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Review of Economic Standard of Living Statistics 2011





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Preface

The *Review of Economic Standard of Living Statistics Report: 2011* provides a framework for the development of income, wealth, and expenditure statistics over the next 10 years. It presents the findings and recommendations of a review of economic standard of living statistics undertaken under section 7 of the Statistics Act 1975. The review was led by Statistics New Zealand with the support of other government agencies and organisations with interest and expertise in income, wealth, and expenditure statistics.

The purpose of the review was to identify enduring information needs relating to economic standard of living, ascertain the extent to which statistics are adequate for current and prospective information needs, and to recommend actions required to address any significant shortcomings or gaps. Consultation with government agencies, other organisations, and with the public enabled us to identify the final key statistical development priorities the Official Statistics System should address in the field of income, wealth, and expenditure.

I would like to acknowledge the contribution of the advisory group of experts drawn from the Treasury, the Reserve Bank of New Zealand, the Ministry of Social Development, the Department of Labour, Inland Revenue, the Retirement Commission, and Motu Economic and Public Policy Research, and also the advisory group from within Statistics NZ. I thank them for their contribution to producing this review. I would also like to thank all the other agencies, organisations, and individuals who made submissions, provided advice, and will contribute to fulfilling the recommendations.



Geoff Bascand
Government Statistician

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1 Executive summary

Introduction to the review

Since the last review of income and wealth statistics in 1991 New Zealand has undergone significant social and economic change. This includes the economic restructuring of the early 1990s, a long period of economic expansion from the early 2000s, and the economic turmoil following the global financial crisis of 2007/08. This change has had a major impact on the living standards and well-being of New Zealanders. It has affected growth in earnings and incomes. It has influenced the level of income inequality in the community, and the proportion of people experiencing low income. It has impinged on the net worth of individuals and families, including their savings for retirement. And, it has had a bearing on the consumption of goods and services by individuals and households.

New Zealand society has also become more dynamic. There is greater volatility in people's working lives, and more fluidity in their family lives. This fluidity is intimately linked with income volatility, and with lifetime income and net worth.

Statistics are needed to enable these shifts to be monitored and understood. They are needed to inform the development and evaluation of policy responses. Understanding what is happening at the micro-economic (household) level helps inform policy decisions relating to taxation, income maintenance, retirement, superannuation, and the delivery of social services. These decisions ultimately impact on the country's macro-economic position; that is, the balance of payments and gross domestic product.

The review is part of a broader initiative, under section 7 of the Statistics Act 1975, to undertake periodic reviews of official subject-matter statistics in consultation with other agencies, interested individuals, and groups. The aim is to identify the key priorities that the Official Statistics System (OSS) needs to address in the field of income, wealth, and consumption.

The review was undertaken by Statistics New Zealand with the help of an advisory group of experts from other interested agencies, an expert advisory group from within Statistics NZ, and through consultation with other experts (see appendix 5) and the public.

Enduring research and policy topics

Economic standard of living is one of 12 domains Statistics NZ has identified in relation to social statistics. A framework was developed for the economic standard of living domain (see figure 1). From that, six topics and associated information needs were identified for the economic standard of living statistics review. The topics are:

- Topic 1 – Wages and salaries
- Topic 2 – Income
- Topic 3 – Wealth/ net worth
- Topic 4 – Consumption
- Topic 5 – Financial hardship/deprivation/poverty
- Topic 6 – Income and wealth dynamics

Assessment of the extent to which statistical information needs are being met

A number of surveys are currently associated with the economic standard of living domain (see table 1 and appendix 1). Several of these collect Tier 1 statistics (see appendix 2). For many of the statistics identified, economic standard of living is not the main focus of the survey or collection. A review of Tier 1 statistics is in progress – the stocktake (appendix 1) and information needs identified in this review will help inform any decision about which data in the economic standard of living domain should be Tier 1 statistics.

The expert advisory groups noted that the current collections have much high quality and relevant, practical information that fits what is needed for public debate, policy advice, service delivery, and research and monitoring. Given the wide range of surveys and collections covering this domain, there may be scope for rationalising statistics where overlaps occur. However, the advisory groups also established that there are gaps in the statistical information base and scope for improving the analysis and output of existing data.

Table 1 shows the extent to which each topic is covered by the main surveys and collections identified in the stocktake in appendix 1. The surveys and collections are sorted into those that specialise in providing statistics on economic standard of living, those that collect income as an explanatory variable, and those that target a specific population group. Looking down each column, a subjective assessment has been made on the extent to which each topic area is informed by existing collections.

Table 1

Topic coverage for economic standard of living domain in surveys and collections
2011

Survey or collection	Informs topic...					
	1	2	3	4	5	6
	Wages and salaries	Income	Wealth	Consumption	Hardship	Dynamics
To this degree ⁽¹⁾ ...						
Those focusing on economic standard of living (ESOL)-related topics						
Household Economic Survey(HES)/HES (Income)	H	H	-	H ⁽²⁾	H	-
New Zealand Income Survey	H	M	-	-	-	-
Household Savings Survey	L	L	H	-	-	-
Survey of Family, Income, and Employment	M	M	M	-	M	H
Linked Employer-Employee Data	H	M	-	-	-	M
Quarterly Employment Survey	M	-	-	-	-	-
Labour cost index	H	-	-	-	-	-
ASSET/ TAXMOD/ TAXWELL	H	H	-	-	H	-
New Zealand Living Standards Survey	-	M	L	-	H	-
QV House price index and aggregate dwelling values	-	-	L	-	-	-
ANZ-Retirement Commission Financial Knowledge Survey	-	L	L	-	L	-
Those in which ESOL-related variables are collected as explanatory variables						
Census of Population and Dwellings	-	L	-	-	L	-
General Social Survey	-	L	-	-	L	-
Those in which ESOL-related variables are collected from specific sub-populations						
Survey of Working Life	H	-	-	-	-	-
Student Loans and Allowances integrated dataset	H	M	L	-	-	M
Longitudinal Immigration Survey: New Zealand	L	L	-	-	L	L
Ministry of Social Development (MSD) benefit dataset	-	M	-	-	-	-
MSD benefits dynamics dataset	-	M	-	-	M	M
Family Tax and Benefits Research linked data	-	M	-	-	M	-
Reserve Bank of New Zealand (RBNZ) standard statistical return	-	-	L	-	-	-
RBNZ general disclosure statement and key information statement	-	-	L	-	-	-
Health, Work, and Retirement longitudinal study	L	L	L	-	L	L
New Zealand Longitudinal Study of Ageing	L	L	L	-	L	L
Degree to which topic area needs are met⁽³⁾	4	4	2	3	4 and 3⁽⁴⁾	3 and 2⁽⁵⁾

1. Measures are: H = high; M = medium; L = low; (-) = negligible or none

2. 'Full' HES expenditure years only.

3. Measures are: 5 is fully met, 4 is mostly met, 3 is partly met, 2 is poorly met, and 1 is not met.

4. Indicates good levels of data are available at present, but topic will have less data available after analysis of SoFIE data is complete. Also, the NZ Living Standards Survey was not continued after 2008.

5. Indicates reasonable levels of data are available at present, but poor coverage after analysis of SoFIE data is complete.

Summary of statistical information needs and recommendations

The review makes 11 recommendations to address the information needs and identifies the agencies to lead them. Table 2 summarises the recommendations, indicates who the lead agency is, the type and importance of the information need, how complex the recommendation would be to implement, and shows the priority of the recommendation suggested by the groups of experts. It also indicates which topics would be improved by each recommendation.

Table 2

Recommendation/information need matrix

Recommendation	Lead agency ⁽¹⁾	Type of need	Need level	Complexity	Priority	Relates to topic...					
						1	2	3	4	5	6
1 Rationalisation of wage and salary statistics (overlaps)		Improving	High	High	High	Yes	Yes	-	-	-	-
2 Wealth/ net worth statistics		New / improving	Medium ⁽²⁾	Medium	High	-	-	Yes	-	-	-
3 Longitudinal data and integration of administrative data		New / improving	Low ⁽²⁾	High	High	Yes	Yes	-	-	Partial	Yes
4 Income reconciliation		Analytical	High	High	High	-	Yes	Yes	-	-	-
5 Occupational earnings	With Department of Labour	Improving	Medium	High	Medium	Yes	Yes	-	-	-	-
6 Fiscal incidence study	Treasury	Analytical	Medium	Medium	Medium	-	Yes	-	Yes	Yes	-
7 Review HES		Improving	Medium	Medium	Medium	Partial	Partial	-	Yes	Yes	-
8 Revising non-income measures	Ministry of Social Development	Improving	Medium	Medium	Medium	-	-	-	-	Yes	-
9 Financial literacy	Retirement Commission	Continuing	Low ⁽³⁾	Medium	Medium	-	Yes	Yes	-	Yes	Yes
10 Imputed rents		Analytical	Low	Low	Low	-	Yes	Yes	Yes	Yes	-
11 Classification review		Infra-structure	Low	Medium	Low	Yes	Yes	Yes	Yes	Yes	Yes

1. Statistics NZ unless stated otherwise.

2. Need becomes high when SOFIE analysis ends.

3. Need becomes medium if survey not repeated.

Symbol: (-) recommendation has no impact

Some recommendations cover large amounts of work, because they concern large topics, while others fill small gaps in well-covered areas. Some are improvements to existing data and others address a complete lack of information.

High-priority recommendations

The following four recommendations are deemed to be high priority.

Rationalisation of earnings and benefit statistics

Given the large number of collections gathering similar data about earnings and benefits, an initial assessment suggests there is scope for rationalising statistics – particularly if administrative data sources, such as tax/benefit data (eg the expanded Linked Employer-Employee Data (LEED)), can be used to replace or supplement survey data in certain circumstances. This area needs further investigation.

Recommendation 1

Statistics New Zealand works with other relevant agencies to investigate the feasibility of improving data quality, reducing respondent burden, and achieving efficiencies through rationalising existing data sources on earnings and benefits.

Wealth/net worth statistics

The 2001 Household Savings Survey (HSS) data are now dated and collection of the Survey of Family, Income, and Employment (SoFIE) has ended. Therefore, options on producing future statistics on the net worth (the assets and liabilities) of households on a

regular basis need to be investigated. The advisory groups of experts identified a future need for both cross-sectional and longitudinal measures of wealth.

Recommendation 2

Statistics New Zealand clarifies the detailed information needs and priorities in the area of individual and household net worth, and works with stakeholders to investigate options to produce highest-priority information needs in a sustainable way.

Longitudinal data and integration of administrative data

Statistics NZ, other agencies, and respondents have already expended considerable effort in providing, collecting, and analysing data in specialised longitudinal surveys (ie SoFIE and the Longitudinal Immigration Survey: New Zealand). It is important that data from the existing surveys are used as much as possible to understand drivers and relationships and to help prioritise future needs. The expert advisory groups identified an ongoing need for longitudinal data. The longitudinal surveys run by Statistics NZ are coming to an end. Statistics NZ and key stakeholders should work to prioritise future longitudinal information needs and investigate ways that these can be provided by existing data sources in the first instance.

Recommendation 3

Statistics New Zealand works with key stakeholders to:

- ensure existing sources of longitudinal data are used to their full potential
- prioritise future needs for longitudinal income and wealth data and investigate options for meeting those needs, including exploiting administrative data (on its own or in combination with survey data).

Income reconciliation

Income, saving, and wealth can all be measured at the macro-economic (national) and micro-economic (individual or household) levels. However, the macro- and micro-economic concepts of income, saving, and wealth are not always the same and the measures do not always agree – at either a component or aggregate level. It is not always appropriate to harmonise definitions. However, it is important that the different concepts, and the effects these differences have on the measures, is understood. Statistics NZ (2006) has gone some way towards this. The advisory groups of experts identified the importance of this work being continued. The Organisation for Economic Co-operation and Development (OECD) is also considering undertaking work on a framework for confronting micro-economic data and macro-economic measures.

Recommendation 4

Statistics New Zealand undertakes a comparison of macro- and microeconomic measures of income, saving, and wealth, with a view to better understanding and explaining these measures.

Medium-priority recommendations

The following five recommendations are deemed to be medium priority.

Occupational earnings

The expert advisory groups identified a deficiency in the suite of wage and salary statistics, which related to the unavailability of detailed data about occupational earnings. Since the demise of the award system of pay remuneration there has been a gap in the level of detail available about occupational earnings. Improvements in occupational wage statistics are needed to identify the short- and medium-run shifts in the demand for labour, when they occur. At present, wage and salary statistics cannot be published at a level that meets this need.

Recommendation 5

Statistics New Zealand works with the Department of Labour to investigate options for obtaining and publishing regular and robust estimates of hourly earnings at more detailed levels of industry and occupation.

Fiscal incidence study

Fiscal incidence studies investigate the net outcome of the flow of money into households (through direct and indirect benefits) and the flow out (through direct and indirect taxation). The expert advisory groups agreed that, since the last such study was undertaken in New Zealand by Crawford and Johnston in 2004, comparing 1987/88 and 1997/98 data, another such study would be informative.

Recommendation 6

Treasury works with other relevant agencies to undertake a fiscal incidence study and consider the frequency of future studies.

Review Household Economic Survey

The Household Economic Survey (HES) was last reviewed before the 2006/07 collection. Further work is required to investigate ways to reduce respondent burden – by looking at what is collected, how it is collected, and what data can be obtained from existing sources. There is also a need to investigate methods and techniques for producing small-domain estimates, to meet information needs without increasing respondent burden.

Recommendation 7

Statistics New Zealand:

- undertakes a review of the Household Economic Survey focusing on content (including rotating supplements or modules), sample design, sample size, and frequency
- investigates statistical modelling techniques aimed at providing detailed estimates for a given sample size.

Revising non-income measures

The expert advisory groups identified an ongoing need for non-income measures of material well-being that are comparable over time and can be used in a variety of ways when measuring financial hardship, deprivation, and poverty. However, with increasing focus on reducing respondent burden, care will be needed to ensure these questions are asked in the appropriate survey vehicle and at the appropriate frequency.

Recommendation 8

The Ministry of Social Development works with interested parties to:

- review the rationale, use, and value of non-income measures of material well-being in national surveys taking into account international practice
- recommend a set of non-income measures of material well-being and,
- decide on the frequency and most appropriate survey vehicle(s) to collect those measures.

Financial literacy

In 2006 and 2009 the Retirement Commission commissioned surveys to measure the levels of financial literacy of New Zealand adults. Further surveys are required to monitor the impact of educational measures, policy changes, and promotions. Financial literacy is an emerging area internationally and there is a need to keep abreast of the latest developments. The advisory groups of experts recognised that this is an important area of statistics that should continue to be investigated and collected.

Recommendation 9

The Retirement Commission:

- continues to commission regular surveys to measure the level of financial literacy of New Zealand adults
- reviews international developments in the field of measuring financial literacy and incorporates changes where feasible.

Low-priority recommendations

The following two recommendations are deemed to be low priority.

Imputed rents

In order to obtain an accurate picture of income and wealth inequality in New Zealand, information on imputed rents at a household level is needed. This would allow researchers to improve their analysis of income and wealth inequality by adjusting for the differing monetary outlays. It is proposed that different methodologies for calculating imputed rent be investigated, including the methodology used by the Australian Bureau of Statistics (ABS, 2008) that is based on a methodology developed by Eurostat (Eurostat, 2006), to explore whether they can be applied to the New Zealand situation.

Recommendation 10

Statistics New Zealand works with stakeholders to identify appropriate methodologies and data sources for producing statistical information on imputed rents.

Classification review

The dollar income and sources of income classifications were last reviewed in 1997. There have been many real-world changes since then. The expert advisory groups recognised that it is important to keep up to date with real-world changes and with changing international recommendations, such as reviews of the Canberra Report (Canberra Group, 2001) and recommendations from the OECD.

Recommendation 11

Statistics New Zealand, together with its Official Statistics System partners and other stakeholders, reviews the definitions used for sources of income, and works to implement international recommendations and real-world changes, where feasible and relevant to the New Zealand situation.

Statistics NZ will, as part of its usual business, continue to work with interested agencies and other users to ensure that analysis and reporting across the OSS are adapted and modified to keep meeting priority needs.

2 Background to the review

2.1 Introduction to the review process

The purpose of the review reported here was to establish key priorities for the Official Statistics System (OSS) to address in the field of income, wealth, and expenditure. The last official review of statistics in this field was undertaken in 1991.

A review of economic standard of living statistics was initiated by the Government Statistician in mid-2008 because in the past decade there had been major societal shifts in the economic standard of living domain. Under section 7 of the Statistics Act 1975, the Government Statistician has the mandate to undertake periodic reviews of official statistics to ensure that they are still relevant, timely, contain no major gaps, and are generally meeting user needs.

An advisory group of experts from the Treasury, the Reserve Bank of New Zealand, the Ministry of Social Development, the Department of Labour, Inland Revenue, the Retirement Commission, Motu Economic and Public Policy Research, and another group of interested experts from within Statistics New Zealand, were involved in preparing a consultation document and this report (see appendix 5). Through consultation with other agencies, groups and interested individuals, Statistics NZ and the advisory group of experts identified enduring statistical information needs in the field of economic standard of living, assessed the extent to which data are available to address these needs, and determined the final key statistical development priorities.

The recommendations developed provide the basis for prioritising further work and improvements in official income, wealth, and expenditure statistics. Statistics NZ, together with other agencies, will work to implement the recommendations of the review.

2.2 Statistical reviews

Statistical reviews are an important aspect of Statistics NZ's role in leading, strengthening, and coordinating the development and ongoing integrity of the OSS. This role is achieved by promoting shared responsibility and cooperation with other agencies.

Statistical reviews provide a structured approach for domains that span the statistical activities of several agencies or sectors. Specifically, they seek to:

- develop a long-term picture of information needs, rather than reacting to short-term issues
- develop a coordinated plan to address issues, rather than tackling them on a piecemeal basis
- work in partnership with other agencies to obtain agreement on priorities, rather than taking a single-agency view.

Statistics NZ has identified 12 domains in relation to social statistics: population, housing, safety and security, economic standard of living, knowledge and skills, health, paid work, culture and identity, social connectedness, human rights, physical environment, and leisure and recreation. A 13th domain deals with cross-cutting issues. These 13 domains form the framework for the Programme of Official Social Statistics, a 10-year whole-of-government programme to improve the range and quality of official social statistics.

2.2.1 Key areas for statistical reviews to cover

Statistical reviews are tailored to the uniqueness of the subject matter and the needs of its stakeholders. However, common threads include:

- identifying key research and policy questions or needs – the starting point for all domain plans is to identify the enduring information needs of users
- identifying key data sources relevant to these needs – undertake a stocktake of data sources currently available to address information needs
- identifying barriers to answering key questions – assessing available data sources in light of the information required to answer the key research and policy questions. Barriers may include information gaps, poor data quality, privacy constraints, timeliness issues, and lack of coherence between available data sources
- having a strategic focus for the next 5 to 10 years – to avoid being focused on operational or short-term policy demands, all reviews aim to have a minimum time horizon of at least five years
- identifying key priorities and how to address them – evaluating competing needs and developing key priorities and the main steps to achieve these.

2.3 Consultation

Following consultation with the internal and external advisory groups of experts, the *Review of Economic Standard of Living Statistics: Consultation Paper* was published by Statistics NZ in October 2009. This paper invited users of income, wealth, and expenditure statistics to make submissions highlighting their particular information needs. Submissions on the consultation paper came from individuals and organisations – including government departments, local government, non-government organisations, and individual researchers. The consultation helped to inform development of the recommendations and endorsed the topics used to frame the economic standard of living statistics review.

