.12	27.84	34.40	60	12.95
Māori (18-64)Ag and Fishery	Fig 4.11	37.50	32.58	42.43	23	11.96
Māori (18-64)Trades & Plant & Mach	Fig 4.11	37.51	35.24	39.77	91	11.05
Māori (18-64)Elementary Occup	Fig 4.11	37.82	33.58	42.07	22	10.15
Total(18-64)Leg, Admin & Mang	Fig 4.11	47.60	46.58	48.62	323	9.39
Total(18-64)Prof, Ass Prof & Tech	Fig 4.11	45.53	44.74	46.32	639	10.18
Total(18-64)Clerks & Service	Fig 4.11	38.42	37.14	39.71	418	13.41
Total(18-64)Ag and Fishery Work	Fig 4.11	45.05	43.80	46.30	228	9.60
Total(18-64)Trades & Plant & Mach	Fig 4.11	39.60	38.61	40.60	577	12.22
Total(18-64)Elementary Occup	Fig 4.11	36.72	34.15	39.29	107	13.60
Income Source						
Māori Income-tested Benefit	Fig 4.12	27.47	25.58	29.36	120	10.57
Māori NZS	Fig 4.12	39.06	35.83	42.30	63	13.10
Māori Market	Fig 4.12	41.21	39.66	42.75	178	10.51
Total Income-tested Benefit	Fig 4.12	28.95	27.75	30.16	440	12.85
Total NZS	Fig 4.12	47.24	46.77	47.71	1,366	8.82
Total Market	Fig 4.12	43.94	43.47	44.40	1,941	10.55
Disposable Income						
Māori $10,000 or less	Fig 4.13	27.60	25.44	29.76	104	11.21
Māori $10,001-$20,000	Fig 4.13	34.89	33.19	36.59	134	10.01
Māori $20,001-$40,000	Fig 4.13	45.11	43.17	47.06	72	8.40
Māori $40,001 or more	Fig 4.13	52.72	47.70	57.74	9	7.61
Total $10,000 or less	Fig 4.13	31.92	30.65	33.18	451	13.70
Total $10,001-$20,000	Fig 4.13	40.20	39.62	40.78	1,457	11.29
Total $20,001-$40,000	Fig 4.13	46.82	46.28	47.36	952	8.50
Total $40,001 or more	Fig 4.13	52.29	51.41	53.17	263	7.28

Sub-population	Text reference	mean	Confidence Interval		Effective sample size n'	Standard deviation S
			LCL	UCL		
Asset Value						
Māori $10,000 or less	Fig 4.14	35.31	33.11	37.50	107	11.58
Māori $10,001-$25,000	Fig 4.14	38.50	33.22	43.78	14	9.95
Māori $25,001-$100,000	Fig 4.14	43.17	39.54	46.80	29	10.04
Māori $100,001-$300,000	Fig 4.14	44.42	41.41	47.44	31	8.49
Māori $300,001 or more	Fig 4.14	49.20	43.53	54.88	10	9.23
Total $10,000 or less	Fig 4.14	40.17	39.39	40.95	797	11.25
Total $10,001-$25,000	Fig 4.14	44.65	43.65	45.65	319	9.09
Total $25,001-$100,000	Fig 4.14	45.42	44.56	46.29	449	9.34
Total $100,001-$300,000	Fig 4.14	47.22	46.40	48.03	400	8.34
Total $300,001 or more	Fig 4.14	51.27	50.38	52.17	268	7.47
Accommodation Costs						
Māori Nil	Fig 4.15	41.10	38.30	43.90	60	11.04
Māori $1-$199	Fig 4.15	32.88	31.20	34.56	199	12.11
Māori $200 or more	Fig 4.15	37.96	34.88	41.03	61	12.30
Total Nil	Fig 4.15	46.89	46.36	47.42	1,220	9.46
Total $1-$199	Fig 4.15	37.60	36.87	38.34	1,145	12.69
Total $200 or more	Fig 4.15	41.84	40.90	42.78	638	12.09

