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Future of the New Zealand Income Survey

Report on the decision to integrate the
New Zealand Income Survey into the
Household Labour Force Survey



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1 Purpose and summary

Purpose

This report presents the results of consultation Statistics New Zealand undertook on proposed changes to the current New Zealand Income Survey (NZIS). It outlines our decisions, recommendations, and a course of action.

Summary of key points

Recently Statistics NZ investigated how we could rationalise the collection of income statistics to collect data more efficiently, improve respondent experience, and continue to meet user needs. As a result we decided to integrate the NZIS content into the Household Labour Force Survey (HLFS). This report summarises the changes we will make as a result of that investigation.

After consulting users of the NZIS and weighing up the costs and benefits of rationalising the NZIS we decided that:

- The NZIS will be discontinued after the June 2015 collection.
- From June 2016, information collected from the current NZIS about income from wages and salaries, self-employment income, and government transfers will be collected as an income module within the HLFS.
- Income from private transfers and investments (other private income) will be collected solely in the Household Economic Survey (HES).
- The current measure of total income called 'income from all sources' will be collected solely in the HES.

Employment-related income data will be collected once a year, in the June quarter of the HLFS.



2 Introduction to the NZIS integration project

Background

For some years, Statistics NZ has been considering whether we should continue to collect multiple measures of income – specifically, earnings and benefits.

Currently we gather income data from the Household Economic Survey (HES), the Quarterly Employment Survey (QES), the Labour Cost Index (LCI), Linked Employer-Employee Data (LEED), the Census of Population and Dwellings, and the NZIS. The NZIS is run as a supplement to the Household Labour Force Survey (HLFS) in the June quarter.

Because there are multiple income collections, with similar content, it can be difficult for users to judge which source of income data will best answer their questions.

Statistics NZ is under increasing pressure to:

- rationalise the collection of income statistics
- improve the way data is collected
- save money
- improve respondent experience
- continue to meet user needs and where possible to add greater value.

To meet some of these goals, the HLFS is being redeveloped. As the NZIS is a supplement to the HLFS, we took this opportunity to consider the future of the NZIS.

A summary of the purpose and uses of the NZIS is available in appendix 1.

Summary of changes

After taking into account feedback from users and using cost-benefit analysis, we decided to discontinue the NZIS after the June 2015 collection. From 2016, most NZIS content will be collected in the HLFS.

The following table summarises how income components in the NZIS will be collected from 2016 onwards.

Some integration decisions will be subject to testing to make sure the quality of the income data is adequate and changes do not negatively affect the HLFS.

Table 1

Decisions for the collection of NZIS income components	
Income component	Decision
Self-employment income	Collect in the HLFS.
Wages and salaries	Collect in the HLFS.
Government transfers	Collect in the HLFS.
Other transfers	As a component of 'income from all sources', this information can be obtained from the HES.
Investments	As a component of 'income from all sources', this information can be obtained from the HES.
Income from all sources	The sum of wages and salaries, self-employment, and government transfer income will be available in the HLFS. The HES will provide detailed 'income from all sources' information.
Actual and usual earnings	Collect usual earnings in the HLFS. Stop collecting actual earnings.
Hours worked	Collect in the HLFS.

Source: Statistics New Zealand

Consultation process

We consulted users to better understand how NZIS data is used outside of the organisation, beyond its core purpose of feeding into the minimum wage review, and to better understand the effects of any change.

We designed a two-phase consultation process for this purpose: an online survey and a discussion workshop.

1. Online survey – May 2013

We developed a two-part survey to consult with users of NZIS data and put it on our website.

The first part of the survey asked which components of the NZIS are used, and how often.

The second part of the survey asked how often the income from all sources data is used, and how necessary this information is. It also provided several alternative options for collecting data on all sources of income and asked how adequately these options would meet the needs of data users. Finally, it asked if respondents preferred the actual or usual measure of earnings, and the hours paid or hours worked concept.

We sent a link to the survey to more than 600 recipients:

- people who subscribe to our notifications about NZIS and all information releases
- microdata access applicants
- organisations known to use NZIS data.

In addition, we advertised the consultation in the May edition of the Expert Data Users newsletter.

2. Further discussion workshop – June 2013

We invited online survey respondents to attend a workshop to discuss the proposed changes.

The workshop was attended by representatives from the Ministry of Business, Innovation and Employment (MBIE), Te Puni Kokiri, New Zealand Council of Trade Unions, Family Centre Social Policy Research, Parliamentary Service, Commission for Financial Literacy and Retirement Income, Ministry of Social Development (MSD), New Zealand Treasury, Ministry of Pacific Island Affairs, and by independent researchers.

Results from the consultation survey and workshop are available in appendix 2.

Rationale

We made decisions following consultation with key data users, and after analysing the benefits and costs of collecting NZIS information. The rationale for these decisions is outlined below, as well as alternative data sources.

Wages and salaries, self-employment income, and government transfers will be collected in the HLFS

Due to their significance and relevance, information about wages and salaries, self-employment, and government transfer income will be collected within the HLFS. Most of the income New Zealanders receive comes from these sources. These three income sources also fit neatly with the HLFS' employment-related statistics.

'Other transfers' (ie private superannuation and annuities) and investment information will no longer be collected

We will no longer collect information about income from other transfers and investments because these sources make up a very small proportion of the total income New Zealanders receive. In addition, the sampling errors are relatively high and users indicated they rarely use other transfers and investment information independently. Users tend to analyse other transfers and investment information as components of 'income from all sources'. The HES provides robust, detailed 'income from all sources' information.