2.4 Scope of the economic standard of living domain

The review's focus is the economic standard of living domain. Economic standard of living is a broad domain that affects and is affected by many of the issues covered by other social statistics domains. This review focuses on the material well-being of individuals, families, and households; the goods and services they consume; and the economic resources they have access to. The scope includes statistics about income, expenditure, and wealth, as well as more direct measures of economic and material living standards.

The domain is concerned with the level, distribution, and dynamics of economic resources and with consumption patterns across the population. It encompasses factors affecting the economic well-being of individuals at different stages of their life, as well as factors that contribute to differences in economic well-being between different population groups. These include demographic, social, cultural, economic, and political factors.

Data on the economic well-being of individuals, families, and households feed into the national accounts and other macro-economic measures, and need to be reviewed in this context. The macro-economic areas have their own frameworks and are therefore outside the scope of this review. However, while this review's scope excludes national or corporate income and wealth, it is acknowledged that macro-economic changes have an impact at household, family, and individual levels. Similarly, micro-economic changes can have an impact at the macro-economic level.

Non-economic information needs that relate to the economic standard of living of individuals, families, and households, such as knowledge and skills, health, and paid employment, are dealt with in other domain reviews. However, when aspects of these

domains affect economic standard of living and its measurement they are covered in this review. For example, earnings from paid employment are a major contributor to the economic standard of living of most individuals, families, and households, and are therefore covered in this review. However, other aspects of employment, such as hours worked and working conditions, are dealt with in a review of paid work statistics. The nature of these links is described in section 3.2.1.

2.5 Significance of economic standard of living statistics

Currently, a wide range of official statistics covers economic standard of living in New Zealand (see appendix 1), although for many, it is not the main focus of the survey or collection. A number of Tier 1 statistics are associated with this domain (see appendix 2). Information needs identified in this review will help inform any decisions about which data in this domain should be Tier 1 statistics.

The expert advisory groups recommended this wide range of official statistics be maintained, as they all focus on different aspects of the economic standard of living domain and are used extensively for research, policy, and evaluation. With the variety of surveys and collections covering this domain there may be scope for rationalising statistics where overlaps occur. However, they also established that there are gaps in the statistical information base and scope for improved analysis and output of available data.

Statistics on the economic standard of living of the population play an important role in public policy analysis, business decision making, and in meeting community needs. Considerable use is made of these statistics in public policy decisions relating to taxation, income maintenance, retirement, superannuation, and the delivery of social services. The statistics are also used in population-based funding models, such as the school decile and health funding models.

Government, academic researchers, and community organisations use the statistics to monitor the impact of policy decisions and to evaluate the effectiveness of government policy. Poverty or low-income studies and studies of income inequality continue to be major areas of research. There is considerable interest in the dynamics and drivers of changes in income and consumption patterns, and in how asset holdings and debt are distributed within the population. The impact of economic standard of living on outcomes for groups such as children or Māori is another fertile area of research. There is also increasing interest in cross-national comparative research studies on income and wealth, and related topics. These are just a selection of the issues of interest in this domain.

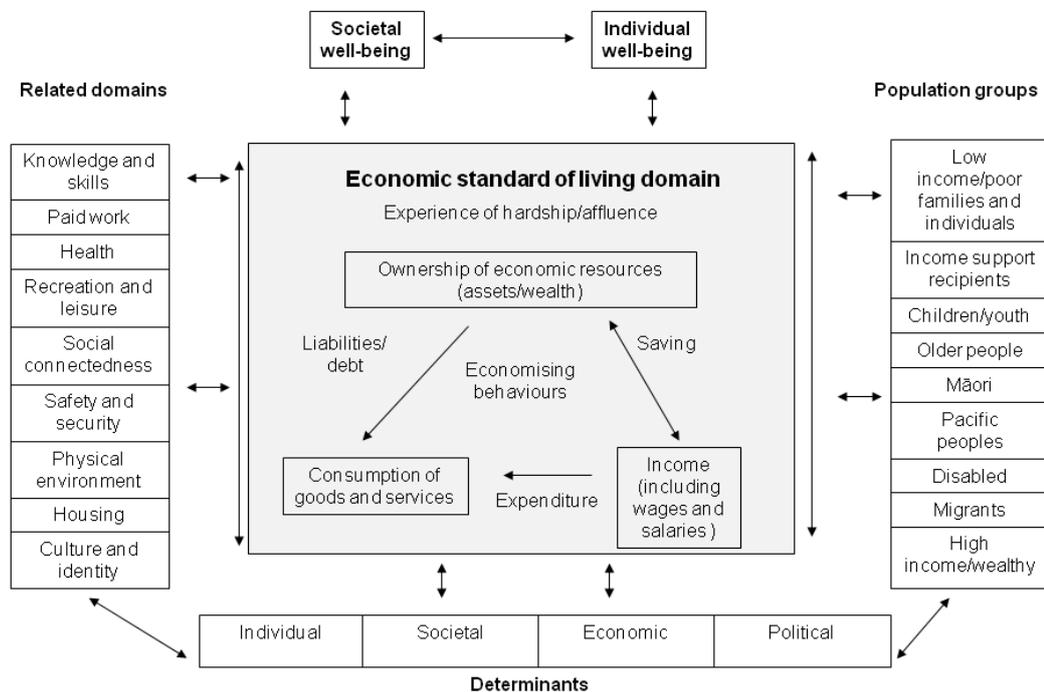
The business community uses statistics on income and wealth to analyse markets, forecast the demand for goods and services, and understand the economy.

2.6 Economic standard of living statistics framework

A framework provides a structured way of thinking about and organising information in a particular domain or area of interest. It defines the scope of activities, identifies key concepts and elements associated with the area, and organises these into a logical structure. It also identifies linkages with other relevant areas and population groups.

Figure 1 presents a conceptual framework for the economic standard of living domain. Economic standard of living refers to people's command over economic resources. This is affected by whether they have a high or low income, whether or not they are wealthy, whether they have high or low consumption, and whether or not they have the means to get over a financial crisis.

Figure 1
Economic standard of living framework



The framework shows key elements, connections, and relationships that are important to understanding the topics of interest within the economic standard of living domain. Key themes (see centre of figure 1) include income levels and distribution (wages and salaries and income topics), consumption of goods and services (consumption topic), experience of hardship (financial hardship/ deprivation/ poverty topic), and ownership of economic resources (wealth/ net worth topic). The sixth topic, income and wealth dynamics, covers how these key themes change over time for individuals, families, and households. These themes are significant in their own right but also because of their impact on a wide range of economic, cultural, social, and environmental outcomes.

Understanding the economic standard of living of individuals, families, and households requires taking account of the individual, cultural, social, and economic factors affecting them. Detailed descriptions of definitions used in the framework above are in appendix 3. Measurement and quality issues related to this domain are discussed in appendix 4.

2.7 Past reviews

The last review of official statistics on income and wealth in New Zealand was carried out in the early 1990s and the findings published in 1991. The review covered the income and wealth of individuals and groups (families, iwi, and other social groups).

In its evaluation of these statistics, the review committee considered conceptual issues of income and wealth, the current and future needs for income and wealth statistics, and the scope and adequacy of the existing statistics.

The review highlighted that individual elements of the framework for collecting income and wealth statistics were only loosely integrated with each other. It reported that improvements were needed in the:

- depth of detail – in particular at the population group level
- coverage – of wealth in general and selected components of income (eg fringe benefits, Accident Compensation Corporation payments, employer contributions to superannuation, and imputed income from home ownership)
- time dimension – in particular the need for longitudinal data about the same individuals
- integration and flexibility of the existing statistics – at both the micro- and macro-level and between survey and administrative sources.

The review committee recommended a three-point strategy to help shape the framework for the future collection of income and wealth statistics. The three dimensions were:

- developing an integrated household survey programme
- integrating tax-based data with demographic characteristics
- progress towards developing a large-scale microdata base of actual and simulated data.

While significant progress has been made since the 1991 review, it is fair to say that the strategy recommended by the review committee has not been completely achieved.

The main achievements since the 1991 review include:

- The New Zealand Income Survey, which collects information on personal income, was introduced as an annual supplement to the Household Labour Force Survey in the June 1997 quarter. The survey, which initially collected income from employment and government benefits, was extended to collect investment income in 2002 and now collects information on all regular sources of income.
- The Household Savings Survey was conducted in 2001.
- The Programme of Official Social Statistics was developed to improve the coherence of official social statistics.
- The Survey of Family, Income, and Employment (formerly known as Longitudinal Survey of Income, Employment and Family Dynamics) began in 2002 for eight annual cycles.
- The first major redevelopment of the Household Economic Survey since it began in the 1970s was done in 2006/07.
- The Linked Employer-Employee Data dataset, which integrates administrative data from the tax system with business data from Statistics NZ's Business Frame, was created.
- The student loans and allowances integrated dataset was created. This integrates administrative data from a number of government agencies:
 - individual students' tertiary enrolment data from the Ministry of Education (MoE)
 - individual students' borrowing data from the now-defunct Student Loan Account Manager provided by Inland Revenue and the MoE
 - individual students' borrowing and allowance data (from 1999 onwards for allowances, and 2000 onwards for loans) from StudyLink, a service of the Ministry of Social Development (MSD)
 - individuals' repayment and income data from Inland Revenue.
- MSD developed the Living Standards Survey, and the economic living standards index – a measure of direct living standards.

Appendix 6 includes a full list of the recommendations from the *Report of the Review Committee on Income and Wealth Statistics* (Department of Statistics, 1991) together with comment on the extent to which each recommendation has been implemented.

2.8 International reviews

In 1996 an international group of statisticians was formed (the Canberra Group) whose remit was to work towards improving international statistics on household income distribution. In particular, it was to improve the international comparability of such statistics. New Zealand was a member of this group. The final report and recommendations were published by the Canberra Group in 2001. A review of their recommendations is underway. Also, the Organisation for Economic Co-operation and Development is developing an integrated framework on income, expenditure, and wealth statistics. Solutions to the recommendations from this review should fit within the international guidelines, and future updates, where possible.

3 Enduring research and policy topics

This chapter presents an overview of users' main information needs, focusing on enduring rather than short-term needs. It draws on intelligence gained through developing the Programme of Official Social Statistics, which included extensive consultation with social sector and population-based agencies to identify enduring research and policy questions.

Six topics and associated enduring statistical information needs were identified for the economic standard of living statistics review. The topics are:

- Topic 1 – Wages and salaries
- Topic 2 – Income
- Topic 3 – Wealth/ net worth
- Topic 4 – Consumption
- Topic 5 – Financial hardship/ deprivation/ poverty
- Topic 6 – Income and wealth dynamics.

Two cross-cutting development areas that are not related to one specific topic were also identified.

Each section in this chapter begins by outlining key research themes identified with each topic. There is then a discussion of the statistical information needs associated with the topic. This is followed by an assessment of the extent to which the statistical information needs are being met by the surveys and collections that contribute statistics to the topic. The recommendations proposed to fill some of the gaps are then outlined. The priority, need, and complexity of each recommendation is discussed.

3.1 Introduction to discussion about topics

The economic standard of living domain is complex, and involves stakeholders who have diverse statistical information requirements. The stakeholders include government agencies, research organisations, the private sector, and community organisations concerned with addressing issues associated with income inequality, financial hardship, poverty, and social exclusion.

Stakeholders require data for many purposes, including the development of appropriate policies, programmes, and services; monitoring and evaluating these; undertaking research and analysis; and communicating information about the economic standard of living domain. Currently, a wide range of official statistics covers economic standard of living in New Zealand (see table 1 and appendix 1). Many of these are run by Statistics NZ, although for some, economic standard of living is not the main focus of the survey or collection. A number of Tier 1 statistics are associated with this domain (see appendix 2) as all outputs from Statistics NZ are Tier 1. Information needs identified in this review will help to inform future decisions about which statistics in this domain should be Tier 1 statistics.

Even with the wide coverage of this domain, the expert advisory groups identified gaps in the statistical information base and scope for improving analysis and output of available data. Within the wide range of surveys and collections covering this domain, there may be scope for rationalising statistics where overlaps occur.

The expert groups also noted the desirability of having information from different domains available at unit record level – from one dataset as far as possible. There are limits to what can be achieved through modelling or statistical matching across datasets, although these approaches do allow for analysis that cannot be done from one survey.

3.2 Topic 1: Wages and salaries

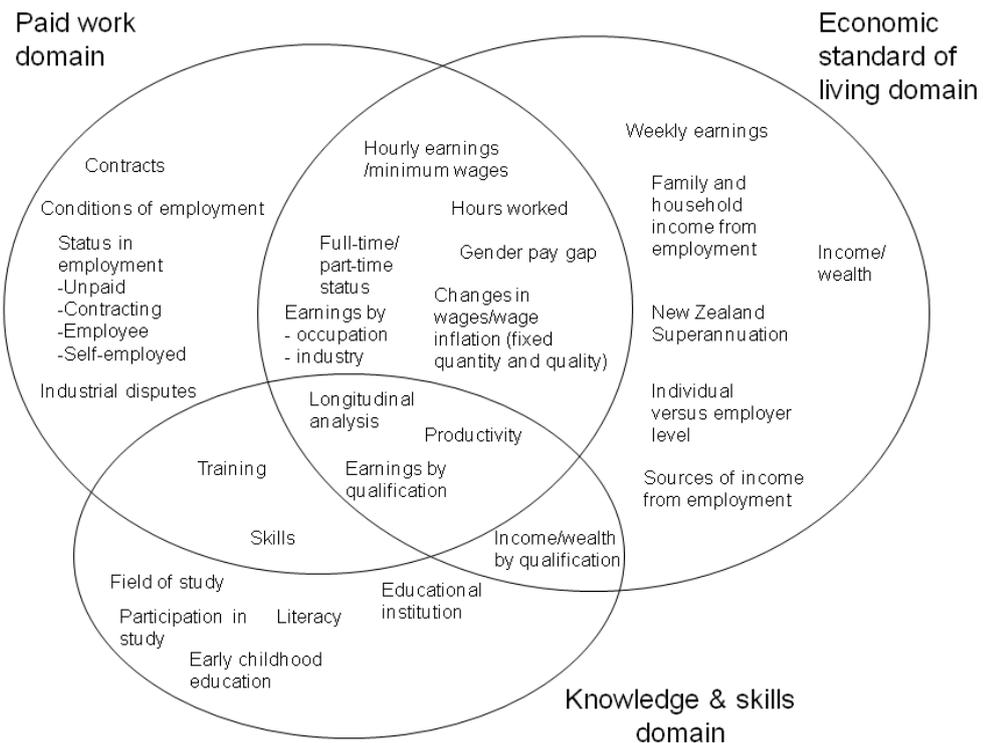
3.2.1 Relationship with other domains

Before discussing this topic, it is important to acknowledge that there is considerable overlap between this topic and topics in the paid work, and knowledge and skills domains. For example, a person's level of knowledge and skills is a key determinant of their employment opportunities and their wage and salary earnings, and therefore their economic standard of living. Wages paid for different jobs also create incentives that influence the supply of labour to those jobs, and influence decisions about acquiring different types of skills, both in the education system and in the workforce. A review of statistics in the knowledge and skills domain is nearing completion and a review of paid work statistics will be led by Statistics NZ at a later date.

Figure 2 shows how the elements of the wages and salaries topic interact within all three domains. The current review covers many of these intersecting topics. However they may also be covered from different angles in the other reviews.

Figure 2

Interaction of topics in the economic standard of living domain with those in the paid work, and knowledge and skills domains



3.2.2 Key research themes for wages and salaries topic

What is the level and rate of change in hourly, weekly, and annual earnings?

How do wage rates and changes in wages differ by socio-demographic characteristics?

What is the impact of occupation, industry, and skill level on wage rates and changes in wages?

How do wage and salary rate changes compare with productivity over time?

3.2.3 Discussion about statistical information needs

For most working-age people, wages and salaries are a significant source of income. Hence, their economic well-being, and that of their families and the households they live in, depends on their level of wage and salary remuneration.

The basic measure of wages and salaries is hourly earnings. Information is needed on how hourly earnings vary for different groups, such as between males and females, ethnic groups, and age groups. Disparities in earnings for different groups doing the same or similar work, such as the gender pay gap or disparities among ethnic groups, are closely monitored. Changes in how earnings are dispersed in the labour market are important because they have a direct and substantial impact on the distribution of incomes.

The New Zealand Income Survey provides information on basic socio-demographic characteristics such as age, sex, ethnicity, and location. A key use of this survey is in analysing and setting the minimum wage. For this work, it is important to know not only how many people are receiving the minimum wage, but also the characteristics of these people, where they work, and the type of work (industry and occupation) they are engaged in.

Hourly and weekly earnings can also vary by industry, occupation, and skill level. Changes in skill mix or employment levels, by occupation and industry, can influence wage levels, and therefore changes in wages – regardless of whether individuals have actually had any increase in their wage rates. It is important to be able to identify and isolate any changes due to these shifts in order so the reasons for changes in wages can be adequately explained. The labour cost index provides a quality and quantity controlled measure of changes in wages.

Industry, and to a lesser extent qualifications, are well covered by the existing statistical collections. However, there is currently no data source that provides information on occupational earnings at a detailed level.

Movements in wage rates at this detailed level provide an important signal of changing labour demand trends, and the existence of supply and demand imbalances affecting particular skills. Details about occupational earnings are important for understanding the relationship between occupation and economic standard of living, and for wage bargaining. Pacheco (2008) states that in New Zealand, “for most of the twentieth century a system of occupational ‘awards’ determined wages”. However, she continues, “this system was weakened with the introduction of the Labour Relations Act in 1987 and met its final demise with the Employment Contracts Act in 1991”. This means that it is now more difficult to measure occupational wage rates. But there is still a need for detailed information on how regular hourly earnings vary between and within occupation and industry groups.

The weekly earnings a person receives depends on how much they are paid per hour, and by how many hours they work per week. The latter varies across population groups. For example, women tend to work fewer hours in paid work than men, on average. Whether a person is paid overtime, and how much overtime is worked, also affects

weekly earnings. It is important to measure wage changes while controlling for these factors.

It is commonly accepted that real wages (ie wage rates adjusted for price levels) should rise at the same rate as labour productivity. Robust wage data, particularly those compiled and consistent with official productivity measures, are critical to developing an understanding of productivity growth. In the same way, robust wage levels can be compared with levels of labour productivity. Over a long period, productivity growth will be the key driver of growth in wage rates and real incomes. People can work more hours in the short term to generate higher incomes, but in the long term, productivity growth is essential to wage and income growth.

These measures are well covered by existing statistical collections. Hourly and weekly earnings are collected in both the Quarterly Employment Survey (QES) (from the employer side) and in the New Zealand Income Survey (NZIS) (from the individual and household side). The Linked Employer-Employee Data (LEED) collects wages and salaries on a monthly basis that can be analysed by employer or employee.

As the labour market has become more diverse, the concept of being paid for doing a job has become more complex. In previous decades workers spent most of their working week working for wages and salaries for one employer, but today they may work on contract, be paid commission, or have several part-time jobs in a week. In some instances, workers may only work for part of the year for an employer. These different employment arrangements need to be measured, as do the different sources through which people gain employment income. The 2008 Survey of Working Life, which was conducted as a supplement to the Household Labour Force Survey, collected this type of information.

To some extent, the wages and salaries that people earn from the labour market are a return on the skills that they possess – their human capital. As such, wage and salary information can be used to estimate the quality of different types of workers. Statistics NZ, and other statistical agencies, use this approach to estimate the impact of changing labour quality on official estimates of productivity. This is done using data from the NZIS. The same approach can be used to value a country's stock of human capital. The OECD is currently producing experimental estimates of human capital stocks for New Zealand, using the NZIS, and other developed countries.

People's ability to earn wages and salaries is also affected by macro-economic and political influences. Measuring the effects of employment shocks and policy interventions is important.

