

Labour Market Statistics: March 2016 quarter

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Key facts

Labour market at a glance

- New Zealand's labour force grows 1.5 percent, the largest quarterly growth since December 2004.
- Employment growth exceeds population growth over the quarter.
- The unemployment rate increased to 5.7 percent, from a revised rate of 5.4 percent last quarter.
- Wage inflation remains subdued.

Employment at a glance (seasonally adjusted)		Mar 2016 quarter	Quarterly change	Annual change
		(000)	Percent	
Working-age population		3,685	+0.8	+2.5
Employed		2,399	+1.2	+2.0
Unemployed		144	+7.4	-0.3
Filled jobs		1,871	+1.2	+2.2
		Percent	Percentage points	
Employment rate		65.1	+0.2	-0.3
Unemployment rate		5.7	+0.3	-0.1
Labour force participation rate		69.0	+0.5	-0.4
Wages at a glance		Level	Percent	
Wage inflation (salary and wage rates, including overtime)	All sectors	1123	+0.4	+1.6
	Private sector	1129	+0.4	+1.8
	Public sector	1107	+0.4	+1.4
LCI analytical unadjusted		1219	+0.6	+2.9
Average ordinary time hourly earnings		\$29.47	+0.3	+2.4
Hours at a glance (figures seasonally adjusted)		Level	Percent	
Average weekly paid hours for FTEs (QES)	Ordinary time	37.62	-0.6	-0.1
	Total	38.32	-0.8	-0.4
Total weekly paid hours (QES)		57.4 (million)	+0.5	+2.3
Total actual weekly hours worked (HLFS)		80.1 (million)	+1.0	+2.5

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Commentary

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- [New Zealand's labour force grows 1.5 percent](#)
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Note about the redevelopment of the Household Labour Force Survey (HLFS)

In this Labour Market Statistics release, we are publishing the last set of results from the current version of the HLFS. A redeveloped version of the survey went into the field to collect data for the June 2016 quarter.

This redevelopment has been done to improve the relevance and quality of our labour force measures. The design of the new HLFS will also provide a better respondent experience when answering the questionnaire.

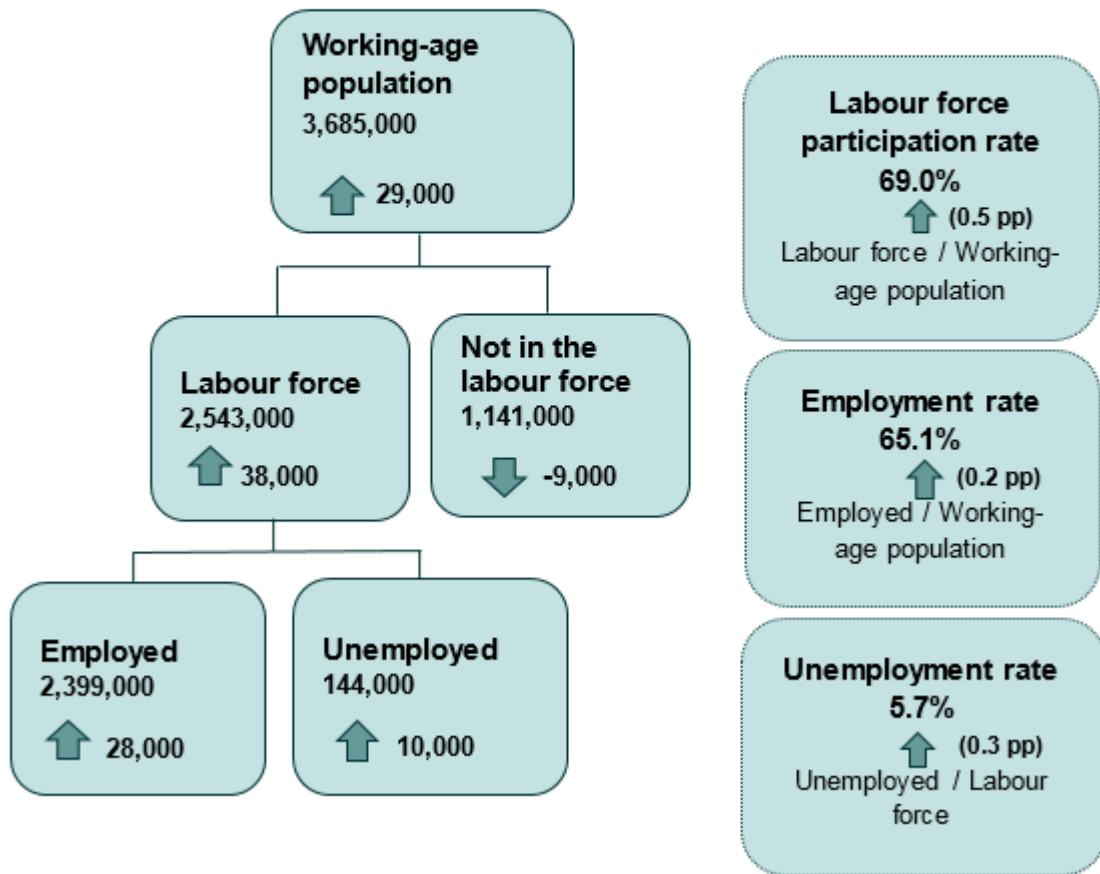
[Improving labour market statistics](#) has more information about the HLFS redevelopment. This page will be the main source of updates on the HLFS redevelopment, including information papers and other relevant data as it becomes available.