Within the NZIS, very few respondents indicate they receive other transfers, so this source makes up a very small proportion of the total income received by New Zealanders. In the last five years, an average of 2 percent of respondents received other transfers, and this made up an average of 1 percent of total aggregate income.

While an average of one-third of NZIS respondents in the last five years indicated they received investment income, it only made up 6 percent of total aggregate income. About 40 percent of respondents with investments report that their only investment is a small amount of income from bank interest.

In addition, the sampling errors for both other transfers and investment income are high compared with collecting wages and salaries income. A higher sampling error means greater variability and consequently a larger range within which the true value will lie.

In the NZIS, sampling errors are calculated using a 95 percent confidence interval. In 2012, the sampling error for collecting other transfers information was 12 percent. This means that 95 times out of 100, the estimate of other transfers income is likely to be within 12 percent of the real figure for New Zealand. For investment income, the sampling error was 10 percent, while it was only 2 percent for wages and salaries.

From our consultation we found that users rarely analyse other transfers and investment income data as independent variables. Only 5 percent of users often use other transfers information. Twelve percent of users indicated they use investment income data often.

The concern for most users about removing the other transfers and investment income information is the effect on income from all sources. That is, that removing these components would give a less complete picture of a person's total income. This is where HES can add value as it provides a more complete measure of income from all sources.

For more information about the HES, see [What other income from all sources data is available?](#)

'Usual earnings' will be collected, 'actual earnings' will no longer be collected

We propose to collect usual earnings information in the HLFS. Actual earnings information will no longer be collected, since most respondents indicate that their actual and usual earnings are the same. The concepts currently used in the NZIS are:

- actual earnings – the wage and salary income actually earned and hours actually worked (paid or unpaid) in the reference period
- usual earnings – the wage and salary income usually earned and hours usually worked (paid or unpaid) in the reference period.

In the NZIS, about 10 percent of the people surveyed have different actual and usual earnings from wages and salaries – that is, the income they received or hours they worked in the reference period was not their typical amount. Over the past five years, an average of 8 percent of people did not have regular hours or earnings. For these people, actual earnings information will still be collected.

To streamline the survey and reduce the number of questions asked, we suggested that either actual or usual earnings information could be collected, not both.

Usual earnings are less variable than actual earnings. This means usual earnings fit better with international best practice, where income is measured to indicate a person's or household's ability to purchase goods and services. The current NZIS tables published on our website are for usual earnings. Collecting information on usual earnings, rather than on actual earnings, will minimise the difference between the current tables and the new tables.

'Hours worked' will continue to be collected

We will collect hours worked information in the HLFS. This aligns with the international standard and users prefer it over the concept of paid hours.

'Income from all sources' will no longer be available as it is currently defined

We will no longer collect income from all sources information as currently defined. However, the sum of wages and salaries, self-employment income, and government transfers will be available.

Currently in the NZIS, an individual's income from all sources is defined as the sum of the income received from:

- wages and salaries
- self-employment

- government transfers
- other transfers
- investments.

What other income from all sources data is available?

The HES is Statistics NZ's most complete measure of personal and household income and is regarded as the best measure of income from all sources. It collects detailed information about income from:

- wages and salaries
- self-employment
- government transfers
- investments
- other regular sources
- overseas
- irregular sources.

The HES collects income information over the period of a year, so it can capture information about seasonal work and previous employment. The sample size of HES is about 4,500 households. The sample size will be boosted to 8,000 households in years where questions about net worth are added to the HES. This will happen first in 2014/15 as part of a modified version of the HES (Income) survey – to be called HES (Savings). Beyond 2016, a net worth module will be regularly added to HES, and the sample will be expanded to 8,000 households, every three years.

Although the HES sample size is smaller than that of the NZIS, it provides a better measure of annual income from all sources. It is robust when analysed at a national level, and for sub-population analysis of sex, age, and ethnic groups. The sample errors for smaller populations, such as Māori and Pacific peoples, are larger, but are considered by Statistics NZ and key users to be acceptable. For example, the Ministry of Social Development already does sub-population analysis using HES, and the Treasury uses HES for its TaxWell model. The Treasury and the Commission for Financial Literacy and Retirement Income agreed that using HES would be an acceptable approach.

The major limitation of HES is its inability to provide regional analysis beyond six high-level regional breakdowns. However, finer-grained regional analysis could still be achieved by continuing to collect income from earnings and all government transfers in the HLFIS. Regional and sub-population analysis could therefore still be done, but on this narrower version of income, rather than income from all sources.