Collecting the detailed information to do the required analyses on wages and salaries imposes a large burden on both employers (for QES) and employees (for NZIS and HES). Statistics NZ is investigating ways in which administrative data (collected via LEED) can be used to replace data collected from respondents.

To summarise, average hourly earnings is the key measure of wages and salaries. However, statistics on average weekly and annual earnings are also required to understand the rate of change in earnings and the impact the variation of labour input has on people's incomes.

These statistics need to be available by key socio-demographic variables, such as age, sex, ethnicity, and qualification level so that differences between groups can be measured. In addition, average hourly earnings, by industry and occupation, are also needed to monitor how the labour market is functioning and how productivity rates are changing.

The explanatory variables are also needed by researchers to help control for differences between individuals. This is important to, for example, accurately estimate the gender pay gap or evaluate the impact of policy changes on earnings.

3.2.4 Assessing the extent to which statistical information needs are being met

The expert advisory groups noted that statistical information needs for the wages and salaries topic were assessed as being “mostly met”. A significant number of sources inform needs around hourly and weekly earnings. The following surveys and collections cover this topic – with the list showing the degree to which they answer the information needs (high, medium, or low), and sorted by the importance of wages and salaries in the collection. They fall into two types:

- those focusing on wages and salaries

Household Economic Survey/ HES (Income)	High
New Zealand Income Survey	High
Linked Employer-Employee Data	High
Labour Cost Index	High
ASSET/TAXMOD/TAXWELL	High
Survey of Family, Income, and Employment	Medium
Quarterly Employment Survey	Medium
Household Savings Survey	Low
- those in which wage and salary variables are collected from specific sub-populations

Survey of Working Life	High
Student Loans and Allowances integrated dataset	High
Longitudinal Immigration Survey: New Zealand	Low
Health, Work, and Retirement longitudinal study	Low
New Zealand Longitudinal Study of Ageing.	Low.

3.2.5 Recommendations

Given the large number of collections gathering similar data about the wages and salaries topic, an initial assessment suggests there could be scope for rationalising statistics – particularly if administrative data sources, such as tax/benefit data (eg the expanded Linked Employer-Employee Data), can be used to replace or supplement survey data in certain circumstances. This area needs further investigation.

Recommendation 1

Statistics New Zealand works with other relevant agencies to investigate the feasibility of improving data quality, reducing respondent burden, and achieving efficiencies through rationalising existing data sources on earnings and benefits.

This recommendation was deemed high priority. Implementing it would not be simple but it would reduce duplication and ensure we are getting the best value from each data source. This recommendation will improve measures in the wages and salaries, and income topics.

As noted above, the expert advisory groups identified a deficiency in the suite of wage and salary statistics. This relates to the unavailability of detailed data about occupational earnings. Since the demise of the award system of pay remuneration there has been a gap in the level of detail available about occupational earnings. Improvements in occupational wage statistics are needed, to identify the short- and medium-run shifts in the demand for labour when they occur. At present wage and salary statistics cannot be published at a level that meets this need.

Recommendation 5

Statistics New Zealand works with the Department of Labour to investigate options for obtaining and publishing regular and robust estimates of hourly earnings at more detailed levels of industry and occupation.

This recommendation was deemed medium priority. Implementing it would not be simple, but would address a key deficiency for the Department of Labour as well as employers, industry organisations, and education and training providers. This recommendation will improve measures in the wages and salaries, and income topics.

3.3 Topic 2: Income

3.3.1 Key research themes for income topic

What is the distribution of (gross, disposable, and real) income across individuals and households, and how does this vary by socio-demographic characteristics?

What are the major sources of income of individuals, families, and households and how do these change over time?

What effect does government intervention through social assistance and taxation have on income distribution?

How do changes in income at the individual and household level impact on the macro-economy, and how is income affected by economic shocks?

3.3.2 Discussion about statistical information needs

An important focus of public policy is to ensure that New Zealanders enjoy an acceptable standard of living. A key element in assessing living standards is people's command over the goods and services they consume to support their standard of living. An individual's, family's, or household's control is most often about having the financial resources to acquire goods and services in the marketplace. For the majority of people, the most important resource that supports their standard of living is their regular income. Consequently, information on sources of income received, income levels, and the distribution of income among subgroups of the population, is of great interest to government, welfare organisations, businesses, and communities.

Income has many different sources and knowing which of these individuals, families, and households receive income from is important. Key income sources are regular or irregular earnings, benefits, superannuation (both private and government), tax credits, inter- and intra-household transfers, investments, and savings.

For Māori, an additional income source is from iwi (tribal) Treaty of Waitangi settlements. As more iwi make a settlement with the Crown, there is a greater possibility of Māori receiving income from their iwi. Information on the number of Māori who receive income from this source, and the amount received, or the amount of indirect benefits (such as school or university fees received), would be useful to form an overall picture of the income of Māori. The impact these payments have on the economic standard of living outcomes of individuals, households, and whānau (family) is also of interest.

Statistics on income distribution are used to identify who to target in income support programmes aimed at those with limited means, such as children, older people, and single-parent families. Government also provides in-kind benefits, such as public education, publicly funded health care, and legal and protective services. As with income support programmes, in-kind benefits are typically funded through a progressive tax system, which redistributes economic resources by taking more from the better off and giving to the less well off.

Many surveys collect income as an explanatory variable. However, there are currently two specialised income surveys in operation: the NZIS focuses more on recent regular income for individuals, while the HES focuses more on regular and irregular annual income for households. The NZIS is not as comprehensive as the HES, but has the advantage of a larger sample, which can provide more robust income estimates for smaller population groups and for subnational areas.

The HES (three-yearly), and the HES (Income) (run in the two years between the full HES), is the data source used by Treasury in their micro-simulation model, TAXWELL. TAXWELL allows Treasury to model the impact of tax and benefit changes on individual gross incomes, to create disposable income, and is used for costing and analysis purposes. Disposable income is widely used in other areas, including low-income analysis, housing affordability analysis, and international reporting.

Other adjustments that can be made to income data include inflation adjustment, to produce estimates of real income, and applying equivalence scales (discussed in appendix 4) to account for differences in household size and composition.

Effective management of government income redistribution activity requires information on how regular government cash payments (direct benefits), and subsidies for health, education, housing, and welfare (indirect benefits) affect household income distribution. It also requires information on how personal income tax (direct taxes) and selected indirect taxes on the production, sale, purchase, or use of goods and services affect household income distribution. The study of the net outcome of the flow of money into households (through direct and indirect benefits) and the flow out (through direct and indirect taxation) is called a fiscal incidence study. This study can be used to help analyse the effectiveness of government activity in reducing income inequalities. Fiscal incidence studies can also help to confirm that net flows to households are larger for more disadvantaged households and smaller for less disadvantaged households. A fiscal incidence study was last conducted by Treasury in 2004.

The majority of income distribution studies assume that household resources are shared equally between household members. However, evidence suggests this is not always the case. There is also little understanding of how households distribute income within and between households, partly because of difficulty in collecting such data. Understanding inter- and intra-household transfers of income is of interest, particularly as more families extend across households. Information is needed on the nature, prevalence, and magnitude of income flows and on their impact on the economic well-being of both the giving and receiving households. Migrant transfers and/or remittances also need to be considered when measuring inter-household transfers – two areas not well covered by existing data sources.

For many New Zealanders, their home is their major asset and it constitutes the largest share of household net worth. People who own their own house have different monetary outlays than those who rent their accommodation. The value of rent a home-owner would pay if they paid rent instead of being a home-owner is their 'imputed rent'. Using imputed rents helps to compare like with like and is a valuable tool in the analysing income, expenditure, and net worth.

Using the surveys to collect the detailed information needed to do the required analyses on income imposes a large burden on respondents. Statistics NZ is investigating ways in which administrative data (collected via LEED) can be used to replace data collected in surveys such as HES and NZIS.

To summarise, income is the most commonly used measure of economic standard of living for individuals, families, and households. Income distributions are needed for different individual and household characteristics, as well as for income source. Several adjustments can be made to the data to help improve data comparability over time and across household types – modelling to produce estimates of after-tax income, deflating time series, equivalising income to account for differences in household size and composition, and accounting for imputed rent.

These measures are needed to show whether the redistributive policies of government, through direct social assistance and taxation, are working or not. Fiscal incidence studies take into account a wider range of direct and indirect benefits and taxation that flow in and out of households, to show the net impact of government activity on people's incomes, and imputing rents adds to the tools available to ensure data comparability.

3.3.3 Assessing the extent to which statistical information needs are being met

The expert advisory groups noted that statistical information needs for the income topic are “mostly met”. A number of sources provide information on income levels, income sources, and the distribution of income among different population groups and household types in the population. This assessment is because income is often collected as an explanatory variable in social and economic surveys, as well as being collected as a specialised subject in its own right. Statistics NZ is working to implement a set of core questions in all its cross-sectional social surveys. This set will include questions on individual and household income similar to those asked in the census.

The following surveys and collections cover this topic – with the list showing the degree to which they answer the information needs (high, medium, or low), and sorted by the importance of income in the collection. They fall into three types:

- those focusing on income

Household Economic Survey/ HES (Income)	High
ASSET/ TAXMOD/TAXWELL (disposable income)	High
New Zealand Income Survey	Medium
Survey of Family, Income, and Employment	Medium
Linked Employer-Employee Data	Medium
New Zealand Living Standards Survey	Medium
Household Savings Survey	Low
ANZ-Retirement Commission Financial Knowledge Survey	Low
- those in which income-related variables are collected as explanatory variables

Census of Population and Dwellings	Low
General Social Survey	Low
- those in which income-related questions are collected from specific sub-populations

Student Loans and Allowances integrated dataset	Medium
MSD benefit dataset	Medium
MSD benefits dynamics dataset	Medium
Family Tax and Benefits Research linked data	Medium
Longitudinal Immigration Survey: New Zealand	Low
Health, Work, and Retirement Longitudinal Study	Low
New Zealand Longitudinal Study of Ageing.	Low.

3.3.4 Recommendations

While the information needs for the income topic were “mostly met”, the expert advisory groups agreed another fiscal incidence study should be run – to investigate the impact that economic and government policy changes over the last decade, regarding government transfers and taxation, have had on household income distribution.

The last such study undertaken in New Zealand was by Crawford and Johnston in 2004, comparing 1987/88 and 1997/98 data.

Recommendation 6

Treasury works with other relevant agencies to undertake a fiscal incidence study and consider the frequency of future studies.

This recommendation was deemed of medium priority, with medium complexity and information need. The data sources necessary to undertake a fiscal incidence study already exist, so the work would be an analytical exercise. This recommendation will provide information relating to the income, consumption, and financial hardship/deprivation/ poverty topics.

A further information need identified by the expert advisory groups was around imputed rents. To obtain an accurate picture of income and wealth inequality in New Zealand, information on imputed rents at a household level is needed. This would allow researchers to improve their analysis of income and wealth inequality by adjusting for the differing monetary outlays. It is proposed that different methodologies for calculating imputed rent be investigated, including the methodology used by the ABS (ABS, 2008) that is based on a methodology developed by Eurostat (Eurostat, 2006), to explore whether they can be applied to the New Zealand situation.

Recommendation 10

Statistics New Zealand works with stakeholders to identify appropriate methodologies and data sources for producing statistical information on imputed rents.

This recommendation was deemed to be mainly analytical work, of low priority and complexity.

3.4 Topic 3: Wealth/net worth

3.4.1 Key research themes for wealth/net worth topic

What is the value, composition, and distribution of wealth among New Zealanders, and how is it changing over time?

How does wealth vary over a lifetime, and to what extent are people able to accumulate sufficient savings to support them in retirement?

What are the levels of debt/liability across different groups in the population, and to what extent can they service their debt?

3.4.2 Discussion about statistical information needs

Wealth or net worth (assets minus liabilities) is an important complementary measure to income and should be considered in assessing economic standard of living. Ownership of wealth potentially earns income for an individual or household, but also affects broader economic power. For example, wealthy households may find it easier to gain credit to finance their consumption or to maximise the choice of timing for different types of consumption. To analyse this, it is necessary to measure assets and liabilities – net worth is the difference (positive or negative) between the two. High levels of net worth can also affect living standards by providing the potential for dis-saving for consumption, either now or at a later date.

Information is needed on the levels and distribution of net worth for individuals, families, and households in New Zealand, how this is changing, and the key determinants of any changes. The composition of asset holdings and how this varies between different groups in the population is a further information need.

Other types of assets in which New Zealanders hold wealth include financial investments, superannuation, rental property, other real estate, vehicles, trusts, stocks, and mutual fund shares. Regular statistics are needed on the value of holdings for each asset type and changes in the percentage of total net worth held in each type of asset. Changes in the value of some asset types can have a significant impact on net worth, with flow-on effects to the economy. For example, increasing house prices lift household net worth, which can in turn result in many home owners converting their stronger balance sheet position into additional consumer spending. Conversely, falling house prices reduce net worth and can leave households with negative equity. Economic impact on net worth, such as changes in the value of houses or shares due to changing macroeconomic conditions, needs to be separated from other changes.

The nature and level of asset holdings, and the extent of asset growth over the working years, is of particular interest for retirement provision and the sustainability of the current retirement income provision. The ageing of New Zealand's population will have a huge impact on the demand for government-funded pensions for older people and health benefit payments, raising concern that future generations of workers may not be able to meet the costs. Information on the savings patterns of individuals, especially superannuation savings, and the contribution employers are making to these saving schemes, is vital to understanding future costs and to determine the need for programmes to encourage people to save for their retirement.

An area of wealth that is not well covered in existing statistical collections, but of great interest, is trusts. Research suggests trusts have become more popular in recent years. In the 2006 Census, 12.3 percent of households reported the dwelling they lived in was owned by a trust (Statistics NZ, 2007). However, the census only measures the number of dwellings held in trusts. It does not measure other types of assets held in trusts, nor the value of any assets held in trusts. Briggs (2006), using Household Savings Survey data, estimated the value of trust holdings in 2001 was \$97.1 billion. He also stated, "even this amount is likely to be an undercount, since wealth surveys tend to undercount the assets of the wealthiest households". Information is needed on the number of trusts there are, what types of assets are held in trusts, how much wealth is held in those trusts, and whether access to a trust changes expenditure patterns.

As important as it is to know about assets, it is equally important to know about liabilities and debt. Household borrowing has grown considerably in many countries over the past two decades. There is a need to understand factors that have contributed to this increased borrowing and the impact of the increase on debt levels, both in absolute terms and relative to total individual and household income. Households' greater indebtedness has important macroeconomic policy implications. Heavily indebted households are very sensitive to the changes in the interest rates they face (particularly when unexpected), and to changes in household income such as those caused by unemployment. At a microeconomic level there is a need to understand the distribution and pattern of debt for different groups of individuals and households, at different stages of their lives, and the relationship between debt and savings patterns, particularly for the less well off. Out-of-control debt can have a significant negative impact on well-being, by contributing to financial hardship, poor physical and mental health, family stress, stigma, and social isolation.

The growth in debt among young people as a result of student borrowing under the Student Loans Scheme is of particular interest. Between the 1986 and 2006 Censuses, the percentage of 24-year-olds living with their parents rose from 19 percent to 23 percent. There is a need to understand whether this is economising behaviour to reduce their levels of debt or whether there are other reasons. A need to understand the impact of policy changes in this area also exists.

In summary, to provide a complete picture of the living standards of New Zealanders, regular statistical information on the value and composition of net worth is needed, to complement income and consumption statistics. Distributional information is needed to indicate whether the spread of wealth across the community is becoming more or less unequal, particularly in response to societal changes and economic shocks.

Information on the savings patterns of individuals is vital for assessing the extent to which people are able to accumulate sufficient resources through their working lives to support them in retirement. This is important for determining the need for programmes to encourage people to save for their retirement.

Understanding the level of indebtedness of New Zealand households is important because of its implications for individual well-being, and also because of its macroeconomic policy implications.

3.4.3 Assessing the extent to which statistical information needs are being met

The expert advisory groups noted that statistical information needs are “poorly met” for the wealth/net worth topic, because the Household Savings Survey and the Survey of Family, Income, and Employment (SoFIE) are the only sources of detailed wealth data.

The following surveys and collections gather data about wealth – the list shows the degree to which they address the information needs (high, medium, or low), and is sorted by the importance of wealth in the collection. They fall into three types:

- those focusing on wealth

Household Savings Survey	High
Survey of Family, Income, and Employment	Medium
- those in which wealth-related variables are collected as explanatory variables

New Zealand Living Standards Survey	Low
QV house price data	Low
ANZ-Retirement Commission Financial Knowledge Survey	Low
- those in which wealth-related variables are collected from specific sub-populations

Student Loans and Allowances integrated dataset	Low
RBNZ standard statistics return	Low
RBNZ general disclosure statement and key information statement	Low
Health, Work, and Retirement longitudinal study	Low
New Zealand Longitudinal Study of Ageing.	Low.

3.4.4 Recommendation

The expert advisory groups noted that Statistics NZ ran a cross-sectional wealth survey (Household Savings Survey (HSS)) in 2001, and wealth modules in the even waves of the longitudinal SoFIE, in 2003/04, 2005/06, 2007/08, and 2009/10. These sources have informed a wide range of information needs relating to the level, composition, and distribution of net worth in New Zealand. However, with HSS data now dated and SoFIE now ended, options need to be investigated for producing future statistics on the net worth (the assets and liabilities) of households on a regular basis. The expert groups identified a future need for both cross-sectional and longitudinal measures of wealth.

Recommendation 2

Statistics New Zealand clarifies the detailed information needs and priorities in the area of household net worth, and works with stakeholders to investigate options to produce highest-priority information needs in a sustainable way.

This recommendation was deemed to be of high priority, with medium complexity and medium information need. However, the information need will become high when the SoFIE data has been analysed. This recommendation will improve measures of wealth and net worth.

3.5 Topic 4: Consumption

3.5.1 Key research themes for consumption topic

How do levels and patterns of expenditure vary between different groups in the population, and vary over time?

What is the relationship between income, wealth, and expenditure?

How do changes in household consumption impact on the macro-economy and vice versa?

3.5.2 Discussion about statistical information needs

Consumption is very difficult to measure. Increasingly, studies are using expenditure (spending by households on goods and services) to measure aspects of economic standard of living. The underlying notion of this approach is that households derive well-being from actually consuming goods and services rather than from having the ability to consume – by receiving income and having wealth. If households base their spending on expected lifetime income, then expenditure should provide a better measure of lifetime resources than income does. Expenditure is less subject to short-term variations in income and therefore should better reflect material well-being in terms of past, current, and expected future income.

While income and wealth statistics indicate the economic resources available to individuals, families, and households, consumption data are needed to give a more direct picture of how people actually live. Consumption may be financed by regular and recurring income, by savings from previous years, from irregular income such as inheritances, by bartering or home production, or by incurring debt.

Expenditure-based measures of material standard of living, as collected in the three-yearly Household Economic Survey (HES), use levels and patterns of expenditure for different population groups to indicate relative advantage or disadvantage. Since households tend to satisfy their basic needs first, a higher relative share of total household income and/or expenditure on basic necessities is seen as indicating socio-economic disadvantage. For example, income is often analysed after housing costs are removed. Governments and welfare organisations are interested in the numbers and characteristics of households that spend a high proportion of their income on the essentials of daily living. For some households, confining expenditure to the basics may be a deliberate choice driven by, for example, the desire to pay off their mortgage as soon as possible or to maximise savings for future expenditure. This highlights the value in looking at the relationships between income, expenditure, and wealth when analysing standard of living across different household types. It is also important to understand the drivers behind different levels or patterns of expenditure, over time and between different population groups. These include social, cultural, psychological, institutional, and economic factors.