Confidence Intervals for ELSI Mean
Chapter 5 - Pacific population

Sub-population	Text reference	mean	Confidence Interval		Effective sample size n'	Standard deviation S
			LCL	UCL		
Total	**Fig 5.1**	**41.95**	**41.49**	**42.40**	**3,182**	**12.21**
Pacific	**Fig 5.1**	**32.85**	**30.50**	**35.20**	**139**	**14.12**
Age Group						
Pacific Children Under 18	Fig 5.2	31.87	28.99	34.74	80	13.14
Pacific 18-34 Yrs	Fig 5.2	36.67	33.68	39.66	59	11.75
Pacific 35-44 Yrs	Fig 5.2	34.99	29.96	40.03	35	15.27
Pacific 45-64 Yrs	Fig 5.2	26.04	20.17	31.91	32	16.94
Pacific 65+ Yrs	Fig 5.2	31.60	26.95	36.25	29	12.70
Total Children Under 18	Fig 5.2	38.59	37.83	39.36	1,098	12.97
Total 18-34 Yrs	Fig 5.2	41.41	40.64	42.18	843	11.40
Total 35-44 Yrs	Fig 5.2	42.15	41.27	43.03	688	11.80
Total 45-64 Yrs	Fig 5.2	43.70	42.87	44.53	901	12.76
Total 65+ Yrs	Fig 5.2	47.42	47.04	47.80	1,993	8.72
Gender Single/sole parent						
Pacific Males Single/sole parent	Fig 5.3	29.29	24.88	33.71	15	8.84
Pacific Females Single/sole parent	Fig 5.3	34.98	29.68	40.28	33	15.65
Total Males - Single/sole parent	Fig 5.3	42.17	41.14	43.20	484	11.56
Total Females - Single/sole parent	Fig 5.3	39.77	38.87	40.66	856	13.38
Pacific Males	Fig 5.4	32.13	28.65	35.62	61	13.83
Pacific Females	Fig 5.4	33.51	30.33	36.70	78	14.36
Total Males	Fig 5.4	42.33	41.69	42.96	1,377	12.00
Total Females	Fig 5.4	41.57	41.00	42.14	1,807	12.40
Family Type						
Pacific Couple only	Fig 5.5	34.32	27.94	40.70	29	17.48
Pacific Couple with children	Fig 5.5	33.45	30.34	36.55	63	12.57
Pacific One parent family	Fig 5.5	27.23	20.97	33.49	18	13.70
Pacific Single person	Fig 5.5	33.94	28.75	39.13	29	14.15
Total Couple only	Fig 5.5	46.60	45.99	47.22	1,024	10.07
Total Couple with children	Fig 5.5	41.93	41.17	42.69	835	11.22
Total One parent family	Fig 5.5	29.66	28.13	31.20	273	12.92
Total Single person	Fig 5.5	42.38	41.67	43.10	1,056	11.85
Number of children						
Pacific no children	Fig5.6	34.13	29.71	38.55	48	15.62
Pacific 1 Child	Fig5.6	35.57	30.70	40.43	24	12.15
Pacific 2 Children	Fig5.6	29.47	25.16	33.77	29	11.89
Pacific 3+ Children	Fig5.6	31.97	26.61	37.33	27	14.12
Total no children	Fig5.6	43.59	42.97	44.22	1,338	11.70
Total 1 Child	Fig5.6	39.71	38.49	40.94	369	12.01
Total 2 Children	Fig5.6	40.13	38.99	41.26	455	12.35
Total 3+ Children	Fig5.6	37.95	36.36	39.54	273	13.41

Sub-population	Text reference	mean	Confidence Interval LCL	Confidence Interval UCL	Effective sample size n'	Standard deviation S
Region						
Pacific Auckland	Table 5.1	30.59	27.68	33.49	86	13.76
Pacific Other	Table 5.1	37.79	34.10	41.48	53	13.65
Total Auckland	Table 5.1	41.35	40.41	42.30	672	12.49
Total Other	Table 5.1	42.17	41.70	42.64	2,507	12.09
Total	Table 5.1	41.95	41.49	42.40	3,182	12.21
Pacific	Table 5.1	32.85	30.50	35.20	139	14.12
Housing Tenure						
Pacific Owned	Fig 5.7	34.91	31.28	38.53	58	14.15
Pacific Rented (private)	Fig 5.7	31.27	27.85	34.70	36	10.45
Pacific Rented (HNZ)	Fig 5.7	23.38	19.57	27.20	44	12.90
Total Owned	Fig 5.7	43.06	42.59	43.53	2,393	11.73
Total Rented (private)	Fig 5.7	36.02	35.06	36.98	629	12.25
Total Rented (HNZ)	Fig 5.7	27.47	25.56	29.37	170	12.67
Highest Qualifications						
Pacific No school qual	Fig 5.8	29.78	25.77	33.80	45	13.66
Pacific School qual	Fig 5.8	32.09	28.21	35.98	64	15.80
Pacific Occupational cert or dip	Fig 5.8	37.13	32.75	41.52	22	10.53
Pacific Bachelors degree or higher	Fig 5.8	44.55	39.55	49.56	10	7.93
Total No school qual	Fig 5.8	41.05	40.19	41.90	830	12.55
Total School qual	Fig 5.8	43.08	42.29	43.87	867	11.88
Total Occupational cert or dip	Fig 5.8	42.83	42.16	43.50	1,070	11.16
Total Bachelors degree or high	Fig 5.8	46.70	45.71	47.69	435	10.54
Income Source						
Pacific Income-tested Benefit	Fig 5.9	26.53	20.64	32.43	30	16.48
Pacific NZS	Fig 5.9	36.22	32.68	39.77	31	10.01
Pacific Market	Fig 5.9	34.63	32.12	37.14	101	12.87
Total Income-tested Benefit	Fig 5.9	28.95	27.75	30.16	440	12.85
Total NZS	Fig 5.9	47.24	46.77	47.71	1,366	8.82
Total Market	Fig 5.9	43.94	43.47	44.40	1,941	10.55
Disposable Income						
Pacific $10,000 or less	Table 5.2	25.87	21.55	30.19	34	12.92
Pacific $10,001-$20,000	Table 5.2	30.39	26.82	33.96	56	13.56
Pacific $20,001 or more	Table 5.2	42.49	38.80	46.17	29	10.08
Total $10,000 or less	Table 5.2	31.92	30.65	33.18	451	13.70
Total $10,001-$20,000	Table 5.2	40.20	39.62	40.78	1,457	11.29
Total $20,001 or more	Table 5.2	47.90	47.42	48.38	1,217	8.55