New Zealand's labour force grows 1.5 percent

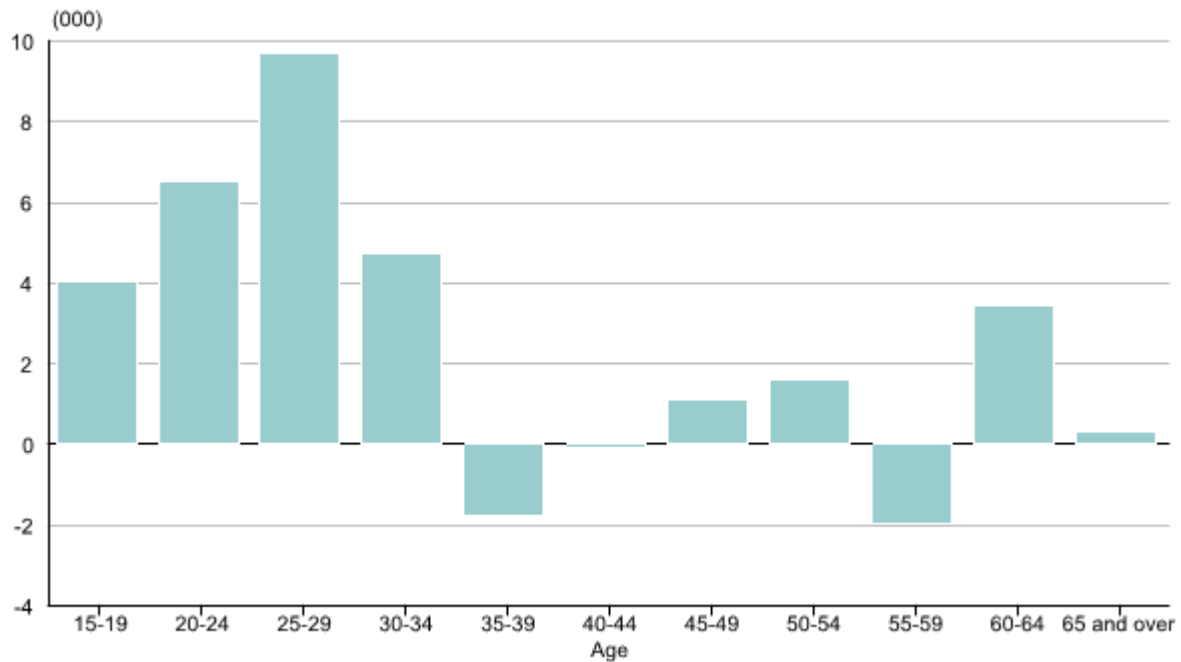
The labour force increased 1.5 percent in the March 2016 quarter, with 38,000 more people in the labour force. This was the largest quarterly growth since December 2004.

The labour force participation rate increased 0.5 percentage points in the March 2016 quarter, up to 69.0 percent. This was the first increase since labour force participation reached a record high of 69.5 percent in December 2014.