Changing patterns of household expenditure, as measured in the HES, are analysed by Statistics NZ to help select the representative basket of goods and services that is priced in the consumers price index (CPI).

Patterns of household expenditure are also of interest to the private sector and businesses. Analysis of spending patterns provides information on the levels of expenditure by different types of households on a range of goods and services. This is valuable information for businesses, both in forecasting demand for their products and services and in marketing them.

The study of household expenditure behaviour is central to macroeconomic analysis because of important links with aggregate demand and economic growth. Household consumption expenditure accounts for a significant proportion of total final consumption in New Zealand. Because the economy relies heavily on imports to meet its consumption needs, changes in expenditure can have a significant impact on the balance of payments position. Also, changes in exchange rates affect people's purchasing decisions (eg exchange rate variability has a direct effect on the price of petrol at the pump; the cost of petrol influences how much travelling people do).

To summarise, consumption is generally measured through expenditure statistics – which provide a more direct picture of how people actually live. Expenditure statistics are needed for different household types, and help to show which households spend

relatively more of their income on basic necessities such as food and housing costs. Understanding the relationship between income, expenditure, and wealth is important for gaining a clearer picture of economic standard of living.

Expenditure statistics also show changes in the nature of goods and services purchased by households, and are therefore useful in selecting the CPI basket and useful for businesses in marketing their goods and services. Finally, expenditure statistics help economists to understand the drivers on demand for imported goods, and the effect of this on New Zealand's balance of payments position.

3.5.3 Assessing the extent to which statistical information needs are being met

The consumption topic was assessed as being "partly met". The only survey that collects detailed information on this topic is HES. Collecting detailed expenditure information involves a high level of respondent burden and as a result, the survey sample size is kept as small as feasible. The expert advisory groups recognised that this excludes the ability to produce any robust detailed analysis, but also identified a need to expand the range of sub-populations, to meet enduring needs. For example, at the moment expenditure analysis can only be done for broad household types, despite an increasing need for more detailed data on expenditure by Māori and Pacific households, particularly in relation to level of hardship.

The Reserve Bank's standard statistics returns, general disclosure statements, and key information statements give broad, aggregate-level data about consumption, but do not provide the detailed data many users require.

3.5.4 Recommendation

The HES was last reviewed before the 2006/07 collection. Further work is required to investigate ways to reduce respondent burden, by looking at what is collected, how it is collected, and what data can be obtained from existing sources. Methods and techniques for producing small-domain estimates need to be investigated, to meet information needs without increasing respondent burden.

Recommendation 7

Statistics New Zealand:

- undertakes a review of the Household Economic Survey focusing on content (including rotating supplements or modules), sample design, sample size, and frequency
- investigates statistical modelling techniques aimed at providing detailed estimates for a given sample size.

This recommendation was deemed to be of medium priority, complexity, and information need. The main impact of this recommendation is on the consumption topic. However, because HES collects income data, it will improve data in the financial hardship/deprivation/poverty topic and have some impact on the wages and salaries and income topics.

3.6 Topic 5: Financial hardship/deprivation/poverty

3.6.1 Key research themes for hardship/deprivation/poverty topic

What is the nature, extent, and severity of financial hardship among New Zealanders?

How does financial hardship vary by socio-demographic characteristics?

How do levels of hardship change over time, and over the life cycle?

3.6.2 Discussion about statistical information needs

The extent of financial hardship, deprivation, or poverty in a community is of concern. It raises issues of social justice as well as the need to address problems that poor people have, particularly if certain sub-populations or geographic regions are disproportionately affected. Of particular concern is the level of child poverty, because it is associated with many adverse outcomes for children (St John et al, 2008) and is seen to be inconsistent with equality of opportunity. The introduction of the Working for Families scheme in 2005 was aimed at improving the economic well-being of families with parents, especially those in paid work.

The length of time people experience financial hardship and when in their life this occurs are also important. For example, students may live in poverty, but once they graduate and are earning an income, they generally move out of poverty. Over their lifetime they can expect to earn higher incomes. Experiencing financial hardship may not affect a family very much if it lasts only a few months, but it will probably have a significant effect if it lasts longer than a year. Knowledge about the reasons for material deprivation or hardship, and how they affect people's lives, is required to inform social policies directed at improving people's standard of living.

Estimates of the extent of financial disadvantage vary enormously, depending on how it is defined – low income does not always translate into material hardship. The living standards of individuals and households are affected by factors other than their cash income, which include receiving in-kind income (eg fringe benefits and pensioner concessions) or fully-subsidised government services. Owning assets can also be important. For example, the economic well-being of two individuals on a similarly low income may be very different if one owns their own home without a mortgage while the other is renting. Consequently, approaches that use direct measures are used to identify material disadvantage – significant ones are the expenditure, relative deprivation, and social exclusion approaches.

Stiglitz (2009) has highlighted the importance of not using just income as an indicator of well-being. Some researchers have attempted to overcome problems associated with using income data to measure economic standard of living by using income and expenditure data together. This approach measures how much income constrains the purchasing of goods and services. Households are defined as economically disadvantaged if they spend over a designated proportion of their disposable income on basic necessities such as food, accommodation, heating, and clothing. However, this approach does not allow for households that can sustain an adequate standard of living during periods of low income by running down past savings, incurring debt, or by increasing home production of goods.

The relative deprivation approach to measuring material standard of living is based on direct observation of various dimensions of people's lifestyles. It defines relative deprivation as a situation where people lack sufficient resources to have the living conditions and amenities, and participate in the activities, that are widely encouraged and approved of in their society. This approach uses descriptive indicators of actual living circumstances (such as ownership of particular goods, how well individuals and families

manage on their income, and whether they do without things because of lack of income), as well as people's perceptions of their own living standards. It may involve combining items into an index of living conditions or material well-being. The Ministry of Social Development has designed such an index, called the economic standard of living index (ELSI), for use in New Zealand.

To summarise, measures of income, expenditure, and wealth provide an indication of financial hardship. However, they can be misleading in situations where, for example, a person's poor state of health or limited access to educational facilities results in greater expenditure on their particular situation, and less expenditure on other basic necessities of life than for others earning similar incomes. Non-income measures of material standard of living are needed to supplement income, expenditure, and wealth statistics. Such measures directly measure an individual's or household's consumption of the goods and services considered essential for well-being. The measures need to be available for key socio-demographic variables, such as age, sex, and ethnicity, so that differences between groups can be measured.

3.6.3 Assessing the extent to which statistical information needs are being met

The financial hardship/deprivation/poverty topic was assessed as "mostly met" now, with a significant number of information sources informing the topic. However, the rating will drop to "partly met" when analysis of SoFIE data is complete. Also the NZ Living Standards Survey is not being continued after 2008. The following list of surveys and collections shows the degree to which each answers the information needs (high, medium, or low), and is sorted by the importance of income in the collection. They fall into three groups:

- those focusing on hardship

Household Economic Survey/ HES (Income)	High
ASSET/ TAXMOD/TAXWELL	High
New Zealand Living Standards Survey	High
Survey of Family, Income, and Employment	Medium
ANZ-Retirement Commission Financial Knowledge Survey	Low
- those in which hardship-related variables are collected as explanatory variables

Census of Population and Dwellings	Low
General Social Survey	Low
- those in which hardship-related questions are collected from specific sub-populations

MSD benefits dynamics dataset	Medium
Family Tax and Benefits Research linked data	Medium
Longitudinal Immigration Survey: New Zealand	Low
Health, Work, and Retirement longitudinal study	Low
New Zealand Longitudinal Study of Ageing.	Low.

The surveys above provide data on hardship but not all ask non-income questions. While some surveys listed above are unlikely to be repeated, given how many surveys use the ELSI short-form questionnaire to gather non-income data, there is still scope for rationalisation.

3.6.4 Recommendation

In the last year or so there has been increasing international interest in non-income measures of well-being. Many surveys already use a set of non-income questions, based on the ELSI measure, and MSD is redeveloping a revised set of questions based on those used in the 2008 Living Standards Survey. The goal is a set of non-income measures/questions that can be used to create a range of indices useful for different purposes (eg measuring material hardship in New Zealand, international material

hardship comparisons, or material well-being more generally (from low to high living standards)), or be used alone as Statistics NZ does now in the HES and other releases. With more focus on reducing respondent burden, care is needed so that these questions are asked in the most appropriate survey vehicle and at the appropriate frequency.

The expert advisory groups identified an ongoing need for non-income measures of material well-being that are comparable over time, and that can be used in different ways when measuring financial hardship, deprivation and poverty.

Recommendation 8

The Ministry of Social Development works with interested parties to:

- review the rationale, use, and value of non-income measures of material well-being in national surveys taking into account international practice
- recommend a set of non-income measures of material well-being and,
- decide on the frequency and most appropriate survey vehicle(s) to collect those measures.

This recommendation was deemed to be of medium priority, complexity, and information need.

3.7 Topic 6: Income and wealth dynamics

3.7.1 Key research themes for income and wealth dynamics topic

How much income mobility is there in New Zealand and how sustained are the transfers between income groups?

What is the extent of inter-generational transfer of wealth?

3.7.2 Discussion about statistical information needs

Public policy use of statistics on economic standard of living has a strong focus on income and wealth distribution, but is placing increasing emphasis on how people's income and wealth change over time. This emphasis is because of limited understanding of which factors determine how an individual or group's economic standard of living evolves over their lifetime. There is also uncertainty over how policy impacts on economic living standards. For these reasons, it is important to collect a sufficiently wide range of information on any potentially important dimensions of living standards, and their dynamics, and on possible influencing factors. This information can inform ongoing research into understanding influencing factors, and to test competing theories.

For income, data are needed to allow the exploration of individual, family, or household income over a lifetime, and the impact of life events (eg birth of first child, marriage dissolution, or retirement) and external factors (eg changes to government transfer payments or taxation, or changes in the country's economic situation) on income levels. There is particular interest in turnover in the low-income population from year to year, and over a longer time. This information can provide a more accurate picture of the nature of income poverty than cross-sectional data does. For example, questions for research include time in poverty, reasons for being in poverty, and ways of getting out of poverty.

The information needs on wealth dynamics are broadly similar to those for income dynamics. They relate to net worth accumulation over a lifetime, factors associated with significant changes in net worth, the extent of net worth mobility, ways of dealing with economic shocks, and the transfer of net worth between generations.

In summary, statistical measures of income and wealth dynamics are needed to provide a robust foundation for understanding changes in the economic well-being of individuals

and households. Longitudinal measures provide insights into the temporal nature of living standards (whether they are transitory or permanent), the causes and consequences of changes in living standards, and the connections between policies and outcomes. These insights cannot be gleaned from cross-sectional measures.

3.7.3 Assessing the extent to which statistical information needs are being met

Longitudinal surveys that collect income and wealth data run by Statistics NZ have finished their collection cycle, although the administrative collections are continuing. Future information needs relating to income, wealth, and consumption dynamics need to be confirmed and prioritised. Longitudinal surveys are complex, expensive to run, and involve a high respondent burden. Following the same group of people for an extended period of time has drawbacks – attrition rates, particularly for sample surveys, can reduce the usefulness of the data. Also, longitudinal data increases confidentiality risks – the more data collected about a respondent, the more identifiable they become. These confidentiality risks, and acts of Parliament such as the Statistics Act 1975 and various tax acts, mean access to some data must be managed carefully to protect confidentiality (while maximising the data's use).

Before running new surveys, data from existing surveys should be used as much as possible and the feasibility of exploiting other data sources should be investigated. However, administrative data on its own is unlikely to completely meet the data need, due to a lack of necessary socio-demographic variables – data requirements for administering programmes are different to those for determining a programme's impact and outcomes. However, by increasing the use of administrative data, it may be possible to reduce the number of questions asked in a sample survey.

The income and wealth dynamics topic was assessed as being “partly met now but poorly met in the future”. Several sources inform the topic, but the two main surveys (SoFIE and LisNZ) have ended their survey lives. The following surveys and collections cover this topic. The list shows the degree to which they answer the information needs (high, medium, or low), and is sorted by the importance of economic standard of living in the collection. They fall into two types:

- those focusing on economic standard of living

Survey of Family, Income, and Employment	High
Linked Employer-Employee Data	Medium
- those in which economic standard of living-related variables are collected from a specific sub-population

Student Loans and Allowances integrated dataset	Medium
MSD benefits dynamics dataset	Medium
Longitudinal Immigration Survey: New Zealand	Low
Health, Work, and Retirement longitudinal study	Low
New Zealand Longitudinal Study of Ageing.	Low.

3.7.4 Recommendation

Respondents and Statistics NZ have expended considerable effort in providing, collecting, and processing data in specialised longitudinal surveys (SoFIE and LisNZ). It is important that data from the existing surveys are used as much as possible to understand drivers and relationships, and to help prioritise future needs. The expert advisory groups identified an ongoing need for longitudinal data. With Statistics NZ's longitudinal surveys having completed their collection cycle, the organisation and key stakeholders should work to prioritise future longitudinal information needs and investigate how these can be met by existing data sources as much as possible.

Recommendation 3

Statistics New Zealand works with key stakeholders to:

- ensure existing sources of longitudinal data are used to their full potential
- prioritise future needs for longitudinal income and wealth data and investigate options for meeting those needs, including exploiting administrative data (on its own or in combination with survey data).

This recommendation was deemed to be of high priority and complexity. The information need is currently low but will become high after SoFIE data has been completely analysed. This recommendation impacts on the income and wealth dynamics topic in particular, the wages and salaries and income topics in general, and to some extent on the financial hardship/deprivation/poverty topic.

3.8 Statistical information needs not related to one specific topic

The expert advisory groups identified three statistical information needs that relate to a number of topics. These are discussed below.

3.8.1 Financial literacy

How people manage the money they have affects their economic standard of living, so it is important to measure their financial literacy. The Retirement Commission uses Schagan's (1997) definition of financial literacy:

"Financial literacy is the ability to make informed judgements and take effective decisions regarding the use and management of money throughout life."

In 2006 and 2009 the Retirement Commission commissioned surveys to measure the levels of financial literacy of New Zealand adults. Further surveys are required to monitor the impact of educational measures, policy changes, and promotions. Financial literacy is an emerging area internationally and there is a need to keep abreast of the latest developments. The advisory groups recognised that this is an important area of statistics that should continue to be investigated and collected.

Recommendation 9

The Retirement Commission:

- continues to commission regular surveys to measure the level of financial literacy of New Zealand adults
- reviews international developments in the field of measuring financial literacy and incorporate changes where feasible.

This recommendation was deemed to be of medium priority and complexity, and of low information need currently. The need would rise to medium if the Retirement Commission's Financial Knowledge Survey (currently run three-yearly) was not continued. This recommendation will improve understanding in four topics: income, wealth/net worth, financial hardship/deprivation/poverty, and income and wealth dynamics.

3.8.2 Income reconciliation

Income, saving, and wealth can all be measured at the macroeconomic (national) and microeconomic (individual or household) levels. However, as macro- or microeconomic concepts they are not always the same, and the measures do not always agree at either a component or aggregate level. It is not always appropriate to harmonise definitions; however, it is important that the different concepts, and the effect of their differences on the measures, is understood. Statistics NZ (2006) has gone some way towards this and the expert advisory groups identified the importance of continuing the work. The

Organisation for Economic Cooperation and Development is also considering work on a framework for confronting microeconomic data and macroeconomic measures.

Recommendation 4

Statistics New Zealand undertakes a comparison of macro- and microeconomic measures of income, saving, and wealth, with a view to better understanding and explaining these measures.

This recommendation was deemed to have high priority, complexity, and information need. This recommendation will improve understanding of measures in both the income and the wealth/net worth topics.

3.8.3 Review of sources of income classification

The 'dollar income' and 'sources of income' classifications were last reviewed in 1997. There have been many real-world changes since then, such as bonuses, stock options, employer superannuation contributions, or fringe benefits. Also, the United Nation's Canberra Group (in 2001) and the International Labour Organization (ILO) (in 2003) have published recommendations on how to classify income, wealth, and consumption. The expert advisory groups recognised the importance of keeping up to date with real-world changes and with changing international recommendations.

Recommendation 11

Statistics New Zealand, together with its Official Statistics System partners and other stakeholders, reviews the definitions used for sources of income, and works to implement international recommendations and real-world changes, where feasible and relevant to the New Zealand situation.

This recommendation was deemed to be of low priority, medium complexity, and low information need. This recommendation will affect all six economic standard of living topics.

It should be noted that the Canberra Group recently initiated a refresh of the Canberra Handbook. Also, the ILO is undertaking a review of the 'status in employment' classification (employed, self-employed, etc). Although this review is not strictly within the scope of this domain, any changes will be implemented after a review of the New Zealand classification.

Statistics NZ will, as part of usual business, continue to work with interested agencies and other users to ensure that analysis and reporting across the OSS are adapted and modified to continue to meet priority needs.

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Appendix 1 Information sources for the economic standard of living domain

Appendix 1 provides an overview of existing data sources and statistics on economic standard of living that are available from the Official Statistics System. Their contribution to informing the enduring information needs is also assessed.

A1.1 Surveys or collections focusing on economic standard of living topics

Statistics New Zealand

1. Household Economic Survey (HES and HES (Income))

Lead agency	Statistics NZ
Collection type	Household survey
Frequency	Annual from 1973–98. Since 2001, the survey has been conducted every three years. From 2006/07, the income and housing costs components of HES are administered annually and the expenditure component every three years
Unit of measurement	Households and individuals
Coverage	Individuals aged 15 years and over living in private households
Key variables	Age, sex, ethnicity, household composition, highest educational qualification, labour force status, expenditure on a range of items, household and personal income (from both regular and irregular sources), living standards
Sample	4,700 households (target)
Accessibility	Survey results are published in an information release, accessible on Statistics NZ's website; unit record data are available to approved researchers in Statistics NZ's data laboratory
Relationship to information needs	Informs topics 1, 2, 4, and 5.

Note: HES and HES (Income) produce a number of Tier 1 statistics relating to this domain.

The Household Economic Survey (HES) provides a comprehensive range of information relating to household income and expenditure. Run annually until 1998, the survey shifted to a three-yearly cycle in 2001. From 2006/07, the survey has collected information on incomes and housing costs annually. Detailed expenditure data will continue to be collected on a three-yearly cycle.

HES was originally developed for use in updating the consumers price index. Over the years, the content has been expanded and the survey now provides an important source of detailed information on income and the living standards of New Zealanders. The survey shows annual income from all sources at both the individual and household level. An annual measure of income tends to give a better measure of living standards than a weekly one, by giving a longer-term view.

The expenditure information is collected by an expenditure questionnaire and diary. The questionnaire collects information on major items of household expenditure. Details of expenditure and sales are gathered for housing, home maintenance, household operation, transport, health, and education. The expenditure diary is issued to all

household members aged 15 years and over. Details are recorded for items bought and any other money spent over a 14-day period.

The income questionnaire collects regular income from household members by means of the 'current approach'. This requires respondents to give details of the latest amount they received, the time period covered for that amount, and the number of weeks or months (to the interview date) that income was received from the source concerned. Irregular income is collected using the 'recall approach'. This requires respondents to give details of the total (gross) amount received from each source of irregular income in the 12 months leading up to the interview.

Since 2006/07, HES has collected data on living standards by using the MSD's ELSI short-form questionnaire.

An important limitation of the survey is that comparisons of income with expenditure data from the survey are problematic, because the method of surveying income and expenditure does not allow consistency at an individual level. In addition, a household's expenditure is not always paid from its current income. Consequently, comparisons of total income against total expenditure are not valid at the household level.

A further limitation is the small sample size (3,000 households and approximately 5,500 individuals achieved), which makes it difficult to analyse individual or household income at a regional level, or the income position of small population subgroups. Sample size is kept at this level due to the burden on the respondents of providing so much detail.