Sub-population	Text reference	mean	Confidence Interval LCL	Confidence Interval UCL	Effective sample size n'	Standard deviation S
Asset Value						
Pacific $10,000 or less	Fig 5.10	36.69	33.16	40.23	36	10.82
Pacific $10,001 or more	Fig 5.10	39.69	34.09	45.29	23	13.59
Total $10,000 or less	Fig 5.10	40.17	39.39	40.95	797	11.25
Total $10,001 or more	Fig 5.10	46.97	46.50	47.43	1,427	8.96
Accommodation Costs						
Pacific Nil	Fig 5.11	32.95	27.41	38.49	17	11.57
Pacific $1-$199	Fig 5.11	30.32	26.65	33.98	59	14.34
Pacific $200 or more	Fig 5.11	30.63	26.85	34.40	52	13.93
Total Nil	Fig 5.11	46.89	46.36	47.42	1,220	9.46
Total $1-$199	Fig 5.11	37.60	36.87	38.34	1,145	12.69
Total $200 or more	Fig 5.11	41.84	40.90	42.78	638	12.09

Confidence Intervals for ELSI Mean
Chapter 6 - Families with Dependent Children (population under 65 years only)

Sub-population	Text reference	mean	Confidence Interval		Effective sample size n'	Standard deviation S
			LCL	UCL		
Families						
No Children	Fig 6.1	42.88	42.24	43.52	1,338	11.86
With Children	Fig 6.1	38.80	38.04	39.55	1,098	12.77
Family Type						
Couple with children	Fig 6.2	42.07	41.32	42.83	828	11.09
One parent family	Fig 6.2	30.55	29.00	32.10	270	13.00
Income Source						
Income-tested Benefit	Fig 6.3	27.03	25.55	28.51	231	11.47
Market Income	Fig 6.3	42.31	41.58	43.03	865	10.92
EFU by Income Source						
Couple Income-tested Benefit	Table 6.1	25.35	22.55	28.14	52	10.28
Couple Market Income	Table 6.1	42.88	42.14	43.62	774	10.50
Single Income-tested Benefit	Table 6.1	27.30	25.59	29.00	179	11.63
Single Market Income	Table 6.1	37.86	35.20	40.52	91	12.92
EFU no children Benefit	Table 6.1	33.03	31.18	34.88	209	13.64
EFU no children Market Income	Table 6.1	45.43	44.84	46.03	1,059	9.86
Total EFUs Benefit	Table 6.1	31.11	29.87	32.35	440	13.28
Total EFUs Market Income	Table 6.1	44.50	44.04	44.96	1,924	10.29
Age of Mother						
18 to 24 years	Fig 6.4	34.50	32.01	36.99	67	10.43
25 to 34 years	Fig 6.4	37.32	35.96	38.69	348	13.02
35 to 44 years	Fig 6.4	40.22	39.11	41.34	493	12.63
45 to 54 years	Fig 6.4	42.71	40.54	44.88	126	12.42
55 or over	Fig 6.4	39.27	33.62	44.92	19	12.68
Ethnicity						
Māori	Fig 6.5	33.00	31.09	34.90	176	12.89
Pacific	Fig 6.5	33.15	30.31	35.99	80	12.96
Other	Fig 6.5	37.96	35.30	40.62	82	12.27
European	Fig 6.5	40.69	39.87	41.52	829	12.12
Number of Children						
One Child	Fig 6.6	38.75	37.48	40.01	369	12.38
Two Children	Fig 6.6	39.67	38.52	40.82	455	12.52
Three or more Children	Fig 6.6	37.36	35.74	38.99	273	13.68
Age of Youngest Child						
0 to 4 yrs	Fig 6.7	38.52	37.42	39.61	485	12.28
5 to 9 yrs	Fig 6.7	37.33	35.78	38.88	279	13.23
10 to 14 yrs	Fig 6.7	40.99	39.36	42.61	227	12.50
15 to 17 yrs	Fig 6.7	39.69	37.11	42.27	101	13.24