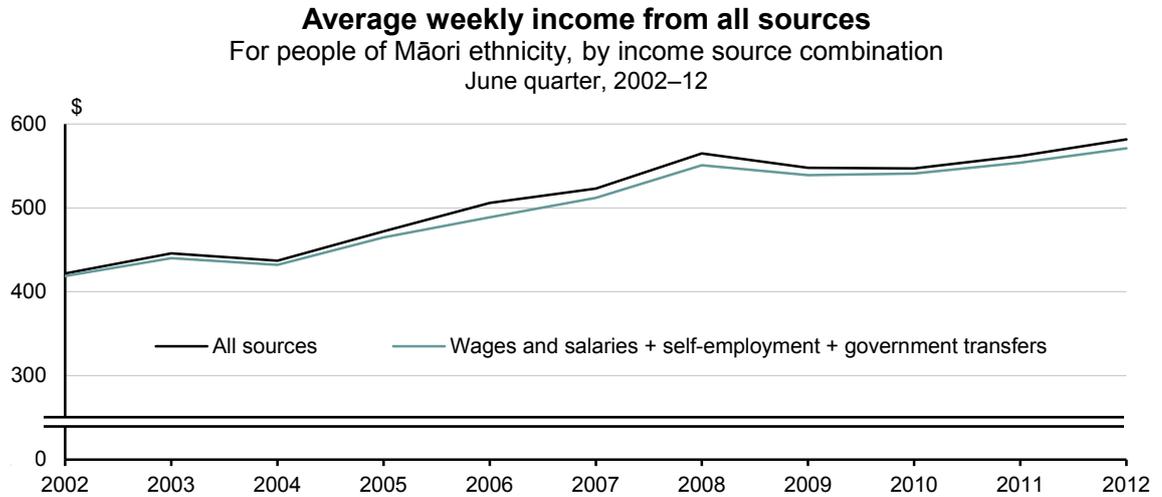
Estimates for these small groups could also be provided from the HES using techniques such as data pooling. If there is sufficient demand for this information, we can develop methodology for combining two years' worth of HES data together. This would double the sample size available, and improve the quality of estimates available through HES. If one of the pooled years was a year in which net worth is run, then the sample would more than double. However, this type of methodology changes the survey period from one year to two years. This means year-on-year movements in income levels cannot be accurately estimated.

How will estimates of total income be affected by the changes?

The sum of wages and salaries, self-employment, and government transfers still provides an indication of the total income received by an individual or household, as these components are the largest contributors to total income. Figures 1 and 2 show that removing other transfers and investments has a very small impact on the estimates of income from all sources for the Māori and Pacific populations. This means that for these

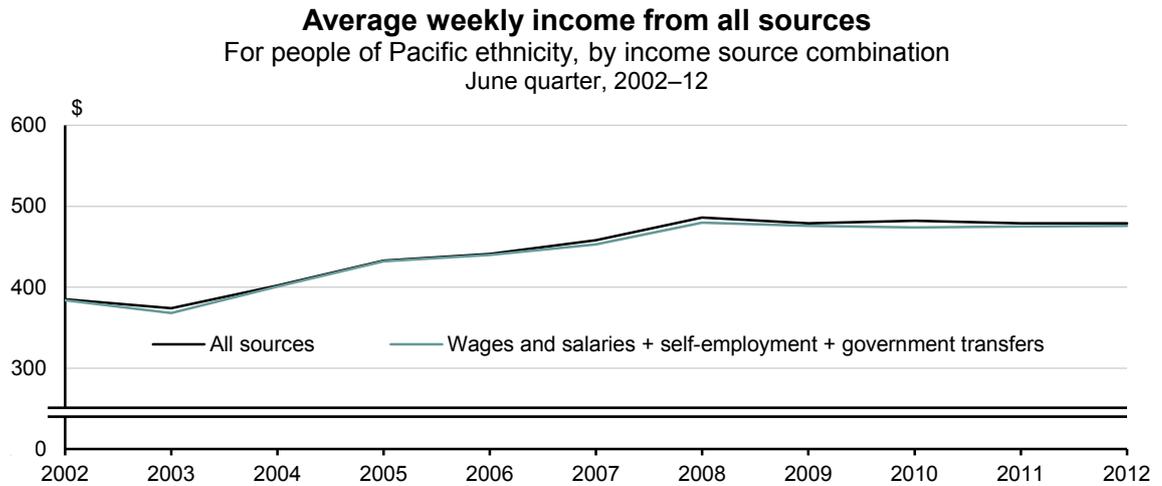
populations, the narrower measure could still be used to estimate income from all sources, and would allow regional analysis.

Figure 1



Source: Statistics New Zealand

Figure 2



Source: Statistics New Zealand

For the younger age groups (people under the age of 40), the sum of wages and salaries, self-employment, and government transfer income is very close to the measure of income from all sources. That is, the sum of these three income sources is an adequate estimate of total income.

The older age groups are much more affected by the narrower measure because they are more likely to receive income from investments or private superannuation.

If we look at the data by sex, we see a similar pattern for males and females, with both groups affected by the narrower measure.

For graphs by sex and by age group, see appendix 3.

Integrating the NZIS into the HLFS

The NZIS will no longer run as a supplement to the HLFS. The content will instead be integrated into the main HLFS questionnaire.

Integrating the NZIS content into the HLFS has several benefits. These include:

- a smaller burden on respondents, because there will be:
 - fewer income-related questions
 - a shorter interview time
 - fewer figures to recall.
- better-quality responses (eg respondents may be more accurately able to answer questions about income from jobs immediately after giving information about their jobs)
- improved respondent experience, which will help sustain goodwill from the public for Statistics NZ
- cost savings from having a streamlined survey with a more logical question flow.

As a result of integrating the NZIS content into the HLFS, there will potentially no longer be a separate NZIS information release. Data previously collected in the NZIS may be reported along with HLFS results.

Next steps

Further income information

Several datasets provide income information, and users are not always sure which one to use. It was evident from the consultation that we need to make more information available.

We plan to continue consulting with users and to keep them informed of the most appropriate income dataset for their needs.

Investigations into the potential of administrative data

Integrating the NZIS content into the HLFS is a short- to medium-term solution.

Administrative data is our preferred long-term option for gathering as much as possible of the data we currently collect. Using administrative data has the potential to be more accurate, more cost-effective, and less burdensome on respondents than running surveys.

Work is underway to identify administrative data sources that could replace data collected via the NZIS and to develop the methodology required.