2. New Zealand Income Survey

Lead agency	Statistics NZ
Collection type	Household survey
Frequency	Annually in the June quarter
Unit of measurement	Individual and household
Coverage	Individuals aged 15 years and over living in private households
Key variables	Age, sex, ethnicity, highest educational qualification, labour force status, actual and usual gross wages and salaries, actual and usual hours worked, government transfer income, and income from investments (from 2002)
Sample	15,000 households (target)
Accessibility	Survey results are published in an information release, accessible on Statistics NZ's website. Unit record data are available in confidentialised unit record files (CURFs) for 2002–07 to approved researchers. Unit record data for all years are available to approved researchers in Statistics NZ's data laboratory
Relationship to information needs	Informs topics 1 and 2.

Note: The New Zealand Income Survey produces a number of Tier 1 statistics relating to this domain.

The New Zealand Income Survey (NZIS) is conducted annually as a supplement to the Household Labour Force Survey (HLFS) during the June quarter. It was run for the first time in the June 1997 quarter. The survey collects actual and usual gross income from wages and salaries (divided into ordinary time, overtime, and other job-related income) for the main job and up to two other jobs. To match this, information on actual and usual hours worked is collected. The information on wages and salaries relates to the respondents' most recent pay period.

The NZIS also collects income from government transfers, investments, and self-employment. The information on government transfers covers the previous two weeks while that on investments and self-employment relates to the previous 12 months. Information on irregular income is not available from the NZIS.

One of the main benefits of the NZIS is that the income data can be related directly to data on labour market characteristics, such as labour force status, full-time/part-time status, and occupation. For example, it is possible to compare the average and median hourly earnings of people working in different high-level occupation groups and look at how earnings vary by sex. Also, due to its large sample size, the NZIS is a useful source of data for regional and subgroup analysis. As respondents are in the HLFs for eight quarters (and so in the NZIS for two years) limited longitudinal analysis is possible, although the survey was not designed for this type of analysis.

The NZIS is very sensitive to compositional changes in the labour market, which can give the impression that there are greater changes in rates of pay than there actually are. The labour cost index is better equipped to deal with compositional changes.

The NZIS reports on weekly income for an average week during the June quarter. Conversion of this weekly income into an annual equivalent is not recommended as an individual's circumstances can change significantly during a year.

The NZIS is also used in the composition-adjusted productivity series, where income data are used to estimate skill level differences between workers.

3. Household Savings Survey

Lead agency	Statistics NZ
Collection type	Household survey
Frequency	One-off in 2001 but may become more regular
Unit of measurement	Individuals and couples
Coverage	Individuals aged 18 years and over living in private households
Key variables	Age, sex, ethnicity, highest educational qualification, labour force status, income from wages and self-employment, net worth, value and type of assets, value and type of debt
Sample	5,400 (achieved) (included a Māori booster sample)
Accessibility	Survey results were published in an information release and a statistical report, accessible on Statistics NZ's website. Unit record data are available in a CURF
Relationship to information needs	Informs topics 1,2, and 3.

The Household Savings Survey (HSS) was conducted in 2001 on behalf of the Office of the Retirement Commissioner. The survey collected detailed information on the type and value of assets and liabilities for both the respondent and the respondent's partner. It therefore provided a major source of information on the net worth of individuals and couples in New Zealand. The survey also asked about the expectation of receiving a significant inheritance. This helped with research questions regarding inter-generational transfer of wealth.

A key limitation of the 2001 survey was that data collection was restricted to individuals and couples. It meant that no analysis of the assets, liabilities, or wealth of households and families was possible from the survey data. Further, the sample size of the survey limited the amount of analysis that was possible for sub-populations. The methodology for any future survey would need to be reviewed. However, a balance is always needed between increasing the sample size, reducing respondent burden, maintaining consistency, and available funding.

4. Survey of Family, Income, and Employment

Lead agency	Statistics NZ
Collection type	Household survey
Frequency	Longitudinal survey – data collected annually from the same panel of respondents over an eight-year period starting in 2002
Unit of measurement	Individual
Coverage	Individuals aged 15 years and over living in private households
Key variables	Age, sex, ethnicity, highest education qualification, country of birth, years in New Zealand, labour market history, labour market activity, employment spells, government support spells, income spells, annual income, family/household composition, self-assessed health status (waves 3, 5, and 7), assets and liabilities (waves 2, 4, 6, and 8)
Sample	11,500 (achieved) households in wave 1
Accessibility	Survey results for waves 1 to 4 were published in an information release, accessible on Statistics NZ's website. A transition report based on the results of waves 1 to 7 was released in 2010/11 and is available on Statistics NZ's website. Unit record data for waves 1 to 7 is available to approved researchers in Statistics NZ's data laboratory. Results for waves 1 to 8 will be available late in 2011
Relationship to information needs	Informs topics 1, 2, 3, 5, and 6.

Note: The Survey of Family, Income, and Employment produced a range of Tier 1 statistics relating to this domain.

The Survey of Family, Income, and Employment (SoFIE) aimed to look at how New Zealanders' circumstances and lifestyles change over time and the factors that influence those changes. SoFIE was an eight-year longitudinal survey, meaning respondents were visited each year to build a picture of how their circumstances changed.

SoFIE collected information once a year from the same individuals about income levels, sources, and changes; and on the major influences on income, such as employment and education experiences, household and family status, and changes and demographic factors. Every two years SoFIE included a module on assets and liabilities to monitor net worth, or on health status – in alternating years from wave 2.

The longitudinal nature of the survey means that it is a key data source for analysis of income, employment, family dynamics, and related factors.

A limitation of SoFIE as a longitudinal survey is that it was subject to sample attrition at each wave, which can build bias into the data over time.

5. Linked Employer-Employee Data

Lead agency	Statistics NZ
Collection type	Integrated dataset of administrative data from Inland Revenue, Ministry of Social Development, and Statistics NZ
Frequency	Quarterly and annual
Unit of measurement	Job or individual
Coverage	<p>Quarterly – All jobs that relate to a person aged 15 years and over who has a valid IRD identifier, and that have PAYE tax deducted at source</p> <p>Annual – All people who received either:</p> <ul style="list-style-type: none"> • Income that had PAYE tax deducted at source, and who have a valid IRD identifier (wages and salaries, paid parental leave, student allowances, New Zealand Superannuation, Accident Compensation Corporation payments, and income-tested benefits can be identified separately) • Self-employment income (either from annual returns or in the employer monthly schedule)
Key variables	Age and sex of employee, region and industry of employer, firm size, sector of employer, total earnings, worker turnover, employee accessions and separations, total filled jobs, job creation and destruction, income source transitions, income and earnings decile transitions, job tenure
Sample	Not applicable
Accessibility	Survey results are published on Statistics NZ's website quarterly (job level) and annually (person level)
Relationship to information needs	Informs topics 1, 2, and 6.

The Linked Employer-Employee Data (LEED) measures labour market and income dynamics. The dataset was created by linking a longitudinal employer series from the Statistics NZ Business Frame to a longitudinal series of employer monthly schedule (EMS) payroll data from Inland Revenue. For each employee, EMS provides taxable and non-taxable earnings, tax deductions that include PAYE or withholding tax, and job start and end dates. Since the EMS does not contain any information about occupation or hours worked for earnings, no analysis of LEED data can be done by these variables.

Many social assistance payments are made through the EMS and can be identified separately. The sources of income that can be separately identified in LEED are:

- wages and salaries paid to employees
- self-employment (combining withholding payments reported through the EMS with annual self-employment returns)
- paid parental leave
- student allowances
- New Zealand Superannuation and veterans' pensions
- Accident Compensation Corporation payments
- income-tested benefits.

In 2008, LEED was integrated with benefit records from the Ministry of Social Development (MSD). This allows income-tested benefits to be analysed by benefit type, such as unemployment, sickness, invalid's, or domestic purposes benefit.

The Business Frame is a regularly maintained list of all economically significant businesses and organisations (greater than \$30,000 turnover) that are engaged in producing goods and services in New Zealand. Information derived from the Business Frame includes industry, sector, number of geographical units (physical locations), a count of employees at each geographical unit, and the ownership structure of the business.

LEED does not include people who work without paying tax. Other limitations of LEED are that it does not include investment income, benefits paid as tax credits, or income from non-taxable sources, such as non-taxable benefits (eg accommodation supplement). It is also not a good source of data on irregular payments such as bonuses. As it uses data collected by Inland Revenue for tax gathering purposes it has very limited information about the socio-demographic characteristics of individuals, apart from age and sex. LEED is also based on individuals and has no information about families or households.

The major value of LEED is that it provides data on labour and associated earnings dynamics. It can also provide output at the job and individual level, by the territorial authority area of the employer. LEED also provides interesting information on income distribution and dynamics. Changes in the sources of income people receive over time can be tracked longitudinally for individuals, as can their movement between income or earnings deciles.

The Employment Outcomes of Tertiary Education feasibility study, which linked tertiary education data into LEED, was published on 30 September 2009.

6. Quarterly Employment Survey

Lead agency	Statistics NZ
Collection type	Survey
Frequency	Quarterly
Unit of measurement	Geographic unit or individual business location
Coverage	All business locations belonging to economically significant enterprises in surveyed industries with employees
Key variables	Average ordinary time earnings (hourly/weekly); average overtime earnings (hourly/weekly); average total earnings (hourly/weekly); total surveyed employment; filled jobs
Sample	18,000 geographic units
Accessibility	Survey results are published in an information release, accessible from Statistics NZ's website
Relationship to information needs	Informs topic 1.

Note: The Quarterly Employment Survey produces a number of Tier 1 statistics relating to this domain.

The Quarterly Employment Survey (QES) measures quarterly estimates of changes in, and levels of, average hourly and average weekly (pre-tax) earnings from wages and salaries. Data are available by sector, industry, and sex.

The QES does not include the earnings of those working in agriculture and fisheries, or several smaller industries. It also excludes earnings from self-employment. Because of the survey design, and the ability of nationwide employers to provide regional information, it loses accuracy if disaggregated at the regional level.

The QES is very sensitive to compositional changes in the labour market, which can give the impression that there are greater changes in rates of pay than there actually are. The labour cost index is better equipped to deal with compositional changes.

The QES average weekly earnings for the December quarter is the base on which the New Zealand Superannuation figures are calculated.

7. Labour Cost Index

Lead agency	Statistics NZ
Collection type	Derived measure
Frequency	Quarterly
Unit of measurement	Employees
Coverage	Employees in all occupations and industries. Excludes those employed in private households
Key variables	Salary and ordinary time wage rates, overtime wage rates, annual leave and statutory holidays, superannuation, ACC employer premiums, other non-wage labour costs, industry, sector, occupation
Sample	See footnote ⁽¹⁾
Accessibility	Survey results are published in an information release, accessible from Statistics NZ's website
Relationship to information needs	Informs topic 1.

1. Before the re-weight in the June 2001 quarter there were approximately 5,100 job descriptions for which salary and ordinary time wage rates were calculated each quarter. More than 1,000 overtime descriptions designed to survey changes in overtime wages were attached to ordinary-time wage descriptions in the survey. For the re-weight, the LCI sample was updated to the extent that several hundred new positions were recruited in occupations that were under-represented in the existing sample. In the December 2003 quarter, a further 200 job descriptions were added, improving coverage in other areas.

Note: The labour cost index produces a number of Tier 1 statistics relating to this domain.

The labour cost index (LCI) measures changes in levels of base salary and ordinary time wage rates, overtime wage rates (on a quarterly basis), and the following non-wage labour-related costs (on an annual basis):

- annual leave and statutory holidays
- employer contribution to superannuation
- ACC employer premiums
- medical insurance
- motor vehicles available for private use
- low interest loans.

The LCI measures changes in labour costs, at sector, sector by industry, sector by occupation, and industry by occupation levels. It is a quality controlled measure that provides a 'pure indicator' of changes in pay rates, not affected by compositional changes such as industry and employment shifts. As it measures changes in levels but not the levels themselves it is of limited use for measuring incomes.

The index excludes irregular salary and wage payments, such as irregular bonuses, commissions, and one-off payments in lieu of wage increases. It also excludes performance-based increases in salaries and wages, promotions, and service increments. There are no regional or sex breakdowns, and no information is available on the average dollar wage.

An unadjusted analytical LCI series is also produced. The unadjusted series retains the constant quantity of the labour input but allows for some changes in the quality of labour input. Consequently, the unadjusted series includes movements in pay rates due to factors such as performance, responsibility, experience, and increased qualifications. The

experimental series has been developed to complement, but not replace, the official adjusted LCI series.

Treasury and Statistics NZ

8. ASSET/TAXMOD/TAXWELL

Lead agencies	Treasury and Statistics NZ
Collection type	Household survey with micro-simulation
Frequency	Based on HES and HES (Income). Annual from 1982 to 1998. Produced three-yearly from 1998 to 2007 and annually since 2008
Unit of measurement	Households and individuals (families in some years)
Coverage	Individuals aged 15 years and over living in private households
Key variables	Age, sex, ethnicity, household composition, highest educational qualification, labour force status, expenditure on a range of items, household and personal disposable income
Sample	4,700 households (target)
Accessibility	Research dataset. Some results published by MSD. Unit record data available to approved researchers in Statistics NZ's data laboratory
Relationship to information needs	Informs topics 1, 2, and 5.

HES collects before-tax income, and respondents are not required to estimate the amount or type of tax they pay. The ASSET (A Simulation System for Evaluation Taxation) database was developed by Statistics NZ, using HES data. It was used to calculate personal income tax liability, using income tax regulations and characteristics of the individual, their family, and household, so that analysis of disposable income could be done. In the late 1990s, the system was updated (to TAXMOD) to perform a wider range of functions and was run by the Treasury. In 2008, the Treasury replaced TAXMOD with TAXWELL, a micro-simulation model that models the impact of taxes and benefits on individual disposable income, for costing and analysis purposes.

These datasets are used in analysing personal and household disposable income, such as income inequality and housing affordability. Examples include the MSD's *Social Report*, MSD's *Household Incomes in New Zealand*, Statistics NZ's *New Zealand Incomes Now*, and the OECD's *Growing Unequal*.

As these datasets are based on HES they have similar advantages and disadvantages to that collection. The main advantage is the long time series (since 1982). Household disposable income is generally accepted as a more appropriate measure of a household's access to economic resources, and thus well-being or living standards, than gross household income. The main disadvantage is the small sample size that limits subgroup analysis.

Ministry of Social Development

9. New Zealand Living Standards Survey

Lead agency	MSD
Collection type	Household survey
Frequency	2000, 2004, 2008
Unit of measurement	Economic family units and individuals
Coverage	Individuals aged 18 years and over living in permanent private dwellings
Key variables	Age, sex, ethnicity, family composition, economic family unit type, region, housing tenure, education, occupation, income source, disposable income, asset position (2000 and 2004 only), housing costs, number of life shocks (2004 only), health restrictions, financial difficulties, and other non-income measures
Sample	Around 5,000 (achieved)
Accessibility	The results of the survey are published on MSD's website. The datasets are available on application to approved researchers
Relationship to information needs	Informs topics 2, 3, and 5.

The New Zealand Living Standards Survey is part of a research programme aimed at developing a comprehensive description of the living standards of New Zealanders. To date, three surveys have been conducted, in 2000, 2004, and 2008. The 2004 survey updated information collected in 2000, but also expanded it by including more factors that affect people's well-being and living standards, such as life history, personal health, and access to childcare. The 2004 survey also collected data on assets and liabilities. The 2008 Living Standards Survey was much shorter than the one in 2004, and the focus was to further develop indices of material well-being and hardship, and on international comparisons. Data from the survey were used to develop a scale of the economic standard of living of New Zealanders (ELSI). Statistics NZ's Household Economic Survey (HES), HES (Income), and General Social Survey have included the short form of the ELSI questionnaire in recent years.

PropertyIQ Ltd

10. QV house price index and aggregate dwelling values

Lead agency	PropertyIQ Ltd
Collection type	Administrative data on current values of houses and lifestyle blocks
Frequency	Index is produced monthly, based on data from the previous three months
Unit of measurement	Dwellings
Coverage	All private sector residential dwellings – detached houses, flats and apartments, 'lifestyle blocks' (with a dwelling), detached houses converted to flats, and 'home and income' properties
Key variables	Dwelling type, capital valuation, sales history, land area, floor area, age of property, wall construction, value and nature of improvements, sale date, sale price, location
Sample	Not applicable

Table 10 continued next page

Table 10 continued

Accessibility	<p>QV house price index is available from PropertyIQ.</p> <p>Aggregate dwelling values are available via the Reserve Bank of New Zealand: http://rbnz.govt.nz/keygraphs/Fig4.html</p> <p>Other data is available through chargeable customised requests by contacting PropertyIQ directly</p>
Relationship to information needs	Informs topic 3.

This collection contains information on the physical characteristics, valuation, and sales of residential properties in New Zealand. The information is available at a national and detailed subnational level. The PropertyIQ database is one of the largest sources of data on housing and could provide a major source for estimating the condition of the housing stock. This can be used to approximate the wealth (from property) of households.

Customised requests are available from PropertyIQ directly. There is a charge.

PropertyIQ produces the QV house price index from this data. The Reserve Bank of New Zealand publishes limited aggregate-level data based on this collection on their website.

Retirement Commission

11. ANZ-Retirement Commission Financial Knowledge Survey

Lead agency	Retirement Commission
Collection type	Household survey
Frequency	Three-yearly (2006 and 2009)
Unit of measurement	Individuals
Coverage	Individuals aged 18 years and over living in private households
Key variables	Age, sex, ethnicity, education, socio-economic status, income, wealth, English as a first or second language, tenure of household, and the following topics: mathematical and standard literacy, financial understanding, financial competence, money management – mortgages, money management – understanding financial records, financial planning, goal setting, budgeting, debt management, saving, risk management, understanding of consumer rights and responsibilities, understanding and confidence to access assistance when things go wrong
Sample	2006 – 856 individuals (achieved) 2009 – 850 individuals (achieved)
Accessibility	Results are published on the New Zealand Network for Financial Literacy website: www.financialliteracy.org.nz/research
Relationship to information needs	Informs topics 2, 3, and 5.

The ANZ-Retirement Commission Financial Knowledge Survey was run in 2006 and 2009 by Colmar Brunton. The survey was conducted as a face-to-face interview and asked questions to measure levels of financial literacy. The Retirement Commission intends to repeat this survey in 2012 or 2013.

A1.2 Surveys in which economic standard of living-related variables are collected as explanatory variables

Statistics NZ

12. Census of Population and Dwellings

Lead agency	Statistics NZ
Collection type	Census of dwellings and their occupants
Frequency	Five-yearly ⁽¹⁾
Unit of measurement	Dwellings and individuals
Coverage	All dwellings and individuals in New Zealand on census night
Key variables	Age, sex, ethnicity, birthplace, family type, household composition, highest educational qualification, labour force status, occupation, industry, income, sources of income, tenure of dwelling
Sample	100 percent enumeration
Accessibility	Census results are published on Statistics NZ's website
Relationship to information needs	Informs topics 2 and 5.

1. The 2011 Census was delayed to 2013 due to the 22 February 2011 Christchurch earthquake.

Note: The Census of Population and Dwellings produces a number of Tier 1 statistics relating to this domain.

The Census of Population and Dwellings gives the official count of population and dwellings in New Zealand, and provides a unique snapshot of the demographic, social, and economic characteristics of our society at a point in time.

The census collects an individual's total income from all sources in the 12 months ending on 31 March of the census year. Data are collected in income bands. Family and household income is derived by adding together the incomes of members of the family or household. The level of non-response to the income question is often relatively high compared with other variables, particularly for some population subgroups such as Pacific women. This limits the strength of any inferences made from the data.