Sub-population	Text reference	mean	Confidence Interval LCL	Confidence Interval UCL	Effective sample size n'	Standard deviation S
Housing Tenure						
Owned	Fig 6.8	40.09	39.22	40.96	759	12.20
Rented (private)	Fig 6.8	28.72	27.23	30.22	255	12.17
Rented (HNZ)	Fig 6.8	25.35	22.76	27.93	83	12.04
Highest Educational Qualifications						
No school qual	Fig 6.9	31.46	29.61	33.32	181	12.74
School qual	Fig 6.9	38.49	37.05	39.92	301	12.74
Occupational cert or diploma	Fig 6.9	39.88	38.78	40.98	435	11.71
Bachelors degree or higher	Fig 6.9	43.85	42.09	45.60	179	12.01
Accommodation Costs						
Nil	Table 6.2	43.22	41.43	45.00	164	11.69
$1-$199	Table 6.2	35.42	34.28	36.56	478	12.74
$200-$399	Table 6.2	38.42	37.08	39.76	323	12.30
$400 +	Table 6.2	46.38	44.06	48.70	56	8.86
Asset Position						
$10,000 or less	Table 6.2	36.45	35.05	37.86	244	11.20
$10,001-$25,000	Table 6.2	41.29	39.25	43.32	88	9.74
$25,001-$100,000	Table 6.2	42.39	40.54	44.23	127	10.58
$100,001-$300,000	Table 6.2	45.17	43.71	46.62	153	9.17
$300,001 or more	Table 6.2	49.41	47.68	51.15	97	8.73
Disposable Income						
$10,000 or less	Table 6.2	27.01	25.43	28.59	233	12.30
$10,001-$20,000	Table 6.2	37.26	36.25	38.27	415	10.49
$20,001-$40,000	Table 6.2	46.81	45.91	47.71	337	8.44
$40,001 or more	Table 6.2	52.88	50.71	55.05	26	5.65
Accommodation Costs - Total						
Nil	Table 6.2	46.89	46.36	47.42	1,220	9.46
$1-$199	Table 6.2	37.60	36.87	38.34	1,145	12.69
$200-$399	Table 6.2	40.48	39.42	41.53	536	12.49
$400 +	Table 6.2	47.19	45.54	48.84	102	8.51
Asset Position - Total Population						
$10,000 or less	Table 6.2	40.17	39.39	40.95	797	11.25
$10,001-$25,000	Table 6.2	44.65	43.65	45.65	319	9.09
$25,001-$100,000	Table 6.2	45.42	44.56	46.29	449	9.34
$100,001-$300,000	Table 6.2	47.22	46.40	48.03	400	8.34
$300,001 or more	Table 6.2	51.27	50.38	52.17	268	7.47
Disposable Income - Total						
$10,000 or less	Table 6.2	31.92	30.65	33.18	451	13.70
$10,001-$20,000	Table 6.2	40.20	39.62	40.78	1,457	11.29
$20,001-$40,000	Table 6.2	46.82	46.28	47.36	952	8.50
$40,001 or more	Table 6.2	52.29	51.41	53.10	263	7.28