Appendix 1: Summary of the purpose and uses of the New Zealand Income Survey

Purpose of the New Zealand Income Survey (NZIS)

The NZIS was established in 1997 because the Department of Labour needed a measure of hourly earnings that could be broken down by age – to identify people on the youth minimum wage. At the time, the Household Economic Survey (HES) was collected once every three years, so there was also demand for an annual measure of income for households and individuals.

In his 1996 paper, 'Project report on phase 1 of the development of the income supplement to the Household Labour Force Survey', Dr Eric Assendelft acknowledged that the income data sources were inadequate for policy evaluation or research studies. They either used bands of income (ie the census), thus hiding sources and details of income, or the sample sizes were not large enough to allow analysis of subgroups (ie the HES).

Income components collected in the NZIS

The NZIS collects information about income received from:

- wages and salaries
- self-employment
- government transfers
- other transfers
- investments (from 2002 onwards).

Income from these sources is added together to give a measure of 'income from all sources', a close approximation to total income.

Use of NZIS information

The NZIS meets two information needs relating to:

- wages and salaries
- income of sub-populations.

Wages and salaries

The key external data user of wage and salary information in the NZIS is the Ministry of Business, Innovation and Employment (MBIE). MBIE uses NZIS data to determine the number and characteristics of people on different hourly wages. This information is used to inform MBIE's annual minimum wage review. The review feeds into a cabinet paper due in December each year.

As well as monitoring wage growth, MBIE also uses NZIS data to carry out a variety of analyses. For example, they look at the differences in wages across sub-populations, industry groups, and occupational groups, and identify changes in the distribution of earnings. This analysis is used to assess areas in the labour market with skill shortages or high labour demands.

Other external users of wage and salary information include:

- Ministry of Education (aggregate earnings data for customised education qualifications by age and sex feed into international reporting)
- Ministry of Women's Affairs (to measure improvements in women's earnings)
- New Zealand Treasury (for monitoring wage pressures)
- Ministry of Social Development (median hourly earnings is used in its Social Report)
- academics (eg migrant incomes, returns to education).

Income of sub-populations

There is a strong need for income information about population subgroups. The NZIS is currently the best intercensal source available for sub-population analysis, due to its large sample size.

Te Puni Kokiri and the Ministry of Pacific Island Affairs both use NZIS data on all sources of income and ethnicity to gauge ethnic progress. For example, Te Puni Kokiri includes Māori household income in its statement of intent and receives annual data on median weekly income broken down by various Māori and non-Māori age groups and sex for customised regions to monitor progress in Māori incomes. Similarly, the Ministry of Pacific Island Affairs uses NZIS income data in its Pacific Progress report.

Other examples of external uses of income data include:

- Retirement analysis – as the survey is administered to the population aged 15+, the NZIS can provide information on age groups pre- and post-retirement, and how income and income sources change during this transition.
- Gender analysis – the Ministry of Women's Affairs uses NZIS data, such as weekly income distribution by gender and ethnicity, to support gender equality debates.
- Qualifications analysis – both MBIE and the Ministry of Education use NZIS data to monitor income returns to education, using average weekly income by various demographics including age groups and ethnicity. This information feeds into the annual OECD report (Education at a Glance) that compares outcomes, in the form of income, to education across OECD countries.
- Regional analysis – the NZIS is the only intercensal source of information on income by region. This information is used for making regional comparisons as well as for regional council reporting and monitoring. There is also an emerging need for regional estimates of income, to assess housing affordability.

Appendix 2: Results of consultation

This section outlines the results of the online survey, and subsequent discussion workshop.

Online survey

There were two parts to the survey. The first focused on how frequently respondents use each component of the NZIS. The second concentrated on income from all sources.

There were 41 responses to the first part of the survey. Respondents included local and central government bodies, private businesses, educational institutions, non-governmental organisations, and independent researchers.

Table 2

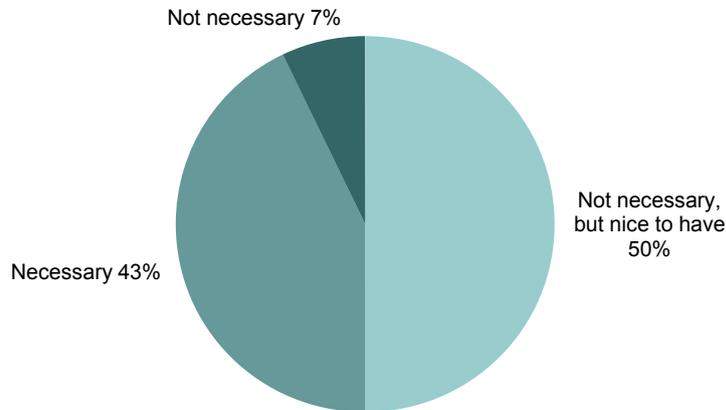
Responses given to online consultation survey (part one)			
N = 41	No	Yes, on occasion	Yes, use often
	Percent		
Do you use the self-employment data?	32	51	17
Do you use the wage and salary data?	10	44	46
Do you use the government transfers data?	46	34	20
Do you use the other transfers data?	63	32	5
Do you use the investments data?	51	37	12
Do you use the income from all sources data?	17	41	41

Source: Statistics New Zealand

The second part of the survey only attracted 14 responses, so the following results should be interpreted with caution.

Figure 3

How necessary is the income from all sources information for your work?