Labour market summary
Seasonally adjusted
March 2016 quarter



Quarterly change in labour force by age
December 2015 to March 2016



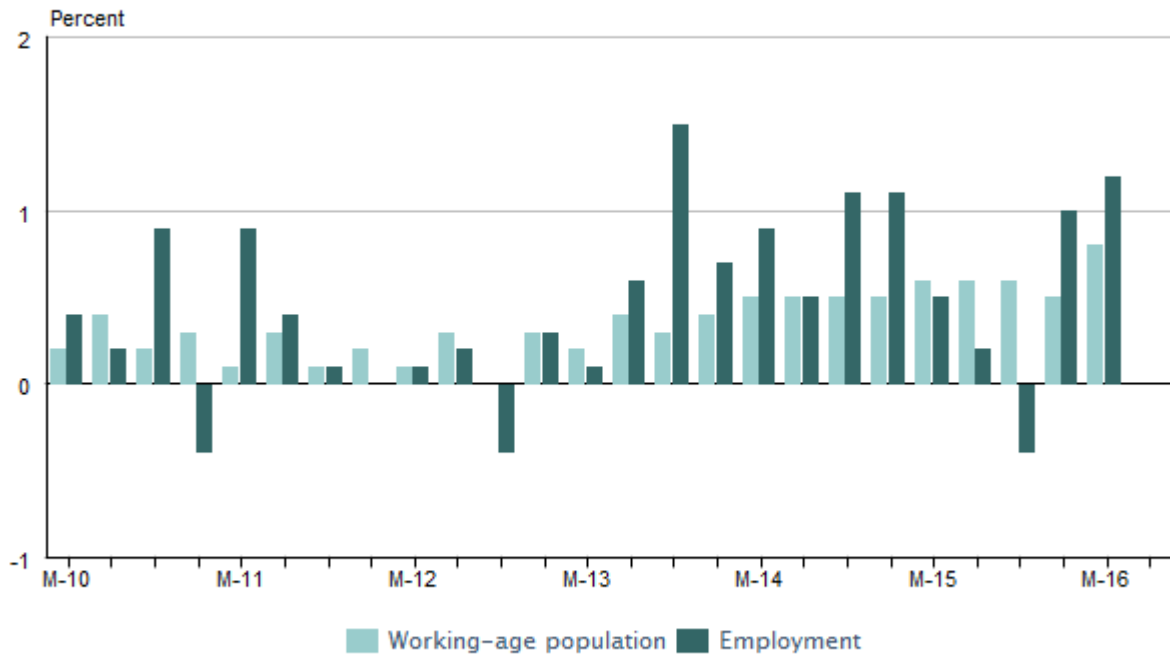
Employment growth exceeds population growth

The working-age population increased 0.8 percent (29,000 people) in the March 2016 quarter, bringing this population up to 3,685,000. This was the largest quarterly growth since the series began in 1986. The largest growth was seen in the younger age groups (20 to 34 years old).

Permanent and long-term migration figures showed a record net gain over the quarter. The net gain in migration figures was a result of more people arriving than departing. New Zealand citizens returning to live in New Zealand accounted for 20 percent of working-age migrant arrivals.

In the March 2016 quarter, the number of people employed increased 1.2 percent (28,000 people). The growth in employment this quarter exceeded the growth in the working-age population, which resulted in an increase in the employment rate of 0.2 percentage points, up to 65.1 percent.

Working-age population and employment
Seasonally adjusted, quarterly



Source: Statistics New Zealand

For the year, New Zealand’s employment growth was 2.0 percent (47,000 people). However, compared with a year ago, New Zealand’s employment rate is down 0.3 percentage points because there was more growth in the working-age population (up 2.5 percent).

Growth in employment rate driven by females in full-time jobs

The employment rate for women increased 0.4 percentage points, up to 60.0 percent, in the March 2016 quarter. The strongest growth in employment for women was in full-time employment, which was up by 10,600 people (1.4 percent). The increase in employment in part-time jobs was less strong, 0.7 percent, which is equivalent to 2,500 more people employed.

The employment rate for men increased 0.1 percentage points, up to 70.5 percent. The biggest growth for men was seen in part-time jobs, up 2.7 percent (4,000 people). There was an increase in full-time employment as well, up 0.7 percent (7,700 people).