Information on sources of income received in the past 12 months is also collected in the census. However, it is not possible to identify the amount earned by an individual from any particular source, for example their employment.

Other information collected that is relevant to economic standard of living is: educational attainment, labour force status, occupation, hours worked in employment, tenure of dwelling, rent paid, and number of motor vehicles the dwelling has access to.

A major benefit of the census is that because it covers the entire population and is not subject to sampling error, it allows analysis of small population subgroups and small geographic areas. As with all surveys, it is still prone to non-sampling error.

A selection of census variables has been used by Salmond, Crampton, and Atkinson (2007), from the Department of Public Health, University of Otago, Wellington, to create the New Zealand Deprivation Index (NZDep). The index seeks to describe how well-off people are materially and socially, according to attributes or items they do or do not have. The index provides an area-based indication of deprivation, by referring to overall deprivation within a particular area; it is not specific to individuals or households.

13. General Social Survey

Lead agency	Statistics NZ
Collection type	Household survey
Frequency	Two-yearly (from 2008/09)
Unit of measurement	Individual
Coverage	Individuals aged 15 years and over living in private households
Key variables	Age, sex, ethnicity, highest educational qualification, labour force status, family and household composition, housing tenure, household income, personal income, sources of income, experience of material deprivation
Sample	8,000 (target)
Accessibility	Survey results are published in an information release, available on Statistics NZ's website. Unit record data are available to approved researchers in CURF form and in Statistics NZ's data laboratory.
Relationship to information needs	Informs topics 2 and 5.

The General Social Survey (GSS) collects information across the 12 social domains making up the Programme of Official Social Statistics. An important objective of the survey is to enable cross-domain analysis of social outcomes and the factors associated with them. The GSS began in April 2008, with the field work extending over a 12-month period.

The GSS collects data on objective and subjective measures of social well-being. The survey gathers income data using the same bands as the census for individuals; household income can be derived from that. MSD's ELSI short-form module collects information on ownership of a range of items (eg telephone, washing machine, good pair of shoes, personal computer), participation in different activities, economising behaviours, and the respondents' own perceptions of their standard of living.

Because the GSS collects information on social outcomes across 12 domains, there is scope for analysing multiple disadvantage. The survey sample size of 8,000 individuals allows some analysis of population subgroups, but regional analysis is limited.

Other sources of data

Many surveys ask a simple income question that can be used as an explanatory variable in analysis. These include:

- Adult Literacy and Life Skills Survey
- New Zealand Health survey
- Survey of Dynamics and Motivations for Migration in New Zealand
- New Zealand Childcare Survey 2009
- Time Use Survey (2001 and 2011).

A1.3 Surveys and collections in which economic standard of living-related variables are collected from specific sub-populations

Statistics New Zealand

14. Survey of Working Life

Lead agency	Statistics NZ
Collection type	Household survey
Frequency	Regularly – frequency yet to be decided
Unit of measurement	Individual
Coverage	Individuals aged 15 years and over living in private households who were employed
Key variables	Age, sex, ethnicity, highest educational qualification, weekly , employment relationship in main job (temporary, permanent, employer, self-employed), length of time in main job, working times and hours, work at home, job flexibility in main job, employer-funded study and training, work-related health and safety, annual leave entitlement in main job, type of employment agreement in main job (collective or individual), union membership in main job, satisfaction with main job and with work-life balance
Sample	15,000 households (target)
Accessibility	Survey results are published in an information release, accessible on Statistics NZ's website
Relationship to information needs	Informs topic 1.

The Survey of Working Life (SoWL) is a supplement to the Household Labour Force Survey (HLFS) that ran for the first time in the March 2008 quarter. There are plans to repeat the survey regularly. All employed HLFS respondents were asked to take part in the SoWL. The objective was to provide reliable statistical data to monitor changes in the employment conditions, working arrangements, and job quality of employed people in New Zealand, and to better understand the reasons for and implications of these employment patterns.

15. Student Loans and Allowances integrated dataset

Lead agency	Statistics NZ
Collection type	Integrated dataset of administrative data from Ministry of Education, StudyLink (MSD), and Inland Revenue
Frequency	Annual
Unit of measurement	Individual
Coverage	Every individual who borrows under the Student Loan Scheme or who receives a student allowance
Key variables	Age, sex, ethnicity, tertiary institution at which enrolled, programme in which enrolled, loan draw downs, loan balance repayment details, allowance received, whether resident overseas, employer, income, income source

Table 15 continued

Sample	Not applicable
Accessibility	Results are published in an information release, accessible on Statistics NZ's website
Relationship to information needs	Informs topics 1, 2, 3, and 6.

The Student Loans and Allowances integrated dataset provides insight into the borrowing, qualifications, and income of students who participate in the Student Loans Scheme or receive a student allowance. The dataset is used to monitor the level of student debt and the speed with which debt is being repaid. Because the dataset includes all students who receive a student loan or allowance, analysis of small sub-populations is possible.

16. Longitudinal Immigration Survey: New Zealand

Lead agency	Statistics NZ
Collection type	Household survey
Frequency	Longitudinal survey – data were collected from selected migrants 6 months, 18 months, and 36 months after arrival in New Zealand (run in partnership with Department of Labour)
Unit of measurement	Individual
Coverage	Migrants granted permanent residence
Key variables	Age, sex, country of origin, labour force status, industry, occupation, health status, housing tenure, problems accessing housing, educational qualifications, participation in education, total income, expenditure, levels of personal and business assets brought to New Zealand, English language proficiency, use of government and community services
Sample	7,137 individuals in wave 1 (May 2005 – April 2007)(achieved)
Accessibility	Survey results were published in an information release accessible on Statistics NZ's website. Unit record data are available to approved researchers in Statistics NZ's data laboratory
Relationship to information needs	Informs topics 1, 2, 5, and 6.

The Longitudinal Immigration Survey: New Zealand (LisNZ) is a survey of new migrants to New Zealand run in partnership with the Department of Labour. The survey provided information about migrants' initial settlement experiences in New Zealand, and the outcomes of immigration policies.

LisNZ respondents were randomly selected by Statistics NZ from a list of people approved for permanent residence in New Zealand. This included migrants who were already in New Zealand and some who were approved for permanent residence before coming to New Zealand. Refugees to New Zealand, temporary visitors, and people from Australia, Niue, the Cook Islands, and Tokelau were not part of the survey.

Migrants selected to participate were visited three times over three years and asked about their settlement experiences in New Zealand. Interviews were at 6 months, 18 months, and 36 months after taking up permanent residence in New Zealand. Each time they were asked about their experiences in education, work, income, health, housing, use

of government services, and satisfaction with life in New Zealand. This made it possible to build a picture of how migrant experiences change over time.

Information about income and expenditure collected in LisNZ includes: total income from all sources before arriving in New Zealand, current income in New Zealand from all sources (including wages and salaries, self employment, investments, benefits), financial assets, expenditure on major items, funds sent overseas, and self-rated ability of income to meet basic living costs.

Limitations of LisNZ as a longitudinal survey are that it was subject to sample attrition at each wave, which could build bias into the data over time, and that it covered only a very specific subgroup of the population.

Ministry of Social Development

17. Benefit dataset

Lead agency	Ministry of Social Development
Collection type	Administrative data
Frequency	Ongoing – statistics are summarised quarterly
Unit of measurement	Individuals
Coverage	All individuals receiving income support
Key variables	Age, sex, ethnic group, type of benefit or subsidy, start and end dates (giving duration on the benefit), amount paid, Work and Income region, presence of a spouse or children
Sample	Not applicable
Accessibility	Statistics are published quarterly on MSD's website
Relationship to information needs	Informs topics 2.

Note: MSD's benefit data produces a number of Tier 1 statistics relating to this domain.

MSD's benefit data provides a stocktake of income-support recipients at a particular point in time. Data are available by benefit type and demographic characteristics of the recipients. The data are subject to change due to policy shifts and operational changes, which can affect comparability over time.

18. Benefits Dynamics Dataset

Lead agency	MSD
Collection type	Administrative data on benefits linked over time
Frequency	Updated six-monthly
Unit of measurement	Individuals receiving first-tier income support (ie main benefits – does not include New Zealand Superannuation)
Coverage	All individuals receiving income support
Key variables	Age, sex, ethnic group, highest educational qualification, type of benefit, start and end dates (giving duration on benefit), amount paid, presence and ages of partner and children, ethnic group of partner, declared earnings, reason for cessation, incapacity type, Work and Income region
Sample	Not applicable
Accessibility	Research database – not readily accessible to those outside MSD
Relationship to information needs	Informs topics 2, 5, and 6.

The Benefits Dynamics Dataset (BDD) is a rich source of longitudinal information on beneficiaries, providing insight into time spent on different benefits, and movement on and off benefits.

The main limitations of the database are that information on supplementary assistance is not available and neither is information about what happens to people when they come off benefits. Also, the database is not readily accessible by people outside MSD. However, the database has been integrated with LEED and this provides information about people who leave the BDD for paid employment.

Inland Revenue and Ministry of Social Development

19. Family Tax and Benefits Research linked data

Lead agency	Inland Revenue
Collection type	Administrative data
Frequency	Ongoing – monthly and annual, updated annually
Unit of measurement	Individuals in families (couples or sole parents)
Coverage	All individuals/families who received Working for Families (WFF) income support from 2004 to the latest update – currently to end of 2010 tax year. Planned to be updated annually.
Key variables	WFF tax credits, accommodation supplement, childcare assistance, income sources, ethnicity, and relationship for those with partners/married, how many children in the family, their ages, and whether care is shared or not
Sample	Not applicable – full administrative data for those who received WFF or its precursors from April 2003 onwards
Accessibility	Policy research database – accessible to tax and benefit-related projects on approval by Inland Revenue/MSD
Relationship to information needs	Informs topics 2 and 5.

Data are available by benefit type and demographic characteristics of the recipients. The data relate only to those who received Working for Families (WFF) benefits or tax credits. Consequently, while the data include most low/middle income families with dependent children in New Zealand, the coverage is not complete. As with other administrative datasets, families disappear from the dataset if they stop receiving WFF payments. The data are subject to change due to policy shifts and operational changes, which can affect comparability over time.

Reserve Bank of New Zealand

20. Standard Statistical Return

Lead agency	Reserve Bank of New Zealand (RBNZ)
Collection type	Survey of registered banks and non-bank lending institutions
Frequency	Monthly – registered banks and selected non-bank financial institutions Quarterly – ‘large’ non-bank financial institutions (over \$100 million in total assets, including securitised assets normally held off-balance sheet) Annual – ‘small’ non-bank financial institutions (between \$5 million and \$100 million in total assets, including securitised assets normally held off-balance sheet)
Unit of measurement	Firm level
Coverage	Registered banks, savings institutions, and deposit-taking and non-deposit-taking finance companies. Individual institutional data are confidential
Key variables	Balance sheet positions, funding by maturity and non-resident source, funding by components, funding by sector, claims by maturity and non-resident borrower, claims by components, claims by sector, and claim origination and residential loan analysis
Sample	19 registered banks and 55 non-bank financial institutions on a monthly or quarterly basis. An additional 50 (approx) responses are received annually
Accessibility	Survey data are published on the last day of the month after the date of the reference period on the RBNZ website, in both static html format and an Excel format containing historical information
Relationship to information needs	Informs topic 3.

The Standard Statistical Return survey (SSR) is conducted monthly for registered banks, with supplementary quarterly and annual surveys to capture other data on non-bank financial institutions. The SSR has run in its current form since 2004, with a predecessor survey from 1998–2004 and another version for the 10 years before that. The survey collects balance sheet positions for registered banks and non-bank financial institutions along with breakdowns that classify the maturity structure of the loan and funding portfolios, a breakdown by type of instruments and their source (retail versus wholesale or Treasury versus non-Treasury operations), and a breakdown of positions by counterparty sector. Where possible, the resident/non-resident distinction in these tables is based on the geographical location of respondents and counterpart transactions. In most cases, however, New Zealand-residency status is defined on the same basis as that used in New Zealand income tax practice, namely one that is centred on the location of the entity's main economic interest.

21. General Disclosure Statement (GDS) and Key Information Summary (KIS)

Lead agency	RBNZ
Collection type	Quarterly publication of accounting and prudential banking statistics
Frequency	Quarterly. Each bank is required to produce a GDS every three months after their balance date. There are long- and short-form GDSs. Banks produce a long-form GDS for their 6-month and annual reports, and a short-form GDS at the 3-month and 9-month reporting periods from their balance date. Bank balance dates differ, so not all banks produce long forms concurrently
Unit of measurement	Firm level
Coverage	All locally incorporated and overseas incorporated banks. Registered banks are required to publish the GDS under the Reserve Bank of New Zealand Act (1989), section 81
Key variables	Balance sheet, income statement, capital adequacy ratios, cash flows, profitability statistics, credit exposure concentrations, peak connected person credit exposures, credit ratings, and asset quality
Sample	19 registered banks
Accessibility	KIS data are published quarterly on the RBNZ website in both static html format and in an Excel file containing historical information. A summary of selected aggregate financial data from the GDS is published on an annual basis. GDS and KIS are published by banks quarterly, and are available in full from the individual bank's website
Relationship to information needs	Informs topic 3.

The Key Information Summary (KIS) is a summary of information contained in a bank's General Disclosure Statement (GDS). The RBNZ publishes individual bank KISs on its website every quarter. It also produces and publishes banking system aggregates derived from GDS data on an annual basis. Since banks have different balance dates, the income data are harmonised to cover the 12 months ending 31 December. Balance sheet and capital adequacy data are as at 31 December. A history of bank registrations is available on the RBNZ website.

Massey University**22. Health, Work, and Retirement longitudinal study**

Lead agency	Massey University
Collection type	Household survey
Frequency	Two-yearly (2006 and 2008)
Unit of measurement	Individual
Coverage	Individuals aged 55–70 years in 2006 and living in private households

Table 22 continued next page

Table 22 continued

Key variables	Age, sex, ethnicity, education, socio-economic status, family structure, labour force status, occupation, mental and physical health, physical activity, social support, work conditions and perceptions, retirement planning and perceptions, Māori cultural identity, actual gross wages and salary, hours worked, assets and liabilities, and MSD's ELSI
Sample	2006 – 6,662 individuals (achieved) 2008 – 2,500 individuals (achieved)
Accessibility	Results are published in technical reports available on the study's website: http://hwr.massey.ac.nz/ Survey data are freely available from the research team. Contact: hwr@massey.ac.nz
Relationship to information needs	Informs topics 1, 2, 3, 5, and 6.

The Health, Work, and Retirement longitudinal study (HWR) was a three-year study funded by the Health Research Council of New Zealand and based in the School of Psychology at Massey University. The HWR collected information in two waves – the first in March 2006 and the second in May 2008 – on the health, wealth, and social factors determining the ability of older New Zealanders to successfully transition from work to retirement. The 2006 collection wave was established as a nationally-representative, cross-sectional sample. The 2,500 respondents in 2008 were participants from the 2006 sample who agreed to participate in the longitudinal study. Data was collected by postal survey from all participants, and by semi-structured interviews of selected Māori and non-Māori in both waves.

In 2006, the HWR study collected information on the following wealth factors: personal and spousal gross income and salaries (open-ended response), source of income, asset ownership and value, liability ownership, superannuation scheme membership (self and spouse), and measured living standards using MSD's ELSI.

In 2008, the HWR collected information on the following wealth factors: personal and spousal gross income and salaries (open-ended response), source of income, asset ownership and value, liability ownership and value, superannuation scheme membership (self and spouse), and brief estimates of yearly savings, yearly expenditure, and retirement income. Living standards were again measured using ELSI.

The impact of these factors on aspects central to health and well-being in later life can be measured by the HWR. Aspects include physical and mental health, social and community participation, work commitment and satisfaction, retirement planning, perceptions of retirement, and key demographic variables such as age, sex, education, and location. Using a specific cultural identity scale for Māori allows assessment of the impact of Māori cultural identity on social, health, and wealth outcomes.

23. New Zealand Longitudinal Study of Ageing

Lead agency	Massey University and the Family Centre
Collection type	Household survey
Frequency	Two-yearly (2010 and 2012)
Unit of measurement	Individual
Coverage	Individuals aged 50–84 years and living in private households
Key variables	Age, sex, ethnicity, education, socio-economic status, family structure, labour force status, occupation, health and health behaviours, sexuality, social participation and support, care giving, living-in place, intergenerational transfer, Māori cultural identity, work conditions and perceptions, retirement planning and perceptions, actual gross or net wages and salary, housing type and costs, assets and debts, MSD's ELSI, and cognitive functioning
Sample	2010 – 3,318 individuals (achieved) 2012 – 4,000 individuals (target)
Accessibility	Results are published in technical reports available on the study's website: http://nzlsa.massey.ac.nz/ Survey data are freely available from the research team. Contact: nzlsa@massey.ac.nz
Relationship to information needs	Informs topics 1, 2, 3, 5, and 6.

The New Zealand Longitudinal Study of Ageing (NZLSA) is funded by the New Zealand Foundation for Research, Science, and Technology and is a research collaboration by the School of Psychology and the Research Centre for Māori Health and Development (Massey University), and the Family Centre Social Policy Research Centre (Lower Hutt, Wellington). NZLSA investigates the role of four key factors in determining health and well-being in later life: economic participation, social participation, intergenerational transfers, and resilience and health.

The first NZLSA data collection wave took place between May and December 2010. This included a postal survey of 3,318 New Zealanders aged 50–84, to assess measures of the four key factors identified above. The NZLSA sample includes approximately 1,900 participants from the HWR study (2006–08), providing a third wave of data for this longitudinal sample. Face-to-face interviews of a subsample of approximately 1,000 participants were also undertaken. The interviews replicated those done by the United States Health and Retirement Study, to assess cognitive functioning and the economic factors influencing older age, and to collect physical and biological markers of health. The 2012 data collection wave will replicate the 2010 structure.

Other sources of data

The following longitudinal surveys collect some data on income but are targeting specific populations (either ethnic or geographic) and income is not the main focus of the survey:

- Dunedin Multidisciplinary Health and Development Study
- Christchurch Health and Development Study
- Pacific Island Families: First Two Years of Life Study
- Te Hoe Nuku Roa – Māori Longitudinal Survey
- Growing Up in New Zealand.

Some administrative collections maintained by a collecting agency are currently not used for statistical purposes (eg datasets held by Inland Revenue for tax administration purposes and those held by the Reserve Bank on bank lending to households).

Appendix 2 Tier 1 statistics related to this domain

In 2005, the Review of Official Statistics defined “a portfolio of statistics (to be known as Tier 1) across the state sector that are important in their own right and, consequently, need to be produced, analysed, and released to high statistical standards”. Tier 1 statistics are a defined set of key official statistics that are performance measures of New Zealand. Tier 1 statistics:

- are essential to central government decision making
- are of high public interest
- needed to meet public expectations of impartiality and high statistical quality
- require long-term continuity of data
- provide international comparability in a global environment or meet international statistical obligations
- align with the Tier 1 statistics principles and protocols.

Table A2.1 lists the current Tier 1 statistics relating to the economic standard of living domain and indicates the ‘health’ of the statistics when they were last assessed. The Tier 1 statistics were assessed in 2007 for quality, in 2008 for adherence to confidentiality principles, and in 2009 against release practices.

All Tier 1 statistics are currently under review. Information needs identified in the *Review of Economic Standard of Living Statistics 2011* have already informed the decisions about which data in this domain should be Tier 1 statistics. It is proposed that the following statistics relating to this domain are Tier 1 statistics:

- personal disposable income distribution
- personal gross income distribution
- household disposable income distribution
- household gross income distribution
- household annual final income distribution (placeholder)
- income dynamics
- distribution of earnings
- labour cost indexes
- wage and salary costs
- household expenditure
- self-assessed standard of living
- welfare assistance
- household and personal net worth.