Source: Statistics New Zealand

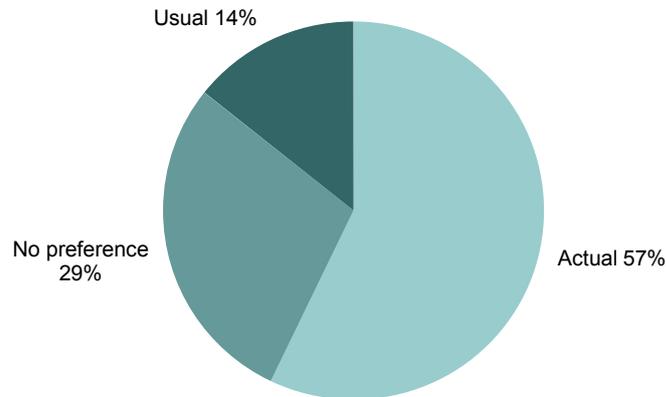
Table 3

Responses given to online consultation survey (part two)				
N = 14	Would meet my needs well	Would meet my needs somewhat	Would not meet my needs	Do not use income from all sources
	Percent			
How well would the sum of wages and salaries, self-employment, and government transfer income meet your needs?	29	29	36	7
Would an income bands question – like the question in the census – meet your needs for income from all sources?	23	38	31	8
Would 'income from all sources' information from the Household Economic Survey meet your needs?	17	50	25	8

Source: Statistics New Zealand

Figure 4

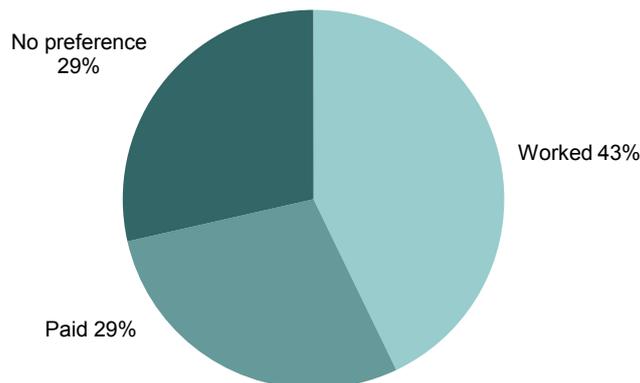
Which measure of earnings is most suited to your data needs?



Source: Statistics New Zealand

Figure 5

Which concept is most suited to your data needs – hours paid or hours worked?



Source: Statistics New Zealand

Further discussion workshop

The website consultation invited respondents to attend a workshop if they wanted to discuss their use of NZIS data in light of the possible changes.

The main discussion points from the workshop were:

- concern that labour force information would be lost if HES was used for income information
- concern that the ability to drill down to sub-populations would be lost by moving to the HES – specifically regional information, and information about vulnerable populations such as Māori and Pacific peoples
- acknowledgement that the proposed changes are not ideal for some users – but they generally understood the need to make changes.

The workshop was also useful for educating participants about the information available in other surveys – for example, that HES can provide total income and income distribution. Some attendees' concerns were eased when they learned about these other data sources.

Appendix 3: Income from all sources estimation

Graphs of income from all sources compared with the sum of wages and salaries (WS), self-employment (SE), and government transfer (GT) income.