Auckland has the strongest growth in employment

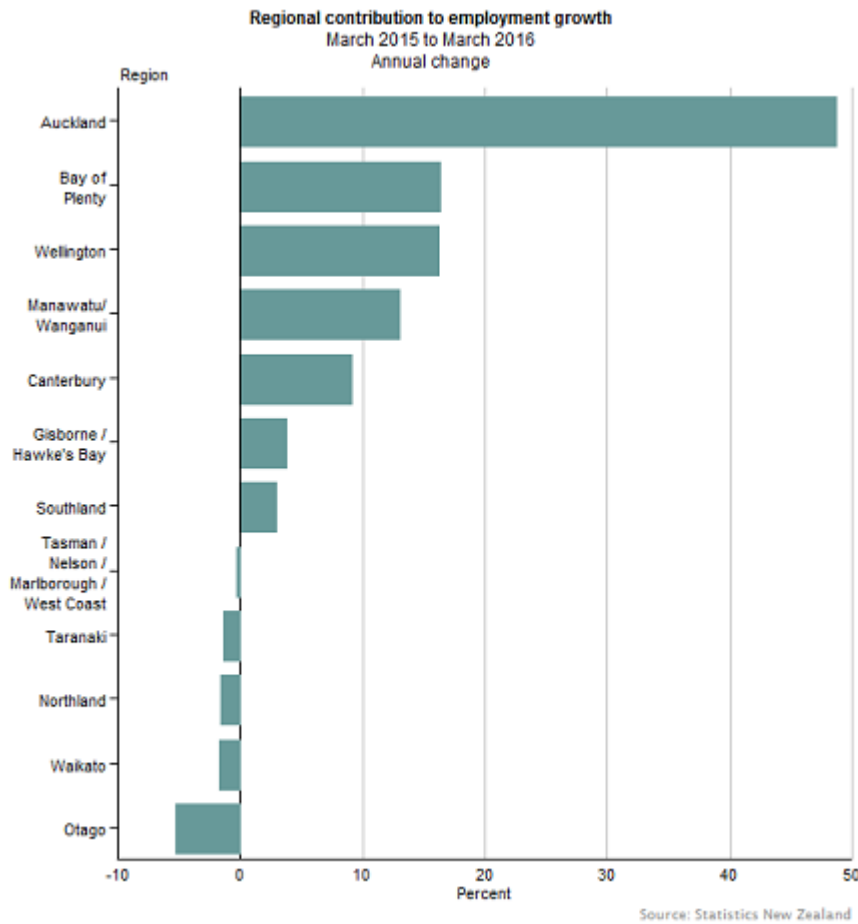
The following two sections refer to unadjusted figures.

Of the total growth in employment in New Zealand over the year to March 2016, 49 percent was in the Auckland region.

There was a significant increase of 23,400 more people employed (2.9 percent). Women in Auckland had employment growth of 4.1 percent over the year. This was twice as strong as the employment growth for men (2.0 percent).

The Bay of Plenty had a significant increase of 5.7 percent in people employed (7,900 people) over the year to March 2016.

The Wellington region had a non-significant increase of 3.0 percent in people employed over the year to March 2016 (7,900 people).



Construction and professional services drive employment growth

The construction industry had a statistically significant increase of 17,500 more people employed over the year to March 2016, which was primarily in the Auckland region. In comparison, there were fewer than a thousand more people employed in Canterbury construction compared with a year ago.

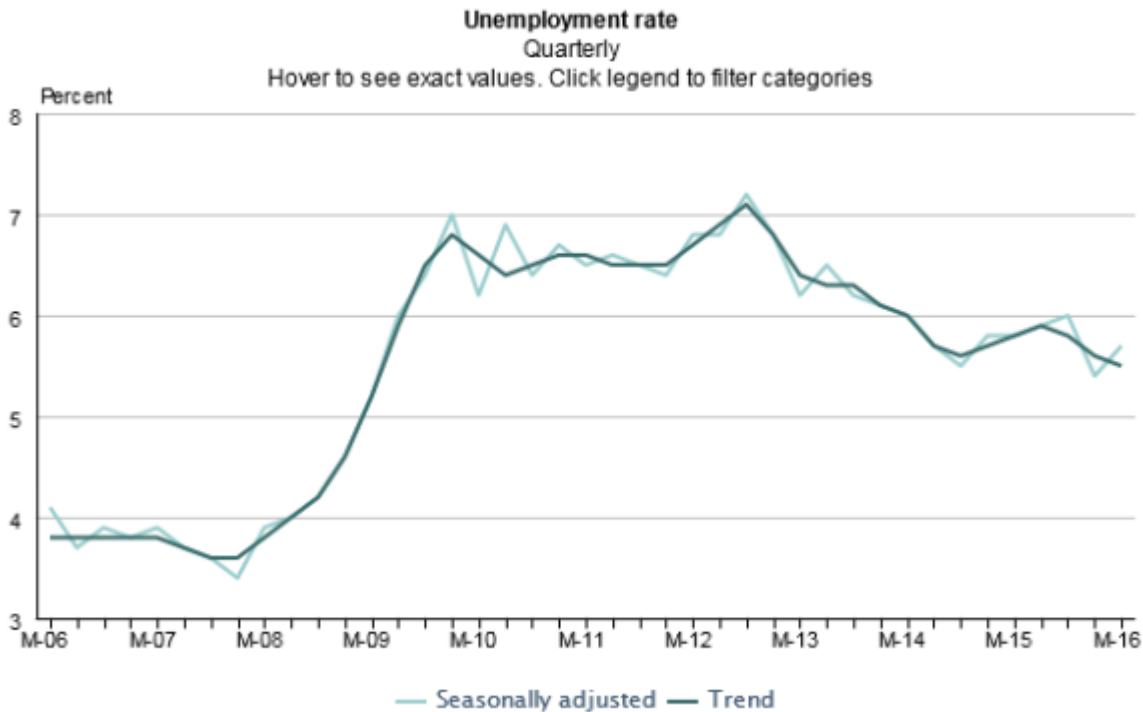
The professional, scientific, technical, administrative, and support services industry had a statistically significant increase of 17,500 people more employed, an increase that was mainly in the Auckland and Wellington regions.