Table A2.1

Health of Tier 1 economic standard of living statistics

Tier 1 statistics – income ⁽¹⁾	Source	Frequency	Quality protocol	Confidentiality, privacy, and security protocol	Release practices protocol
			2007	2008	2009
Statistics on average weekly income from regular sources	New Zealand Income Survey	Annual	Good	Good	Excellent
Statistics on average weekly income, including income from both irregular and regular income	Household Economic Survey	Was three-yearly now annual	Good	Good	Excellent
Statistics on the distribution of total annual income	Census of Population and Dwellings	Five-yearly	Excellent	Excellent	Excellent
Statistics on the distribution of average weekly income from regular sources, by source	New Zealand Income Survey	Annual	Good	Good	Excellent
Change in the amount of average gross income	Quarterly Employment Survey	Quarterly	Acceptable	Acceptable	Good
Measure of the change in salary and wage rates	Labour Cost Index	Quarterly	Acceptable	Acceptable	Excellent
Statistics on average weekly household income, with income from both irregular and regular recurring sources	Household Economic Survey	Three-yearly	Good	Good	Excellent
Measure of relationships, distribution and experience of income dynamics longitudinally and annually with regard to specific objectives. These are: income level over time for individuals and families, as well as significant changes in income and the relation to the labour market; government transfers and family status; relationships between savings for retirement and life cycle; education; labour market and employment	Survey of Family Income and Employment	Annual ⁽²⁾	Acceptable	Excellent	Excellent
Welfare assistance by volume, value, and type – including accommodation assistance	Income Support administrative data ⁽³⁾	Annual	Excellent	Good	Improvement required ⁽⁴⁾

1. All statistics refer to income or sources of income. Currently no expenditure or wealth statistics are Tier 1 statistics.

2. Field work for SoFIE ended in 2010.

3. All Tier 1 statistics listed in this table are produced by Statistics NZ except 'welfare assistance by volume, value, and type – including accommodation assistance', which is produced by MSD.

4. Many questions were answered with 'not applicable', which scores a 0 and affects the overall rating.

Appendix 3 Definitions relating to the economic standard of living framework

The definitions described below relate to the economic standard of living framework (figure 1). Understanding the economic standard of living of individuals, families, and households requires taking account of the range of individual, cultural, social, and economic factors affecting them.

A3.1 Framework definitions

Economic standard of living – relates to the financial and material well-being of individuals, families, and households. It is the command people have over economic resources to meet everyday needs and wants. Those with insufficient access to or command over economic resources may struggle to meet basic living costs and may experience financial stress or hardship. The more money people have, the greater is their choice over the range and quantity of goods and services they can consume, their ability to reduce debt, or their ability to save.

Wages and salaries – can be thought of as income from employment. However, income from employment may include payments other than wages and salaries. Other sources that need to be considered are: bonuses, overtime payments, fringe benefits, penalty rates, and contract rates.

Income – covers regular cash payments such as wages and salaries, self-employment income, interest and dividends from invested funds, rental income (collectively known as market income), pensions, income support payments, or tax credits (collectively known as non-market income). However, income can also come from irregular sources such as inheritances or gambling winnings. An adequate cash income is obviously a major contributor to well-being. However, non-cash income such as in-kind assistance and fringe benefits (eg a rent-free house or use of a car), can significantly improve a person's overall command of goods and services. Individuals and families may also receive substantial non-cash income from government in the form of indirect benefits, such as subsidised health, education, and housing. These indirect benefits affect people's income differently at different stages of their life.

Not all income is available for consumption because some is obligated to others, such as taxes. Disposable income is considered to best reflect the income that is available for regular household use. It can be defined in different ways depending on the analysis being done. Disposable income is often measured as gross cash income minus taxes, but can be further refined to include deductions for other regular and recurring transfers, such as payments related to housing costs and those paid to other households (eg child support payments or tithes to a church).

A further concept of income, final income (sometimes used to measure economic well-being), takes into account indirect government taxes that are ultimately paid by households, and indirect benefits received through government expenditures on various community services. This is useful when international comparisons are being made, as social transfers in kind and levels of taxation differ from country to country, but is also useful when comparing income by household types within New Zealand.

Wealth or net worth – is the value of accumulated assets less liabilities of an individual, family, or household. Unlike income, which is a flow variable and must be measured over a period of time, net worth is a stock figure and must be measured at a point in time. Net worth changes over a lifetime by being added to through saving and capital transfers, or by being depleted through incurring liabilities, liquidating assets to finance consumption, or transferring assets to another household or entity. It may also change without any transactions taking place, such as through an increase in share values caused by changes in stockmarket prices or through a change in property values.

The value of an individual's, family's, or household's net worth plays a very important part in their economic standard of living. Those with high levels of net worth may find it easier to obtain credit for consumption or investment. High levels of net worth can also affect living standards through offering the potential for dis-saving for consumption, either now or at a later date.

Assets – are items of economic value from which benefits, such as income, may be derived by their owners holding them over a period of time. There are two categories of assets: financial assets and non-financial assets. Financial assets include cash, shares, and pension funds. Examples of non-financial assets are the family car and home, human capital, and social networks. The value of some of these is easier to quantify than others.

Liabilities – are financial obligations on the part of an individual, family, or household to the owners of financial assets. They are sometimes referred to as debts. Examples of monetary liabilities are the mortgage on the family home, credit card debt, and consumer loans. An example of a non-monetary liability is a guarantee given against someone else's loan. This is a liability for the guarantor even though the debt may never come to pass.

Consumption – is the process of using goods and services to satisfy the needs and wants of an individual, family, or household. It is often measured using the monetary value of expenditure on goods and services. A useful distinction concerning consumption is between the unit that pays for it and the unit that consumes it. The total financed by a unit is termed expenditure; the total used is actual consumption. Most goods and services are bought and consumed by the same household so fall into both categories. However, there is a range of social transfers that are financed by government but consumed by households, which form part of government expenditure and household actual consumption. This conceptual distinction between expenditure and actual consumption can be applied to inter-household transfers and transfers between households and other units (eg a charity) in a similar way.

Patterns of consumption for different groups in the population are often used as indicators of socio-economic advantage or disadvantage. People who are 'disadvantaged' generally spend a higher proportion of their income on essential goods (eg food and clothing) and less on luxuries (eg holidays).

Consumption not only includes goods and services purchased in the marketplace, it also includes producing and consuming for oneself (eg growing vegetables in one's own garden).

Saving – is that part of disposable income that is not spent on the purchase of goods and services. Saving may be positive or negative. If saving is positive, it will either increase the size of assets (eg cash balance) or reduce the size of liabilities (eg bank loan). If saving is negative, some financial assets must have been liquidated, cash balances run down, or liabilities increased. Saving affects the net worth or wealth of an individual, family, or household.

Saving can also be defined by a change in net worth between two points in time.

Economising behaviours – are behaviours that individuals, families, or households engage in to make income go further, or to make savings through reducing expenditure on goods and services. Examples of economising behaviours include buying less fruit and vegetables or growing one's own vegetables, buying cheaper meat, deferring holidays, buying second-hand clothes, or delaying maintenance on the family car or home. Sharing expenses, and older children staying with their parents in order to reduce debt or save, are other examples. Of particular interest are any economising behaviours on basic items to make ends meet, rather than economising behaviour for its own sake or to save for a non-necessary item.

Experience of hardship/affluence – income, wealth, and consumption can sometimes provide a misleading picture of material standard of living. For example, a person who feels they don't need many material possessions may feel more satisfied with their material well-being than someone who receives more income but who feels the need to 'keep up with the Joneses'. For this reason, it is increasingly common to complement information on income, wealth, and consumption with other information, such as people's experience of hardship or their own subjective assessment of their economic standard of living. In addition, it is important to gather information on what households have and do – to gain a rounded picture of actual living conditions.

A3.2 Factors influencing economic standard of living

The economic standard of living of individuals can be affected by a wide range of individual, societal, economic, and political factors.

Individual factors – such as age and sex, location, level of educational attainment or human capital, labour force status, hours of work, and occupation can all affect the income and consumption patterns of individuals and their families. Other factors that are important are attitudes or beliefs, life history, family circumstances, ethnicity, language proficiency, or the amount of time lived in New Zealand.

Societal factors – such as the degree of community cohesion and the extent of informal transactions and support provided by families, friends, neighbours, and community groups can have a significant impact on the economic standard of living of individuals and families.

Economic factors – the health of domestic and international economies and issues such as productivity and structural changes in employment can affect the economic well-being of individuals, families, and communities.

Political – government interventions are often concerned with issues of equity (eg equal employment opportunities), and may involve redistributing economic resources through a progressive tax regime and the provision of social services.

Relationship of economic standard of living to other domains

The command that individuals and families have over economic resources can affect their participation and outcomes in different social domains. For example, the lack of an adequate income can negatively impact on health, housing, and acquiring knowledge and skills. It can also affect participation in recreation and leisure activities. Many people gain their social status and sense of self-worth from their material standard of living.

Key groups of interest

Policy and research interest in the economic well-being of the population tends to focus on vulnerable groups or groups requiring special assistance or support to achieve an acceptable standard of living. These groups include:

Income support recipients and low income families – these individuals or families may struggle to meet basic living costs, such as food, shelter, clothing, and heating costs, and may require special support to avoid adverse outcomes. This is particularly so if they have low income or income support for long periods of time.

Children/youth – the material circumstances within which children are raised impact on both their current and future outcomes and well-being. Low income, particularly over an extended period, is often associated with many adverse outcomes.

Older people – an adequate standard of living enhances the capacity of older people to age in a positive and productive way and is fundamental to enjoying the opportunities that retirement can bring. Older people have less flexibility for increasing income, as many do not have the option of paid employment to supplement New Zealand Superannuation. They also face possibly higher expenditure to meet health needs. However, there are ways that older people with apparently low-cash income can enjoy a reasonable standard of living. For example, they may have a mortgage-free home, have family support networks, receive some cost subsidies, and may have a private pension or other forms of material wealth that can be liquidated.

Māori – have a younger age profile and generally lower levels of educational attainment than the New Zealand average. They are also more likely to be unemployed or in lower-paid jobs. As a result, they may have access to fewer economic resources. However, they may have access to iwi settlement funds not available to non-Māori.

Pacific peoples – as for Māori, this ethnic group has a younger age profile, generally lower levels of educational attainment than the New Zealand average, and individuals are more likely to be unemployed or in lower-paid jobs. They may also have access to fewer economic resources.

Disabled – the presence of disability may limit access to employment opportunities and economic resources. The disabled may also face higher living costs, as a result of the need for special equipment, aids, or modifications to their home or vehicle. Disabled people may need targeted support to meet basic living costs.

Migrants – migrants may face issues, such as low English language proficiency, or having overseas qualifications not recognised in this country, which may impact on their ability to earn income. Refugees may, additionally, have lower levels of educational attainment than the New Zealand average, which can lead to higher levels of unemployment or lower-paid jobs.

High income/wealthy – while this population is not usually considered vulnerable or in need of special support, it is of interest because it holds the largest proportion of New Zealand's income and wealth. Also, it is hard to obtain information about this group as people with high incomes or wealth can be reluctant to answer questions about their circumstances.

The groups above are key groups of interest and are not mutually exclusive. People can belong to more than one group. Multiple disadvantage is particularly associated with low income.

The review also considered linkages between the economic standard of living domain and other domains. The economic standard of living of individuals can affect their participation in society and influence outcomes in domains such as knowledge and skills, health, paid work, and social connectedness. Similarly, outcomes in these domains can affect the economic standard of living of individuals, families, and households. From a societal well-being perspective, large and conspicuous differences in the economic resources that individuals, families, households, and other groups have access to can adversely affect social cohesion and political stability.

Appendix 4 Measurement and quality issues relating to economic standard of living

A4.1 Measurement issues

There is no single accepted best measure of economic standard of living, because it covers a range of concepts and the emphasis tends to shift, depending on the context.

The following section discusses measurement issues surrounding some of the major areas in this domain.

Material well-being, poverty, and hardship

In the richer nations, poverty or material hardship is generally understood in terms of relative disadvantage. This means that a person or household is considered to be poor or experiencing material hardship when, in comparison to others in the population, they have a day-to-day standard of living or access to resources that falls below a minimum acceptable proportion of the community average.

There are two main approaches currently used to measure poverty and material hardship. The most common method is to use household income as a measure of household resources, then to rank the population by their household's income (adjusted for size and composition). A cut-off income is then chosen as the poverty threshold and the population is divided into two groups, the poor and the non-poor.

There is now also an increasing use of non-income measures that focus more directly on the actual living conditions of individuals and households, rather than on just one aspect of their resources (income). Respondents are asked about their access to household durables, their ability to keep the house warm, have a good meal each day, access medical care, pay the bills on time, pursue hobbies and other interests, and so on. The European Union (EU) has been proactive in these developments and has adopted a non-income measure of material deprivation called the 'Material Deprivation Rate' (Eurostat 2010b) to complement their more traditional income measure of poverty. The Ministry of Social Development (MSD)'s economic standard of living index does not measure exactly the same items and activities but can be compared to this measure (Perry, 2009).

Each approach (household income and non-income measures) has its strengths and limitations, and they are better seen as complementary rather than competing alternatives. Whichever approach is taken, a key decision is where to draw the line, on the continuum from low to high living standards, to distinguish between the poor and the non-poor, those in hardship and those not. While no independent way to select a threshold exists, some thresholds are much more defensible and plausible than others. As a result, there are conventions in many of the richer nations for selecting a poverty line. On the income measure, both 50 percent and 60 percent of the median annual disposable income are widely used as the poverty line. EU nations use 60 percent (Eurostat, 2010a) and the Organisation for Economic Co-operation and Development (OECD) uses the more stringent 50 percent line (OECD, 2008). In reporting on trends, two or more thresholds can be used to indicate how sensitive the results are to the choice of threshold. The same issue arises when using non-income measures, but sensitivity analysis can assist there too. This is the approach currently taken by MSD in their work on poverty and hardship.

Equivalence scales

The concept of equivalent income arises most often in analysing the distribution of family (or other income unit) income. Variations in family size give rise to differences in financial needs. One way to take into account the effect that size and composition have on a family's standard of living is to adjust the family income. Equivalence scales are used to calculate an equivalent income. There is no universally agreed set of scales, although both the 'revised OECD scale' and the 'square root scale' are now very commonly used by developed nations for household income comparisons. In New Zealand, the Revised Jensen Scale has been used for many years, and is very similar to the revised OECD scale. Sensitivity analysis is useful to indicate the degree to which trends and findings are dependent on the choice of scale. MSD plans to produce a short paper which outlines how to use equivalence scales, explains the rationale for equivalence scales, and describes the ones most commonly used internationally. The paper will also illustrate the difference the choice of scale makes to various statistics such as inequality, and poverty rates (ie sensitivity analysis).

Unit of analysis

Some economic living standard information is more appropriately associated directly with individuals (eg subjective assessments). However, other information is associated with families and households, since resources are often pooled for the benefit of family members and there are possibilities of joint consumption. Defining and allocating individuals to a core economic unit, such as a family or household, is relatively arbitrary, without information on sharing of resources both within and between households. As well, while the majority of families are subsets of households, there are many instances where family units cut across household boundaries. There is a need to identify such units statistically to allow analysis of the economic well-being of individuals and families in these situations.

Derived measures of income

Income can be measured in many different ways – gross, net, and disposable being the three most common. However, respondents may not be able to provide the data in the form, or detail, required by users. Modelling is often used to convert the information provided into a user-friendly form, which requires assumptions to be made. These assumptions may introduce inaccuracies into the data. For example, the best measure of economic standard of living from a well-being perspective is disposable income net of taxes and transfers. However, assistance is increasingly being delivered via tax credits rather than benefits; and tax credits are difficult to isolate when analysing gross income. This data has to be modelled. Similarly, household and family income may not be collected directly but may be derived from responses provided by individuals (as in the census).

In-kind income and home production and consumption

In addition to cash income some people receive in-kind income. Examples include an employer-provided car that is part of the total remuneration package, paying rent, and providing goods. People may also grow their own food, and services and goods can be bartered rather than paid for. As with education and health services, the measurement difficulty is that respondents may have no idea of the value of the items or services being provided or consumed and different people may value things differently.

What people/households do and do not consume

Typically, surveys measure what people spend their money on (expenditure), which is hard enough for surveys to do. While expenditure is still an easier concept to measure than consumption, they do not mean the same thing. People may consume things they do not buy because they receive them as part of an in-kind package, they produce things themselves, or they obtain them through bartering. Also, people do not always consume what they purchase – some items may be consumed by other individuals or households.

The issue of the purchaser not always being the consumer typically restricts analysis to households rather than allowing analysis of individual expenditure.

Reference period

Deciding on the most appropriate reference period is also associated with measuring income or expenditure. Wages and salaries are typically measured over a week, but should income be measured over a week, or a longer period such as a year, or should it merely relate to 'usual income' received? If the latter, should usual income relate to the current situation or a much longer timeframe?

Data collected about income and expenditure often cover different reference periods, even within the same survey. This can cause confusion when comparing the two measures.

Skills and human capital

Healy et al (2001) define human capital as:

"The knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being."

As such, human capital is an important factor influencing a person's economic standard of living – through how much income they receive from the labour market. However, human capital and skills are difficult to measure and value. Human capital can be an issue when calculating net worth, as many people with apparently low net worth have a significant educational investment that should improve their overall lifetime earnings and net worth.

For many people, their second-largest asset, after owning a house, is the qualifications and skills they gain over their lifetime. Those with high levels of human capital and no assets distort net worth distributions – they appear to have negative net worth. It is important to be aware of this distortion when analysing net worth.

Overseas holdings of assets

New Zealanders do not only invest in New Zealand assets and investments – they also invest in overseas assets. Should overseas holdings be included as part of an individual's net worth? If so, how can the value be measured?

Hidden economy

The hidden economy, sometimes called the non-observed or informal economy, describes income earned from activities that have not, until now, been measured. Reasons for not measuring income from these activities is either because they are illegal, and therefore not reported, or legal and hard to measure. Examples of legal activities are unpaid work or income from home-produced goods and services. Most respondents would not know the value of the unpaid work they do, or of the goods they produce or barter, and few are prepared to admit to income from illegal activities. This raises questions about how the hidden economy can be measured, to give more accurate representation of individual, family, household, and national income.

Surveys such as the Time Use Survey collect the amount of time people spend on different activities, including unpaid work, and international agreement on methodologies and guidelines for valuing unpaid work is increasing. Statistics NZ produced values for unpaid work, using data from the 1999 Time Use Survey, and will update this work now the 2010 Time Use Survey results are available. However, time use surveys are infrequent, and there is still the problem of how to capture income from illegal activities.

Imputed rent

As well as using equivalence scales to enable valid comparisons of disposable income between households of differing composition, other adjustments can be made, such as

those to disposable income for the value of imputed rent. A household that owns its home without a mortgage will appear to need a lower disposable income than a household of the same composition that is making mortgage repayments, or a household that is renting accommodation. Calculating the value of rent the mortgage-free household would need to pay if they paid rent instead of being mortgage-free (their 'imputed rent'), and adding that to their housing costs, enables more accurate comparisons between households. Home owners cannot be expected to know what the value of their imputed rent is – it needs to be modelled.