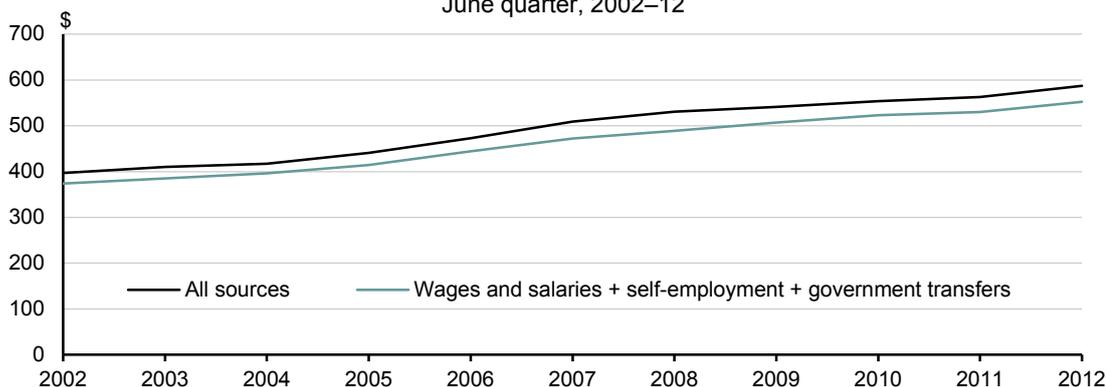
By sex

Figure 6

Average weekly income from all sources

For females, by income source combination

June quarter, 2002–12



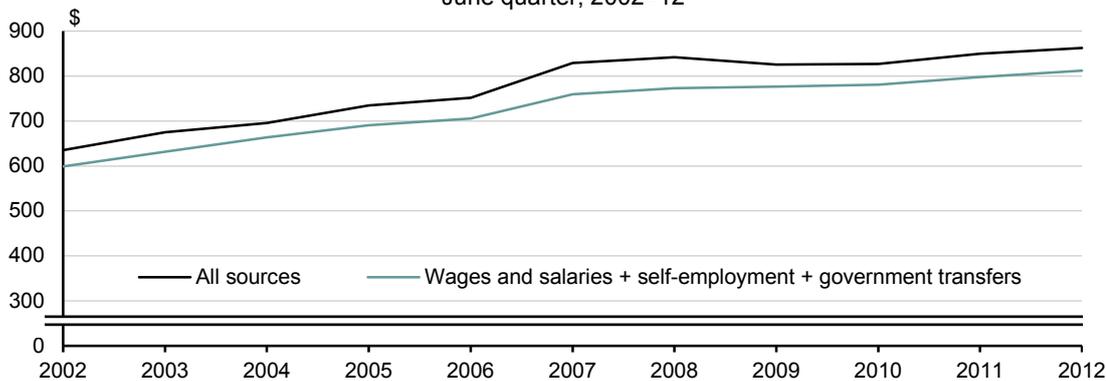
Source: Statistics New Zealand

Figure 7

Average weekly income from all sources

For males, by income source combination

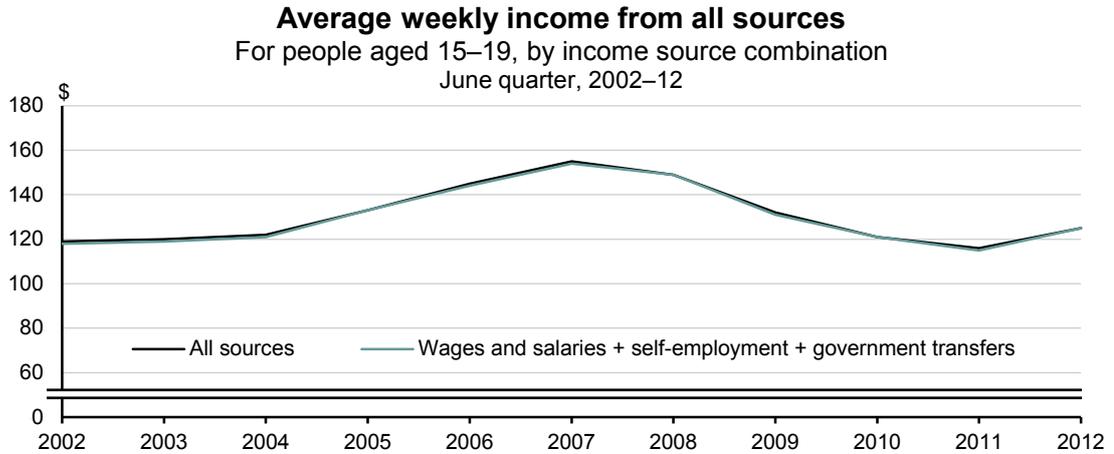
June quarter, 2002–12



Source: Statistics New Zealand