In the Quarterly Employment Survey (QES), which surveys businesses, the following industries had the largest increases in filled jobs for the year to March 2016:

- construction (up 13,800 jobs, 9.6 percent)
- health care and social assistance (up 11,300 jobs, 5.2 percent)
- professional, scientific, technical, administrative, and support services (up 10,500 jobs, 4.2 percent).

Increase in unemployment

The seasonally adjusted number of people unemployed increased, with 10,000 more people in the March 2016 quarter (7.4 percent). The seasonally adjusted unemployment rate increased 0.3 percentage points, up to 5.7 percent, from a revised 5.4 percent last quarter (seasonal adjustment revised this figure).



Source: Statistics New Zealand

The increase in the number of people unemployed came from both women (up 9.6 percent) and men (up 5.2 percent) in the March 2016 quarter. The unemployment rate for females increased 0.4 percentage points (up to 6.2 percent), and the unemployment rate for males increased 0.2 percentage points (up to 5.2 percent).

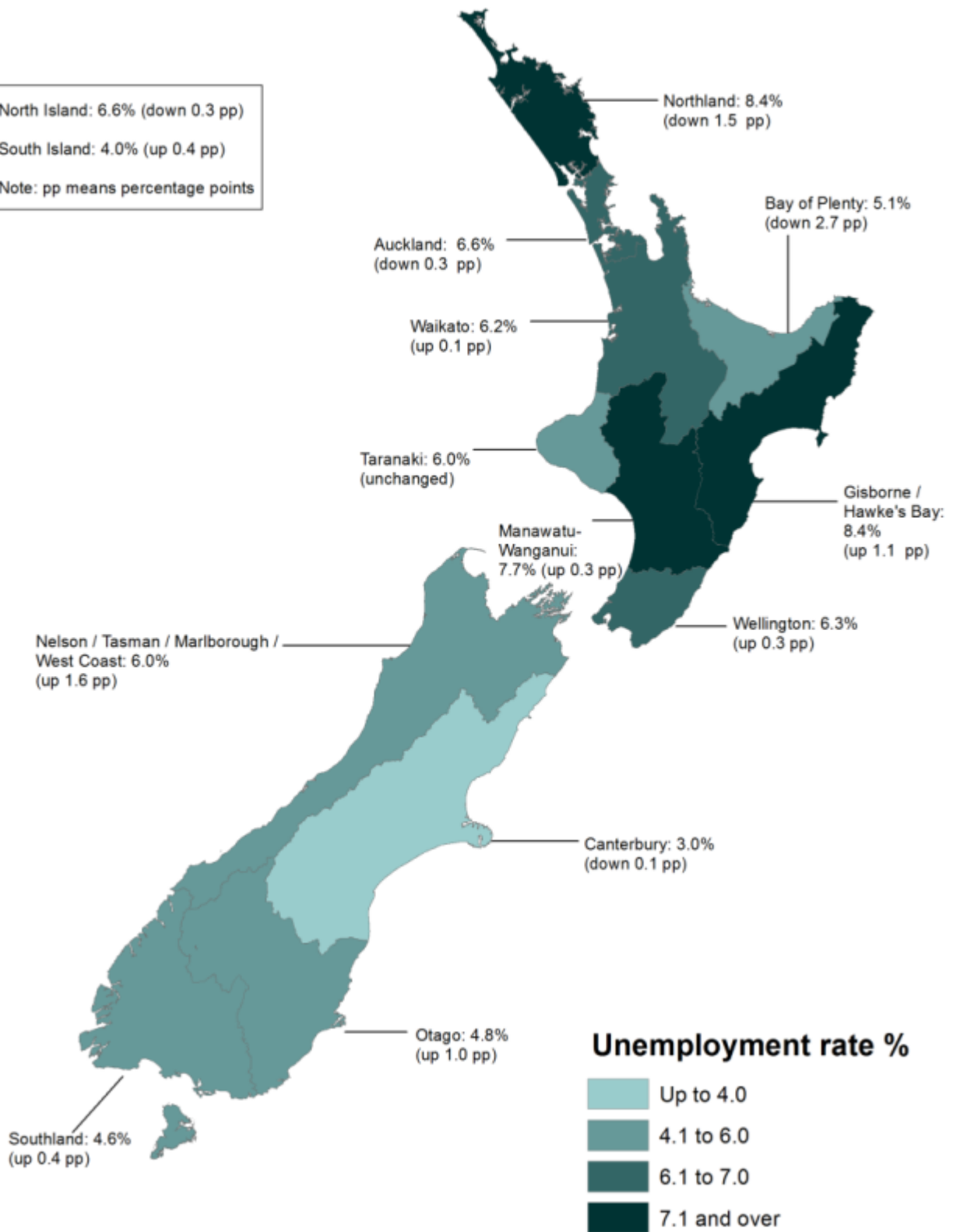
The younger age groups (15–29-year-olds) had the highest increase in unemployment in the March 2016 quarter (up 12.1 percent), an increase of 8,400 unemployed people.