Confidence Intervals for ELSI Mean
Chapter 7 - Low Income Population

Sub-population	Text reference	mean	Confidence Interval LCL	Confidence Interval UCL	Effective sample size n'	Standard deviation S
Equivalent Disposable Income						
Top Two-Thirds	Fig 7.1	45.45	45.00	45.91	1,903	10.08
Bottom Third	Fig 7.1	35.34	34.61	36.08	1,229	13.19
Income Source						
Low Benefit	Fig 7.2	28.41	27.05	29.76	339	12.74
Low market income	Fig 7.2	37.78	36.52	39.04	316	11.43
Low Super	Fig 7.2	44.90	44.29	45.51	845	9.02
Bottom Third	Fig 7.2	35.34	34.61	36.08	1,229	13.19
Income Source and Disposable Income						
Benefit <$10,000	Table 7.1	27.60	25.98	29.23	243	12.89
Benefit $10,001-$20,000	Table 7.1	30.51	28.09	32.92	96	12.07
Market <$10,000	Table 7.1	37.17	35.19	39.14	158	12.67
Market $10,001-$20,000	Table 7.1	38.43	36.89	39.98	158	9.88
Super <$10,000	Table 7.1	43.45	40.54	46.37	46	10.10
Super $10,001-$20,000	Table 7.1	45.04	44.48	45.61	961	8.89
Disposable Income						
$10,000 or less	Table 7.1	31.92	30.65	33.18	451	13.70
$10,001-$20,000	Table 7.1	39.03	38.23	39.82	806	11.52
Low Benefit	Table 7.1	28.41	27.05	29.76	339	12.74
Low market income	Table 7.1	37.78	36.52	39.04	316	11.43
Low Super	Table 7.1	44.90	44.29	45.51	845	9.02
Bottom Third	Table 7.1	35.34	34.61	36.08	1,229	13.19
Income Source and Accommodation Costs						
Benefit Nil	Table 7.2	35.25	32.32	38.18	63	11.83
Benefit $1-$199	Table 7.2	26.42	24.76	28.08	209	12.25
Benefit $200+	Table 7.2	25.35	22.70	27.99	47	9.28
Market Nil	Table 7.2	43.99	42.12	45.86	91	9.07
Market $1-$199	Table 7.2	35.44	33.64	37.23	151	11.27
Market $200+	Table 7.2	32.68	29.77	35.58	61	11.62
Super Nil	Table 7.2	46.03	45.43	46.62	712	8.05
Super $1-$199	Table 7.2	39.49	37.62	41.35	136	11.08
Super $200+	Table 7.2	41.55	36.98	46.12	11	7.79

Sub-population	Text reference	mean	Confidence Interval LCL	Confidence Interval UCL	Effective sample size n'	Standard deviation S
Accommodation Costs						
Nil	Table 7.2	43.03	42.16	43.89	539	10.21
$1-$199	Table 7.2	30.71	29.54	31.87	462	12.79
$200 or more	Table 7.2	30.25	28.14	32.37	112	11.44
Low Benefit	Table 7.2	28.41	27.05	29.76	339	12.74
Low market income	Table 7.2	37.78	36.52	39.04	316	11.43
Low Super	Table 7.2	44.90	44.29	45.51	845	9.02
Bottom Third	Table 7.2	35.34	34.61	36.08	1,229	13.19
Outgoings to Income						
OTI <= 30%	Table 7.3	38.58	37.73	39.44	832	12.54
OTI > 30%	Table 7.3	28.83	27.56	30.09	342	11.98
OTI <= 30% - Benefit	Table 7.3	30.20	28.29	32.11	186	13.28
OTI <= 30% - Super	Table 7.3	45.39	44.79	45.99	769	8.51
OTI <= 30% - Market	Table 7.3	41.23	39.81	42.64	188	9.90
OTI > 30% - Benefit	Table 7.3	26.13	24.28	27.97	153	11.62
OTI > 30% - Super	Table 7.3	38.87	36.06	41.68	74	12.32
OTI > 30% - Market	Table 7.3	31.29	29.34	33.25	128	11.29
Income Source and Housing Tenure						
Benefit Rented (HNZ)	Table 7.4	23.76	20.21	27.31	46	12.29
Benefit Rented (private)	Table 7.4	27.68	25.78	29.59	133	11.20
Benefit Owned	Table 7.4	29.07	27.02	31.11	160	13.18
Market Rented (HNZ)	Table 7.4	25.64	21.71	29.57	29	10.74
Market Rented (private)	Table 7.4	35.49	33.22	37.75	99	11.48
Market Owned	Table 7.4	38.97	37.41	40.54	189	10.95
Super Rented (HNZ)	Table 7.4	37.87	34.93	40.81	45	10.11
Super Rented (private)	Table 7.4	42.08	40.00	44.15	85	9.76
Super Owned	Table 7.4	45.28	44.64	45.92	733	8.82
Housing Tenure						
Owned	Table 7.4	36.81	35.93	37.69	847	13.05
Rented (private)	Table 7.4	31.42	29.99	32.85	276	12.12
Rented (HNZ)	Table 7.4	26.03	23.66	28.40	102	12.25
Low Benefit	Table 7.4	28.41	27.05	29.76	339	12.74
Low market income	Table 7.4	37.78	36.52	39.04	316	11.43
Low Super	Table 7.4	44.90	44.29	45.51	845	9.02
Bottom Third	Table 7.4	35.34	34.61	36.08	1,229	13.19