By age group

Figure 8



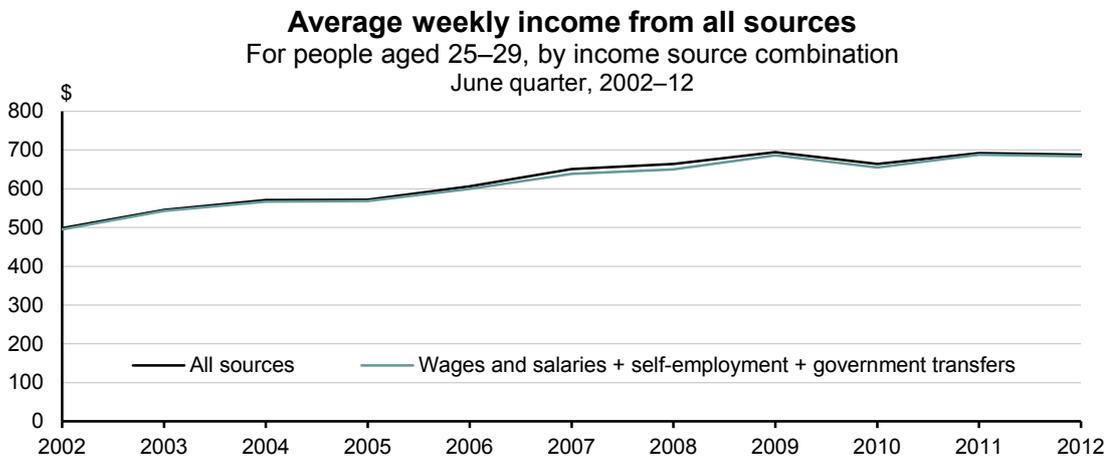
Source: Statistics New Zealand

Figure 9



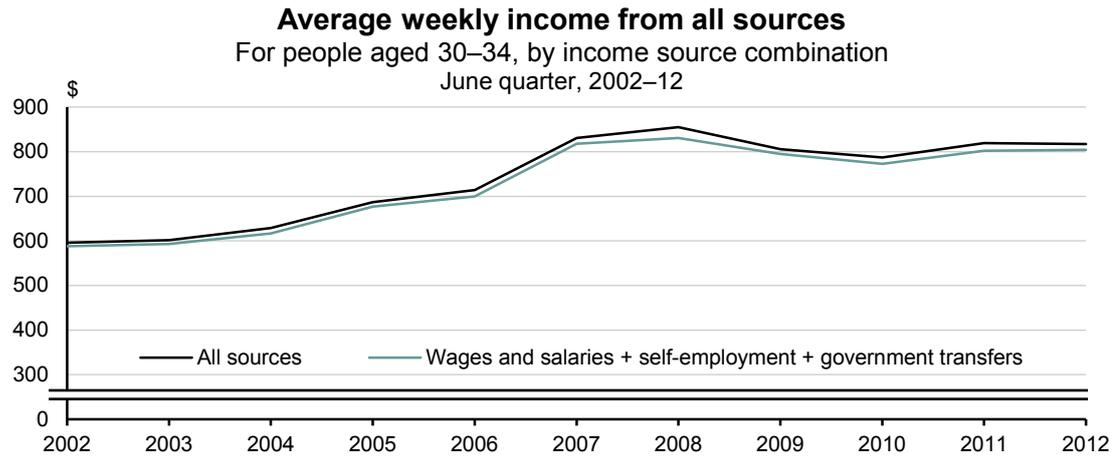
Source: Statistics New Zealand

Figure 10



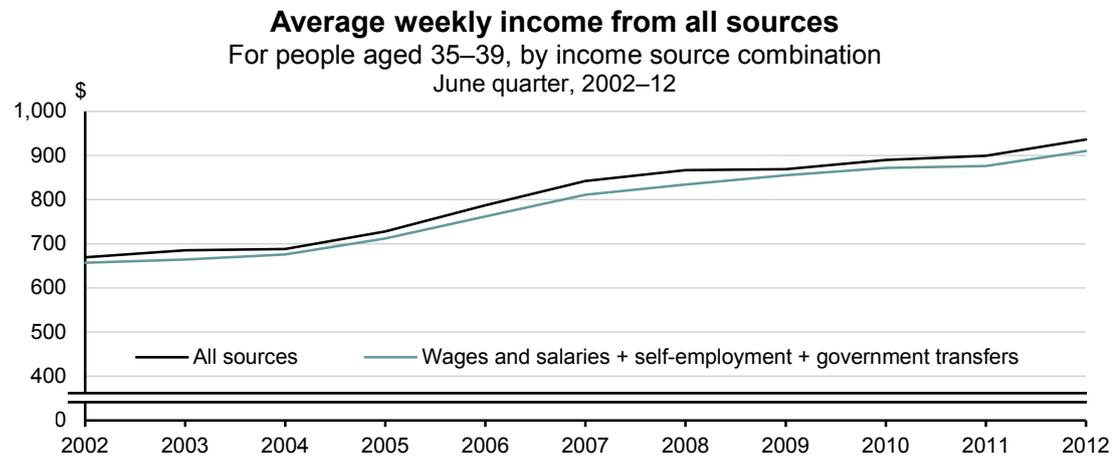
Source: Statistics New Zealand

Figure 11



Source: Statistics New Zealand

Figure 12



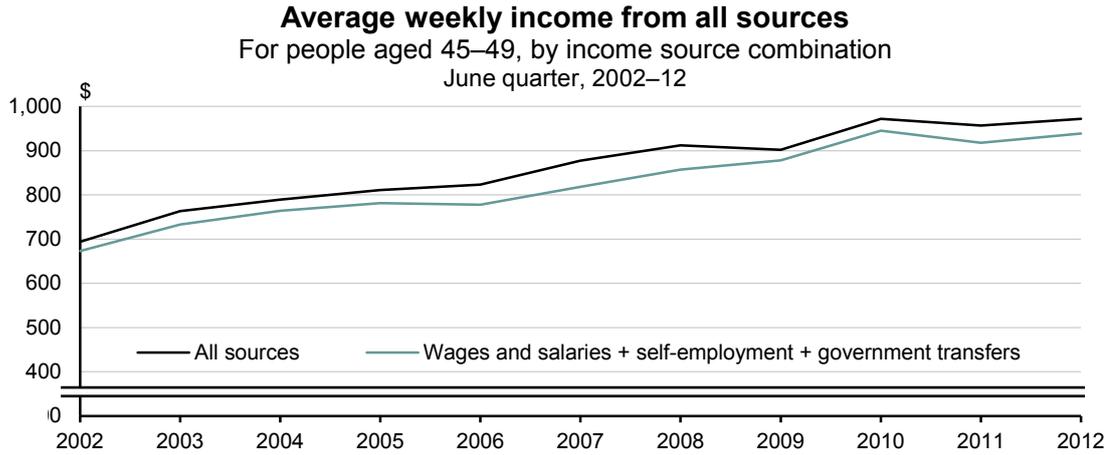
Source: Statistics New Zealand

Figure 13