The Bay of Plenty region had a statistically significant decrease in the unadjusted unemployment rate – 2.7 percentage points over the year to March 2016. This brought the unemployment rate in this region down to 5.1 percent, making it the lowest rate in the North Island.

Unemployment rates by regional council area

March 2016 quarter (compared with March 2015 quarter)

North Island: 6.6% (down 0.3 pp)
 South Island: 4.0% (up 0.4 pp)
 Note: pp means percentage points



New Zealand's OECD rankings

With the unemployment rate at 5.7 percent, New Zealand is now 12th in the OECD rankings; down from 10th equal in the December 2015 quarter. This ranks New Zealand lower than the United States and the United Kingdom (with unemployment rates of 4.9 and 5.0 percent, respectively) but above Australia (5.8 percent).

More young men not in employment or education

The seasonally adjusted NEET (not in employment, education, or training) rate increased 1.4 percentage points, up to 12.4 percent, in the March 2016 quarter. This was the highest NEET rate since the March 2013 quarter, when it was 12.8 percent.

The increase in the NEET rate was mainly driven by men – up 2.3 percentage points, to 11.6 percent. This was the largest quarterly increase since the beginning of the series in 2004. The increase for men came mainly from the 15–19-year-old age group, whose NEET rate increased 3.2 percentage points, to 10.2 percent.

The seasonally adjusted NEET rate for women also increased over the quarter – up 0.5 percentage points, to 13.2 percent.

NB: the target population for NEET is relatively small, and therefore has a smaller sample size than some other groups. This data can have higher sample errors, which should be kept in mind when using these estimates.