Sub-population	Text reference	mean	Confidence Interval LCL	Confidence Interval UCL	Effective sample size n'	Standard deviation S
Income Source and Asset Value						
Benefit <$10,000	Table 7.5	31.34	28.55	34.14	97	14.07
Benefit $10,001-$25,000	Table 7.5	35.08	28.62	41.54	12	11.42
Benefit $25,001-$100,000	Table 7.5	35.58	31.15	40.00	20	10.10
Benefit $100,001-$300,000	Table 7.5	36.53	30.36	42.70	12	10.91
Benefit $300,001+	Table 7.5	-	-	-	-	-
Benefit Not Specified	Table 7.5	25.59	23.96	27.22	195	11.62
Market <$10,000	Table 7.5	40.70	38.94	42.46	107	9.31
Market $10,001-$25,000	Table 7.5	43.53	39.97	47.10	21	8.41
Market $25,001-$100,000	Table 7.5	37.26	32.77	41.75	31	12.83
Market $100,001-$300,000	Table 7.5	41.43	37.65	45.21	25	9.58
Market $300,001+	Table 7.5	42.49	38.39	46.60	18	8.88
Market Not Specified	Table 7.5	32.60	30.39	34.80	113	11.97
Super <$10,000	Table 7.5	44.14	43.22	45.06	331	8.54
Super $10,001-$25,000	Table 7.5	45.17	43.43	46.91	96	8.71
Super $25,001-$100,000	Table 7.5	47.52	46.42	48.63	116	6.07
Super $100,001-$300,000	Table 7.5	47.86	45.24	50.49	39	8.38
Super $300,001+	Table 7.5	50.70	46.96	54.44	13	6.82
Super Not Specified	Table 7.5	43.93	42.85	45.00	343	10.15
Asset Value						
$10,000 or less	Table 7.5	38.14	36.87	39.41	353	12.20
$10,001-$25,000	Table 7.5	42.49	40.52	44.47	101	10.10
$25,001-$100,000	Table 7.5	39.50	37.37	41.63	114	11.62
$100,001-$300,000	Table 7.5	41.60	39.03	44.17	61	10.21
$300,001 or more	Table 7.5	43.09	39.64	46.53	26	8.89
Not specified	Table 7.5	30.51	29.46	31.56	613	13.21
Low Benefit	Table 7.5	28.41	27.05	29.76	339	12.74
Low market income	Table 7.5	37.78	36.52	39.04	316	11.43
Low Super	Table 7.5	44.90	44.29	45.51	845	9.02
Bottom Third	Table 7.5	35.34	34.61	36.08	1,229	13.19
Income Source and Asset Number						
Benefit Nil	Table 7.6	25.39	23.72	27.06	189	11.70
Benefit One	Table 7.6	29.34	26.86	31.81	105	12.91
Benefit Two	Table 7.6	37.18	33.82	40.55	30	9.41
Benefit 3 or more	Table 7.6	43.85	39.60	48.10	15	8.50
Market Nil	Table 7.6	31.48	29.10	33.85	97	11.91
Market One	Table 7.6	39.98	38.21	41.75	118	9.81
Market Two	Table 7.6	39.31	36.47	42.14	57	10.89
Market 3 or more	Table 7.6	43.63	41.18	46.07	45	8.34
Super Nil	Table 7.6	40.38	38.91	41.85	207	10.79
Super One	Table 7.6	44.70	43.86	45.54	396	8.55
Super Two	Table 7.6	46.82	45.87	47.77	243	7.56
Super 3 or more	Table 7.6	49.57	48.29	50.85	85	6.01

Sub-population	Text reference	mean	Confidence Interval LCL	Confidence Interval UCL	Effective sample size n'	Standard deviation S
Asset Number						
Nil	Table 7.6	28.73	27.56	29.90	444	12.60
One	Table 7.6	37.55	36.42	38.69	460	12.40
Two	Table 7.6	40.97	39.55	42.39	208	10.45
Three or more	Table 7.6	44.99	43.44	46.54	110	8.28
Low Benefit	Table 7.6	28.41	27.05	29.76	339	12.74
Low market income	Table 7.6	37.78	36.52	39.04	316	11.43
Low Super	Table 7.6	44.90	44.29	45.51	845	9.02
Bottom Third	Table 7.6	35.34	34.61	36.08	1,229	13.19
Income Source and Highest Qualifications						
Benefit No school qual	Table 7.7	30.83	28.44	33.22	115	13.07
Benefit School qual	Table 7.7	32.25	29.23	35.27	93	14.84
Benefit Occup Cert/Diploma	Table 7.7	28.34	26.07	30.61	108	12.03
Benefit Bach Degree/High	Table 7.7	31.29	26.64	35.94	23	11.31
Market No school qual	Table 7.7	33.41	30.35	36.47	73	13.37
Market School qual	Table 7.7	41.64	39.50	43.78	95	10.66
Market Occup Cert/Diploma	Table 7.7	38.82	37.07	40.58	115	9.60
Market Bach Degree/Higher	Table 7.7	39.10	35.19	43.01	33	11.40
Super No school qual	Table 7.7	43.91	43.12	44.69	529	9.26
Super School qual	Table 7.7	46.09	45.00	47.18	231	8.44
Super Occup Cert/Diploma	Table 7.7	45.70	44.32	47.09	144	8.47
Super Bach Degree/Higher	Table 7.7	47.46	45.70	49.21	141	10.66
Highest Qualifications						
No school qual	Table 7.7	37.05	35.89	38.21	492	13.14
School qual	Table 7.7	40.27	38.90	41.65	322	12.59
Occupational cert or diploma	Table 7.7	35.64	34.28	37.00	318	12.36
Bachelors degree or higher	Table 7.7	36.13	33.09	39.17	62	12.21
Low Benefit	Table 7.7	28.41	27.05	29.76	339	12.74
Low market income	Table 7.7	37.78	36.52	39.04	316	11.43
Low Super	Table 7.7	44.90	44.29	45.51	845	9.02
Bottom Third	Table 7.7	35.34	34.61	36.08	1,229	13.19