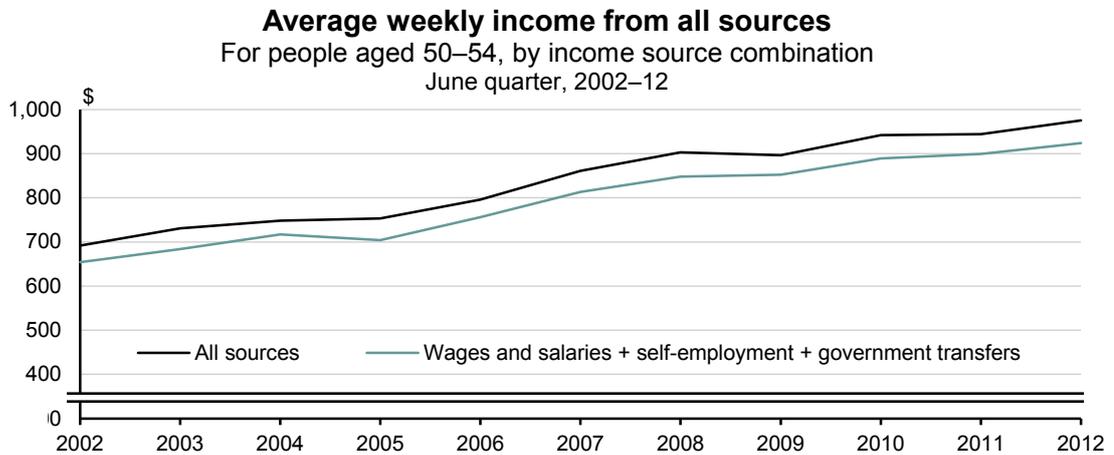
Source: Statistics New Zealand

Figure 14



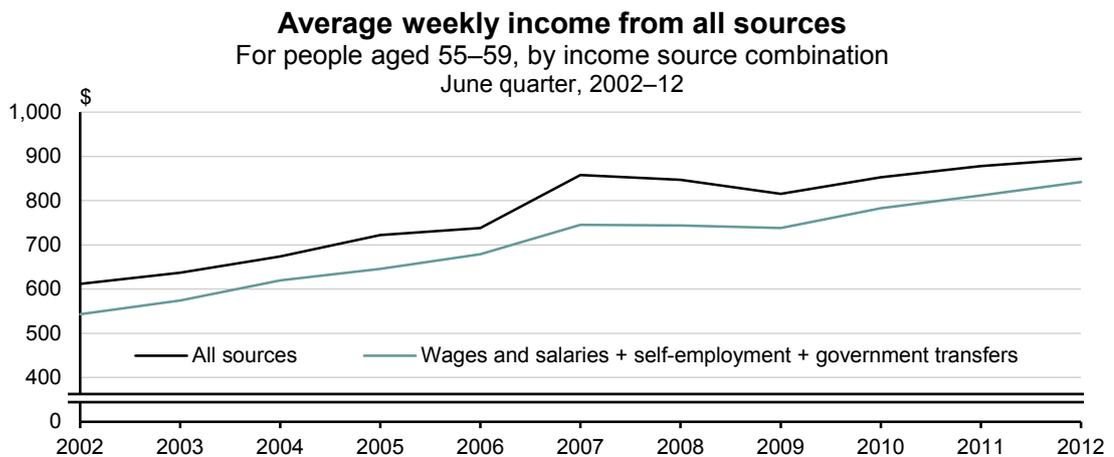
Source: Statistics New Zealand

Figure 15



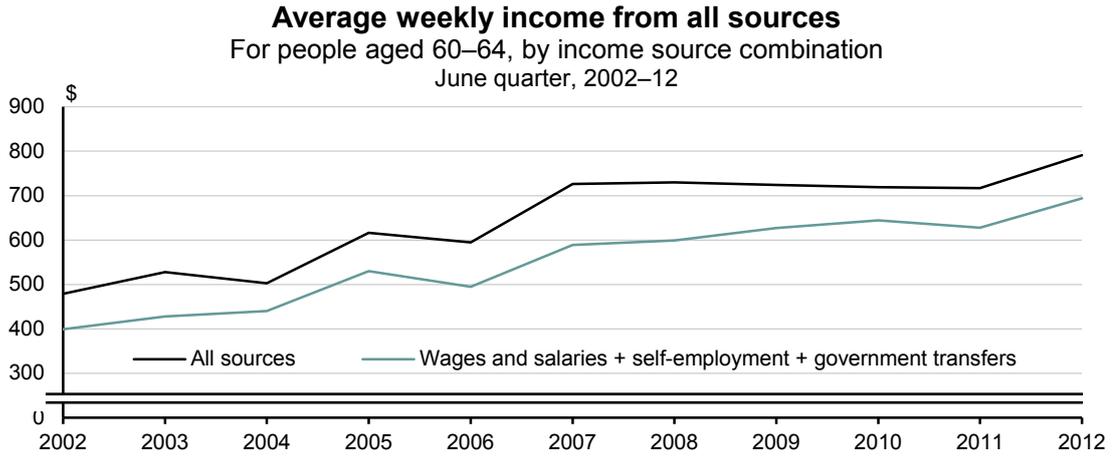
Source: Statistics New Zealand

Figure 16



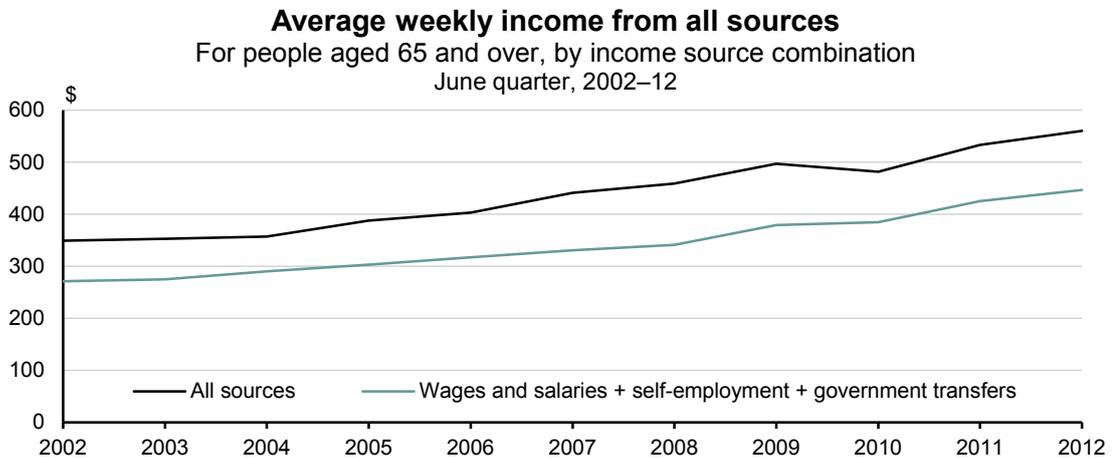
Source: Statistics New Zealand

Figure 17



Source: Statistics New Zealand

Figure 18



Source: Statistics New Zealand