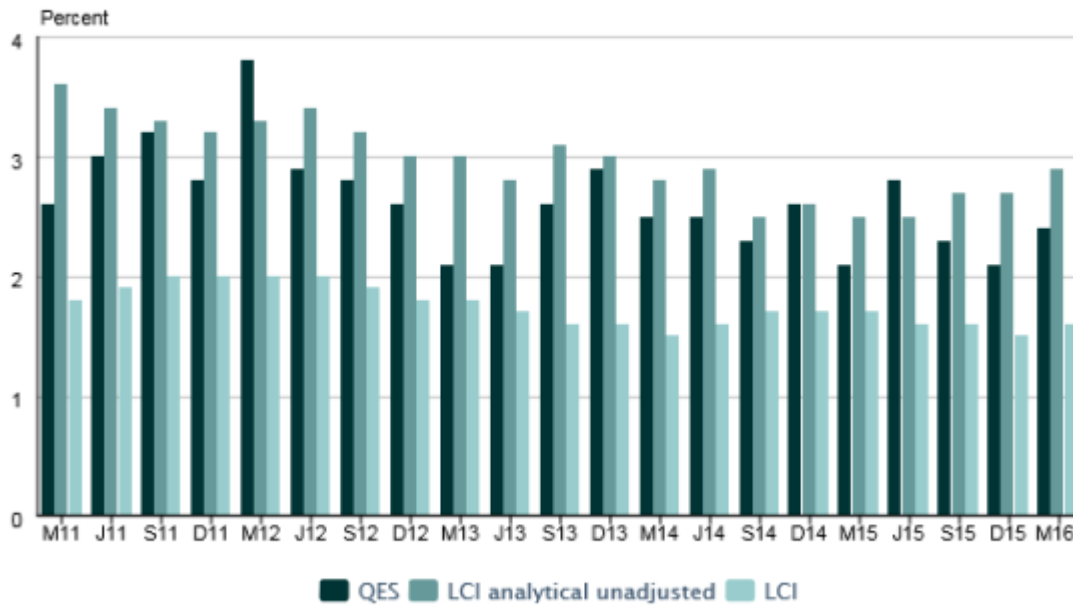
Wage growth remains subdued

All the following movements are for the year to the March 2016 quarter.

The labour cost index (LCI) (including overtime) increased 1.6 percent. (This measure of wage inflation reflects changes in the rates that employers pay to have the same job done to the same standard).

The unadjusted LCI increased 2.9 percent. (This allows for quality changes within occupation as well as wage inflation).

Annual percentage change in salary and ordinary time wage rates
 March 2011 quarter to March 2016 quarter



Source: Statistics New Zealand

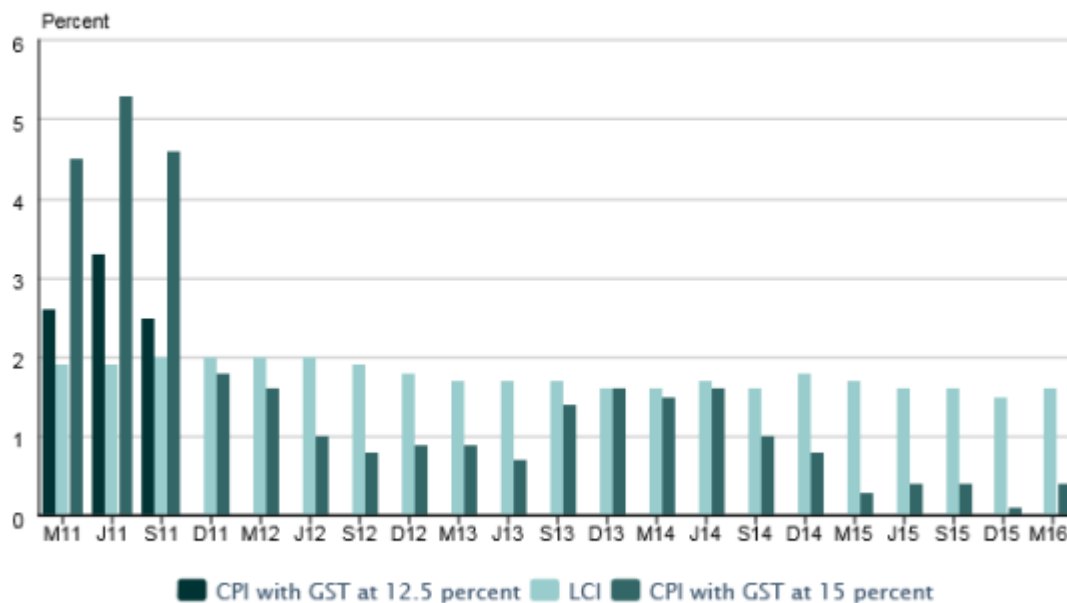
Average ordinary-time hourly earnings, from the Quarterly Employment Survey (QES), increased 2.4 percent, bringing it up to \$29.47. (This measures the average hourly wage bill across all jobs in surveyed industries).

Private sector annual wage growth, as measured in the LCI, increased 1.8 percent, which is stronger than last quarter's 1.6 percent.

Public sector annual wage growth increased 1.4 percent, after having 1.2 percent annual increases for seven of the last eight quarters. The latest annual growth in the public sector came from increases in central government (up 1.4 percent) and local government (up 1.5 percent). This is the largest annual increase for central government since the year to September 2013. The government increase includes wage settlements with the Police and several District Health Boards.

In the year to the March 2016 quarter, prices of goods and services bought by households, as measured by the consumer price index (CPI), increased 0.4 percent. The LCI (including overtime) increased 1.6 percent over the same period.

Annual percentage change in CPI and LCI
March 2011 quarter to March 2016 quarter



Source: Statistics New Zealand

Growth in weekly earnings down on previous quarters

The ordinary time average weekly earnings per FTE, as measured in the QES, increased 2.3 percent over the year to March 2016, up to \$1,110.59. This growth was less strong than the 3.1 percent over the year to December 2015.