Confidence intervals for percentage of individuals or economic family units at an ELSI level

Throughout this report, ELSI score distributions are displayed as histograms showing the percentage (P) of the group at each of the seven ELSI levels. For example, the percentage of the population at level 7 is given by Figure 3.1 as P=9%. Similarly, the percentage of Māori at levels 1-3 is given in Figure 3.6 (and also Figure 3.7) as P=7+9+23=39%.

The confidence interval for such a percentage can be estimated as follows:

Definition: n' is the effective sample size of the group to which the percentage P relates. The value of n' is obtained from the above section of this appendix. For example, for the total population, n' = 3,182 and for Māori n' =338.

Then the following expression gives the lower and upper limits (LCL and UCL) for the confidence interval for P at the 95% confidence level:

$$P \pm 196 \sqrt{\frac{\left(\frac{P}{100}\right)\left[1-\left(\frac{P}{100}\right)\right]}{n'}}$$

Examples: For the percentage of the population at level 7, the 95% confidence interval is 9± 9 .99%. For the percentage of Māori at levels 1-3, the 95% confidence interval is 39 ± 5.2%.

ELSI Items and Score Calculation

Types of Items

The items in the Economic Living Standard Index are of three types:

- "Enforced lack" items, scored as 0 (an enforced lack) or 1 (no enforced lack)[72];

  Definition: a person/economic family unit has an enforced lack when something wanted is lacked because of its cost; its absence is not an enforced lack if the reason is other than cost (which includes its not being wanted).

  The enforced lack items in ELSI are comprised of two sets:

  (a) those relating to ownership of personal and household goods (whose enforced lack is referred to as an "ownership restriction"); and

  (b) those relating to social participation and recreation (whose enforced lack is referred to as a "social participation restriction").

- "Economising" behaviours, scored as 0 (economising a lot) or 1 (economising a little) or 2 (no economising);
- Self ratings, scored 0-3 or 0-4 (according to the number of response categories).

Ownership restriction items

Form of the questions used to obtain the data on ownership restrictions:

For each item on a list of personal and household goods, the respondent was asked:

whether they "have it"

if they did not have it: whether they "would like to have it"

if they would like to have it: whether the reason they do not have it "is because of the cost or some other reason"

The replies to these questions are used to determine whether the respondent had an enforced lack with respect to the item. The code for no enforced lack (= 1) was assigned if the respondent had the item or did not want the item or would like to have it but did not have it for a reason other than cost. The code for an enforced lack (= 0) was assigned if the respondent did not have the item and would like to have it and did not have it because of the cost.

72 The items have been scored in a "positive" direction to ensure that a higher score indicates a higher living standard (and vice versa). Such items are usually scored in the opposite direction when the purpose is to produce a deprivation measure.

The ownership restrictions relate to the following goods:

- Telephone;
- Secure locks;
- Washing machine;
- Heating available in all main rooms;
- A good bed;
- Warm bedding in winter;
- A warm winter coat;
- A good pair of shoes;
- A best outfit for special occasions;
- Pay TV (e.g. Sky);
- Personal computer;
- Access to the internet;
- Home contents insurance;
- Main electricity (not supplied from on-site battery or generator).

Social participation restrictions

The data on social participation restrictions were obtained by means of a set of questions that paralleled those given above for the ownership restrictions, the only difference being that the questions related to activities instead of possessions.

The procedure for coding the responses also paralleled that used for ownership restrictions. Specifically, the code for no enforced lack (= 1) was assigned if the respondent engaged in the activity or did not want to engage in the activity or would like to engage in it but did not do so for a reason other than cost. The code for an enforced lack (= 0) was assigned if the respondent did not engage in the activity and would like to do so and did not do so because of the cost.