Different cultural concepts of wealth

The concept of culture used in this report is the western definition of wealth – the value of accumulated assets less liabilities of an individual family or household (or net worth). While Maslow's (1943) 'hierarchy of needs' approach is trans-cultural and is generally followed, measurement issues can arise because other cultures have different definitions of wealth. For example, a more traditional Māori concept of wealth encapsulates ownership of and access to land, food, rivers, and the sea, and the strength/health of the collective group. People can be physically wealthy (asset rich) but have poor cultural or spiritual wealth (eg they may be considered poor if they don't know their whakapapa or cultural protocol). For Pacific peoples, also, wealth includes spiritual as well as material aspects. Because these are difficult to measure adequately in surveys, the focus tends to be on material well-being and wealth (the focus of this domain).

A4.2 Quality issues

Collecting accurate information on households' economic standard of living is difficult as household members rarely maintain complete and accurate records of income, assets, liabilities, and expenditure. In addition, many respondents, particularly high-income earners, regard their financial matters as private and may be unwilling to fully cooperate in surveys seeking details of their economic resources. Those with large amounts of wealth also tend to be less willing to participate in surveys. This is reflected in lower response rates in surveys that collect data on income, expenditure, and wealth than in other household surveys, and results in the undercounting of certain sub-populations.

Changes in average earnings and income statistics do not necessarily mean that individual respondents are better or worse off, because most cross-sectional sample surveys are subject to the effects of changes in composition. Changes in earnings may result from changes in the wage rates of employees, but may also reflect changes in the composition of the labour force. For example, a change in the proportion of part-time workers in the labour force, or in the average hours worked by employees, will be reflected as an increase or decrease in average earnings regardless of wage changes. Other compositional changes that can affect earnings include variation in the distribution of occupations, changes in the level of skills within occupations, and variation in employment between industries. Indexes such as the labour cost index aim to control for quality and quantity changes, in order to derive a pure wage change figure. However, it is not possible to relate this back to a median or average wage or the characteristics of people receiving those wages.

Where data about the value of economic resources available to households are not collected from households themselves, it is possible to impute such information. Imputation by reference to information from other sources is sometimes used for valuing non-cash income. However, this can be difficult, especially if the required data sources are not readily available.

Data collected for administrative purposes can be used to replace the direct collection from respondents in household surveys. Statistics can be produced using the administrative data directly, the administrative data can be matched to survey data to replace questions (that then need not be asked), or administrative data can be used to impute responses to questions. This can reduce respondent burden because they can be asked fewer questions. Administrative data can provide better quality estimates than

sample surveys as they are subject to less measurement error. Another benefit is that administrative collections may hold data that are difficult to collect in a survey. These collections can also provide data on small populations, which can be hard to capture in sample surveys, and sometimes provide much better coverage than sample surveys, even a complete census. As a result, longitudinal analysis is often possible on data collected for administrative purposes.

However, administrative data collected for non-statistical purposes may not have all the variables needed for thorough statistical analysis, and it may take longer to produce statistics from them. For example, administrative data available from the Linked Employer-Employee Data (LEED), collected by Inland Revenue, may be perceived as being more accurate than data collected from a respondent over the telephone in a sample survey. However, Inland Revenue does not currently collect a person's hours of work because this information is not required for taxation purposes; the collection contains limited socio-demographic information, and some income data are not released until at least a year after collection.

People use trusts to protect their wealth but in doing so they can also disguise their wealth. It is quite common for a trust to own the family home and any investments, making personal or household wealth look a lot less than it actually is. Respondents may not always know if their assets are held in a trust or how much those trusts are worth. As a result, wealth may be undercounted.

Obtaining accurate information about income from self-employment is often difficult. One of the concerns is that income is often very low or negative in value. While this is possibly accurate, analysis of expenditure data for households with low or negative business income often reveals that many of the households have expenditure that is much higher than expected from their income.

Most mortgages involve paying off interest as well as repaying the loan. Adjusting income for housing costs requires these payments to be treated differently, because not all mortgages are structured in the same way. While respondents probably know what their total mortgage repayments are, they do not always know how much goes to paying interest and how much to paying off the loan.

Some researchers use the difference between income and expenditure as a proxy measure for savings. However, there are severe limitations and risks with this method. For example, expenditure on training should be defined as an investment, since it usually results in a qualification, which is an asset that enhances human capital. Another key issue is that expenditure and income can be collected over different reference periods.

As the popularity of managed funds such as KiwiSaver or portfolio investment entities increases, respondents are less likely to know the gross value of their investment income. Modelling of tax paid on these may need to be done to achieve the gross amounts.

Appendix 5 Members of the advisory groups

A group of experts from government agencies and other interested parties with a strong interest in economic standard of living statistics was involved in preparing this document. Along with the Statistics New Zealand working group, the expert group identified the enduring research and policy questions or themes, and assessed the extent to which data are available to answer these needs. The two groups then made 11 recommendations to address those information needs and identified the agencies to lead them.

Members of the external advisory group⁽¹⁾

Name	Organisation	Position
Rochelle Barrow/Phil Briggs	Reserve Bank of New Zealand	Manager Statistics Unit/Senior Adviser, Economics Department
Dr Grant Scobie	Treasury	Principal Advisor
Bryan Perry	Ministry of Social Development	Principal Advisor, Social Sector Strategy
Sylvia Dixon	Department of Labour	Senior Researcher
Valmai Copeland	Inland Revenue	Senior Evaluator
David Feslier	Retirement Commission	Executive Director
Dr David Maré	MOTU	Senior Fellow

1. The following people from Statistics NZ worked with this group: Denise Brown (Principal Social Statistician), Andrea Blackburn (Manager, Standard of Living business unit), Fiona Smillie (Subject Matter Project Manager Housing, Income, and Expenditure team), and Ann Ball (Statistical Analyst, Housing, Income, and Expenditure team).

Members of the internal working group

Name	Position
Denise Brown	Principal Social Statistician
Julie Woolf	Senior Research Statistician Social and Population group
Tas Papadopoulos	Senior Research Statistician Work, Knowledge, and Skills team
Frances Krsinich	Senior Research Statistician Prices team
Michael Morgan (to December 2009)	Subject Matter Project Manager National Accounts team
Chase O'Brien (from January 2010)	Subject Matter Senior Statistician Macro-Economic Statistics Development business unit
Fiona Smillie	Subject Matter Project Manager Housing, Income, and Expenditure team
Ann Ball	Statistical Analyst Housing, Income, and Expenditure team

Other people consulted

Name	Organisation	Position
Peter Potaka	Statistics NZ	Senior Advisor Māori Policy
Luke Crawford	Statistics NZ	Senior Advisor Māori Stakeholder Relationships
Atawhai Tibble	Statistics NZ	Subject Matter Project Manager Māori Social Survey Team
Dr Susan St John	University of Auckland Business School	Associate Professor Economics
Roger Hurnard		Consultant on Public Policy Analysis and Advice
Dr Bill Rosenberg	New Zealand Council of Trade Unions	Economist and Director of Policy

Appendix 6 Recommendations from the 1991 review

This appendix looks at the recommendations of the *Report of the review committee on income and wealth statistics* (Department of Statistics, 1991). Each recommendation is listed in bold, followed by an assessment of the degree to which each recommendation was implemented.

A 6.1 Implementing the 1991 structural recommendations

The report identified the following recommendations to be “about the basic structure of income and wealth statistics” and considered them to be essential:

- 2. The Department of Statistics adopt a three point strategy which comprises:**
- **development of an integrated household survey programme**
 - **integration of tax based data with demographic characteristics**
 - **progress towards development of a large scale micro-database based on actual and simulated data as the basis for the production of income and wealth statistics.**

Soon after the 1991 review, Statistics New Zealand worked towards developing an integrated household survey programme and a programme of supplements to the Household Labour Force Survey (HLFS) was one result of this. In recent years, Statistics NZ has developed an on-going Programme of Official Social Statistics (POSS) to address the need for social statistics.

Statistics NZ, together with Inland Revenue and the Department of Labour, has developed the Linked Employer-Employee Database (LEED), which is created by linking a longitudinal employer series from the Statistics NZ Business Frame to a longitudinal series of Employer Monthly Schedule payroll data from Inland Revenue. Other administrative datasets have also been integrated with LEED. Recently, steps are being taken towards linking LEED data with household survey data to improve the demographic data within LEED, and to improve the quality of survey estimates.

Some research work has been done on simulating income data. A small synthetic unit record file was created for use in schools but no large-scale synthetic datasets have been published.

- 3. The Department of Statistics gives emphasis to improved income and wealth statistics when it undertakes a full feasibility study of the methodology, costs and outputs of an integrated household survey strategy.**

Improvements to the range of income and wealth statistics available are visible through:

- Household Savings Survey (2001)
- Survey of Family, Income, and Employment (2002 onwards)(wealth modules in even years)
- New Zealand Income Survey (supplement to HLFS June quarter) (1997 onwards)
- Retirement Income Provision Survey (supplement to HLFS) (1992)
- Living Standards Survey (2000, 2004, 2008)
- Survey of Older People (2000) (run as part of the development of the Living Standards Survey)
- Survey of Working Life (supplement to the HLFS) (2008).

5. The Departments of Statistics and Inland Revenue promote development of the Taxpayer Model with emphasis put on the development of a statistical resource that promotes analyses of the current and future tax systems. The Department of Statistics should provide assistance wherever possible.

The Taxpayer Model was developed by Inland Revenue in 1991 with assistance from the Department of Statistics. It is a system for extracting and holding data. It is the basis of Inland Revenue's microsimulation models, which act as a 'check and balance' against the tax-modelled data sourced from ASSET/TAXMOD/TAXWELL. No input from Statistics NZ is currently required.

6. The Taxpayer Model includes information from tax forms on age, title and occupation, and that this information be supplemented with information on the demographic and social characteristics obtained from a household survey of taxpayers.

Age and sex are derived from tax forms and are added to the Taxpayer Model database. Matching with a household survey has not been performed.

8. The Department of Statistics coordinate research and development of a large scale micro-database.

There have been a number of initiatives to provide access to income and wealth microdata:

- rather than produce one dataset, Statistics NZ developed the data laboratory in 1997 where approved researchers can access anonymised unit record datasets from each survey
- Statistics NZ has developed the LEED database and LEED-based integration projects, and collaborated with Inland Revenue and the Department of Labour to perform research on these datasets
- Statistics NZ has produced confidentialised unit record files that do not require researchers to come in to the data laboratory.

16. The Department of Statistics operate from time to time a household survey with sufficient sample size to allow statistics on Māori, other population subgroups with a policy focus and regions, to be produced comparable with those on the total population.

A Disability Survey was run in 1996, 2001, and 2006 and another is planned for 2013, after the next census, as part of the POSS programme. The Survey on the Health of the Māori Language was run in 2001 and a Māori Social Survey is also planned to follow the next census as part of the POSS programme. Research is also being done on improving small-domain estimation.

27. The Department of Statistics, where feasible, assist the work of outside researchers by making available facilities allowing recomputation of complex statistics on different assumptions.

Approved researchers can use anonymised datasets in the data laboratory.

A6.2 Implementing 1991 quality and efficiency recommendations

The report identified the following recommendations as "considered to be essential to improve the quality of income and wealth statistics and the efficiency of their production":

1. The Department of Statistics monitor progress with implementing the review committee's recommendations and report annually on the status of each

recommendation, and that the committee meet, as necessary, until the next major review of income and wealth statistics is published.

It has not been possible to establish if this recommendation was implemented. The annual reports of the Department of Statistics do not report on the progress of implementing the recommendations.

4. The Department of Statistics place emphasis on maintaining or improving the quality of income and expenditure data supplied for the National Accounts and Consumers Price Index. Whenever changes are made that adversely affect the quality of key data sources for either of these measures, alternative ways of obtaining data should be evaluated. The costs of these alternatives should be considered as part of the cost of implementing the integrated household survey strategy.

The Household Economic Survey was redeveloped for the 2006/07 survey. The national accounts and consumer price index teams were key stakeholders in the redevelopment.

7. The Department of Statistics consider how to integrate a household survey of taxpayers within an integrated household survey strategy.

LEED collects data on an individual basis.

9. The Department of Statistics should take a proactive role in liaising with agencies whose administrative records provide a basis for official statistics, helping to make them more aware of the statistical use made of their data and the benefits accruing from that.

While Statistics NZ has always had a leadership role for statistics produced by the whole-of-government, following the Review of Official Statistics (2003) Cabinet confirmed a model that identified a set of important statistics (Tier 1) that are performance measures of New Zealand. Additionally, coverage was broadened; a set of standards, protocols and policies for Tier 1 statistics was published; and leadership for the development of the Official Statistics System was strengthened. Statistics NZ is now proactive in liaising with other government agencies to promote and achieve these goals for survey and key administrative data. Details of the Tier 1 statistics relating to the economic standard of living domain can be found in appendix 2.

11. The Department of Statistics, in consultation with users of income and wealth statistics, develop and promulgate standard frameworks that classify income and wealth. A key objective of the framework should be to maximise potential for integration between micro and macro measures of income and wealth.

This recommendation has not been addressed.

12. The Department of Statistics develop and promulgate standard definitions of household income and wealth.

This recommendation has not been successfully addressed – a source of income classification was developed in 1999 but not approved.

13. The Department of Statistics develop a standard module of income and wealth questions for use in all components of its household surveys programme.

Statistics NZ has developed a series of core demographic questions and these are being integrated into all household surveys as they are redeveloped. Basic questions about income are asked but no questions are asked about wealth. A standard income question has been developed for use in surveys where income is not the main reason for the survey.

14. The Department of Statistics change the current treatment of interest payments on non-property loans and on goods on time payment in the HEIS [Household Expenditure and Income Survey] to measure amounts for a single year of the term.

These topics were addressed when the Household Economic Survey was redeveloped in 2006/07.

15. The Department of Statistics refine the classification of household types by 'life cycle stage' (as used in the Fiscal Impact Study) and apply such a classification to both the Census and HEIS.

A classification for 'economic families' was developed but has not been widely used. A 'family and household' classification, with child dependency added, was developed and statistics were produced from census, Household Economic Survey (HES), and New Zealand Income Survey (NZIS) data.

17. Further emphasis be put on the collection, at household level, of data on wealth, including data on access to pension funds and home ownership. The data should be collected in such a way as to integrate with income, demographic and labour force data.

The Household Savings Survey (2001) and Survey of Family, Income, and Employment (2002 onwards, in even-wave years) have collected this data.

19. To improve the coverage of income statistics at a micro-level, data on fringe benefits, ACC levies, employer contributions to superannuation, and home ownership (to impute income from owner occupied housing) be collected.

The labour cost index produces information on the movement of fringe benefits, ACC levies, or employer contributions to superannuation, but not the levels. Although no data are collected on fringe benefits, ACC levies, or employer contributions to superannuation in the NZIS or HES, LEED has the potential to – if the information is captured in the tax system.

21. The Department of Statistics undertake research and development work on definitions of self employment income and improve the quality and accuracy of statistics on the self-employed to a level commensurate with the use of these data in policy analysis.

Self-employment income is collected in detail in the HES and NZIS and in less detail in the Survey of Family, Income, and Employment. Data are also output from the LEED database annually. However, work is still required on the definitions involving self-employment income as the boundary between wage and salary earners and self-employed has become more blurred.

28. The Department of Statistics and departments responsible for Māori development conduct research into and make recommendations on operational definitions of whānau, and of income and wealth from a Māori perspective; which can be submitted to the department's Standard Classification Committee and applied in a standard way across Department of Statistics' surveys.

The Cross Departmental Research Pool funded a Ministry of Health (MoH) scoping project to investigate options for measuring Māori-based collectives, namely whānau. The MoH has worked with other agencies (including Statistics NZ) to develop this methodology. The development of measurement tools for whānau research, monitoring, and evaluation, which reflect current whānau roles and structures, would significantly enhance government agencies' efforts to build strong, connected whānau with good well-being. Statistics NZ will maintain an active involvement in this project.

29. Statistics on Māori income from the 1991 Census of Population [and Dwellings] be made available at the same level of detail as for the total population. Comparisons should be made between Māori and non-Māori. As well, the Department of Statistics should research and develop tables using iwi affiliation data.

All tables output from the 2001 Census of Population and Dwellings were output for the total population and for the Māori population where appropriate. Statistics NZ published key outputs for Māori and the total New Zealand population from the 2006 Census. Statistics NZ also publishes iwi profiles for iwi who want this service.

A6.3 Implementing other 1991 recommendations

The report identified the following recommendations to be 'of considerable value':

10. The Department of Statistics should publish the procedures and rules which prevent large scale databases and the computerised linking of data from different sources being used to invade individual privacy.

The Privacy Act 1993 strengthened the rights of New Zealanders but still allows Statistics NZ to collect data for statistical purposes. Statistics NZ has a special role in integrating data for statistical purposes while using the power of the Statistics Act 1975 to protect respondent confidentiality.

Privacy impact assessments have been undertaken, and are published on the website for any datasets created through linking.

18. The Department of Statistics investigate the feasibility of collecting and producing statistics on superannuation funds from the IRD IR44 form. As part of this process, the Department of Statistics should liaise with the Government Actuary to determine the use of these data as an alternative source of information from which to produce statistics for the annual report to Parliament of the Government Actuary.

Inland Revenue produces summary statistics on superannuation funds, as part of their evaluation of KiwiSaver. Publications of the evaluation can be found at www.ird.govt.nz/aboutir/reports/research/reort-ks/. No other progress.

20. The Department of Statistics in its full feasibility study of the methodology, costs and outputs of an integrated household survey strategy, consider the capability of the HLFS [Household Labour Force Survey] to provide quarterly income data on a panel of respondents over a two-year period.

The NZIS was first run in 1997 as a supplement to the HLFS in the June quarter. It has been run annually since then.

22. The Department of Statistics should endeavour to make the ASSET tax-modelling system more understandable and the computer system more user-friendly.

Since the 1991 review, Treasury has taken over maintaining and running the tax-modelling system. It has developed TAXMOD, and later TAXWELL, which perform similar but slightly different functions to ASSET. The functions performed are complicated but Treasury has endeavoured to make TAXWELL as efficient and user-friendly as possible, while maintaining its complex functionality. The disposable income dataset produced from TAXWELL is available through Statistics NZ's data laboratory to approved researchers.

23. Fiscal impact studies such as the recent 1987/88 study should be repeated every two or three years.

Treasury produced a fiscal incidence report in 2004. No further reports have been produced although work on another has begun.

24. The Department of Statistics encourage liaison on concepts and definitions between the various groups interested in fiscal impact studies.

No information is available on this.

25. The Department of Statistics recognise the need, within the NZSNA [New Zealand System of National Accounts], for the improvement of the current measurement of household income and expenditure; its measurement by socio-economic groups; and for the development of household balance sheets.

Statistics NZ contributed to and agreed to the Canberra Group's Expert group on household income statistics: Final report and recommendations (Canberra Group 2001 and 2011), and continues to work within the guidelines set out in this report. Household balance sheets have not been produced since 1990 as funding has not been available.

26. The Department of Statistics periodically survey those characteristics of households that can be used to derive measures of 'standard of living', within the integrated household survey programme.

Statistics NZ has a reasonably comprehensive programme of income, expenditure, and wealth surveys. These include the:

- Longitudinal Survey of Family, Income, and Employment (with income collected in each wave and wealth in even-wave years)
- Household Savings Survey in 2001
- HES (collecting income and consumption data every year until 1997/08 and three-yearly from 2000/01. Since 2006/07 this survey has also included the Ministry of Social Development's economic standard of living index (ELSI) short-form questionnaire
- HES (Income) (collecting income data and some household consumption data) from 2007/08 in years when HES is not run. This also includes the ELSI short-form questionnaire
- General Social Survey (first run in 2008/09) also includes the ELSI short-form questionnaire.

The MSD has also developed and run the Living Standard Survey from 2000, which includes the ELSI long-form questionnaire (income, wealth, and standard of living questions).