The following are the wordings used for social participation restrictions in the ELSI scale:

- Give presents to family or friends on birthdays, Christmas or other special occasions;
- Visit the hairdresser once every three months;
- Have a holiday away from home every year;
- Have a holiday overseas at least once every 3 years;
- Have a night out at least once a fortnight;
- Have family or friends over for a meal at least once a month;
- Have enough room for family to stay the night.

Economising behaviours

Form of the questions:-

The respondent was asked:

> "in the last 12 months, have you (or your partner) done any of these things, not at all, a little, or a lot?"

A list of behaviours was then read to the respondent.

The responses were coded as:

not at all = 2
a little = 1
a lot = 0

The following are the wordings used for the economising behaviours in the ELSI scale:

- Bought cheaper cuts of meat or less meat than you would like to buy to help keep down costs;
- Gone without fresh fruit and vegetables to help keep down costs;
- Bought secondhand clothing instead of new to help keep down costs;
- Continued wearing clothing that was worn out because you couldn't afford replacement;
- Put off buying clothing for as long as possible to help keep down costs;
- Relied on gifts of clothing to help keep down costs;
- Continued wearing shoes that were worn out because you couldn't afford replacements;
- Put up with feeling cold to save heating costs;
- Stayed in bed longer to save heating costs;

- Postponed visits to the doctor to help keep down costs;
- Gone without glasses you needed because you couldn't afford them;
- Not picked up a prescription to help keep down costs;
- Gone without or cut back on visits to family or friends to help keep down costs;
- Done without or cut back on trips to the shops or other local places to help keep down costs;
- Spent less time on hobbies than you would like to help keep down costs;
- Not gone to a funeral (tangi) you would like to have gone to because of the cost.

Self ratings

Self assessed living standard:-

The wording of the question was as follows:

> Now I'm going to ask you some questions about your material standard of living - things that money can buy. Your material standard of living does NOT include your capacity to enjoy life. You should NOT take your health into account.
>
> Generally, how would you rate your standard of living?

high	(= 4)
fairly high	(= 3)
medium	(= 2)
fairly low	(= 1)
low	(= 0)

Self assessed satisfaction with living standard:-

The wording of the question was as follows:

> Generally, how satisfied are you with your current standard of living?

very satisfied	(= 4)
satisfied	(= 3)
neither satisfied not dissatisfied	(= 2)
dissatisfied	(= 1)
very dissatisfied	(= 0)

Adequacy of income to meet everyday needs:-

The wording of the question was as follows:

How well does your (and your partner's combined) total income meet your everyday needs for such things as accommodation, food, clothing and other necessities?

Would you say you have
not-enough-money
just-enough-money
enough-money
or more-than-enough-money?

not-enough	(= 0)
just-enough	(= 1)
enough	(= 2)
more-than-enough	(= 3)

Scores for the item sets

The ELSI items are specified above as four sets: economising behaviours, ownership restrictions, participation restrictions, and self ratings. For each set, the respondent's scores on the items are added. These four sums are labelled, respectively, S_E, S_O, S_P, and S_R.

Table C1 Summary of item characteristics 2000

Item set	Item type	Scoring	Number of items in the set	Sum of scores of items in the set	Range of sum of items
Economising behaviours	Ordered categories	0-2	16	S_E	0-32
Ownership restrictions	Enforced lack	0,1	14	S_O	0-14
Participation restrictions	Enforced lack	0,1	7	S_P	0-7
Self-ratings			3	S_R	0-11
Self-assessed standard of living	Ordered categories	0-4			
Self-assessed satisfaction with standard of living	Ordered categories	0-4			
Self-assessed adequacy of income to meet everyday needs	Ordered categories	0-3			

Calculation of the ELSI score

(i) Use the respondent/economic family unit data on the items to obtain S, where

$$S \equiv S_E + S_O + 2S_P + 2S_R$$

Comment:

- S is in the range of 0-82.
- A low value of S indicates a low living standard, and *vice versa.*

(ii) Use S to obtain ELSI score, as follows:

if $S \leq 22$, ELSI = 0

if $S > 22$, ELSI = S - 22

Comment:

- ELSI is in the range of 0-60.
- As for S, a low value of ELSI indicates a low living standard, and *vice versa.*
- The purpose of step (ii) is to truncate the bottom part of the range of S, which contains few respondents; the value of 22 was chosen on the basis of an analysis showing that it was sufficiently low (given the distribution of S scores) to avoid any significant loss of information.

ELSI levels

The seven ELSI levels are a set of seven standard score ranges. The score ranges for levels 1 to 7 are, respectively: 0-15, 16-23, 24-31, 32-39, 40-47, 48-55, 56-60.