Annual mean increase in wages lowest since June 1994

Of all salary and ordinary time wage rates in the LCI sample, 57 percent rose in the year to the March 2016 quarter. Over the quarter, 13 percent of all salary and ordinary time wage rates increased – March quarters usually have the lowest proportion of quarterly increases.

Of the 57 percent that increased over the latest year, there was:

- a mean increase of 2.9 percent (the lowest since the year to the June 1994 quarter, when it was also 2.9 percent)
- a median (middle) increase of 2.2 percent (the lowest since the year to the June 2000 quarter).

Of the 13 percent that increased over the latest quarter, there was:

- a mean increase of 2.9 percent
- a median (middle) increase of 2.0 percent.

Wage growth in the construction industry

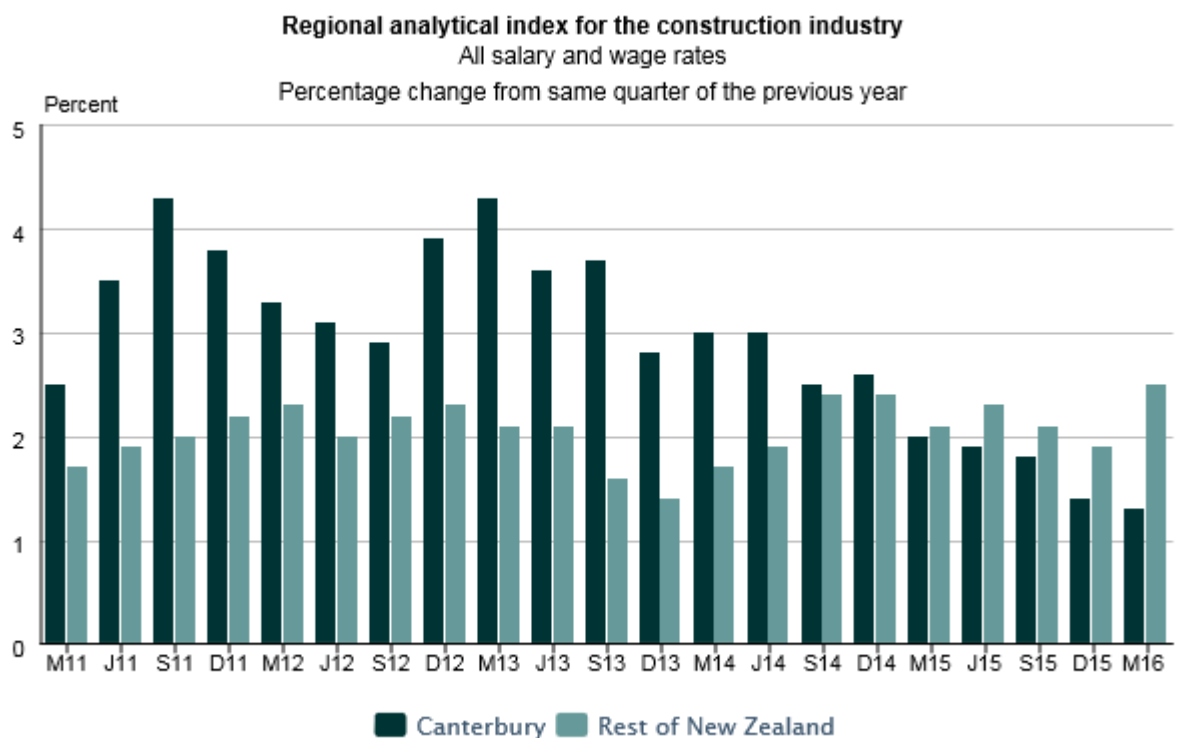
In the year to the March 2016 quarter, salary and wage rate growth (including overtime) in the Canterbury construction industry continued to ease, to 1.3 percent. This is the lowest annual increase since the series began in 2010.

For the rest of New Zealand, wage rate growth in the construction industry rose to 2.5 percent, the highest annual increase since the series began in 2010.

The annual mean increases of the rates that rose for the March 2016 quarter were:

- 3.5 percent for the Canterbury region
- 4.0 percent for the rest of New Zealand.

The annual mean increases in Canterbury construction wage rates have been lower than the mean increases for the rest of New Zealand for the second quarter in a row.



Source: Statistics New Zealand

For more detailed data about labour market statistics, see the Excel tables in the 'Downloads' box.

Definitions

About labour market statistics

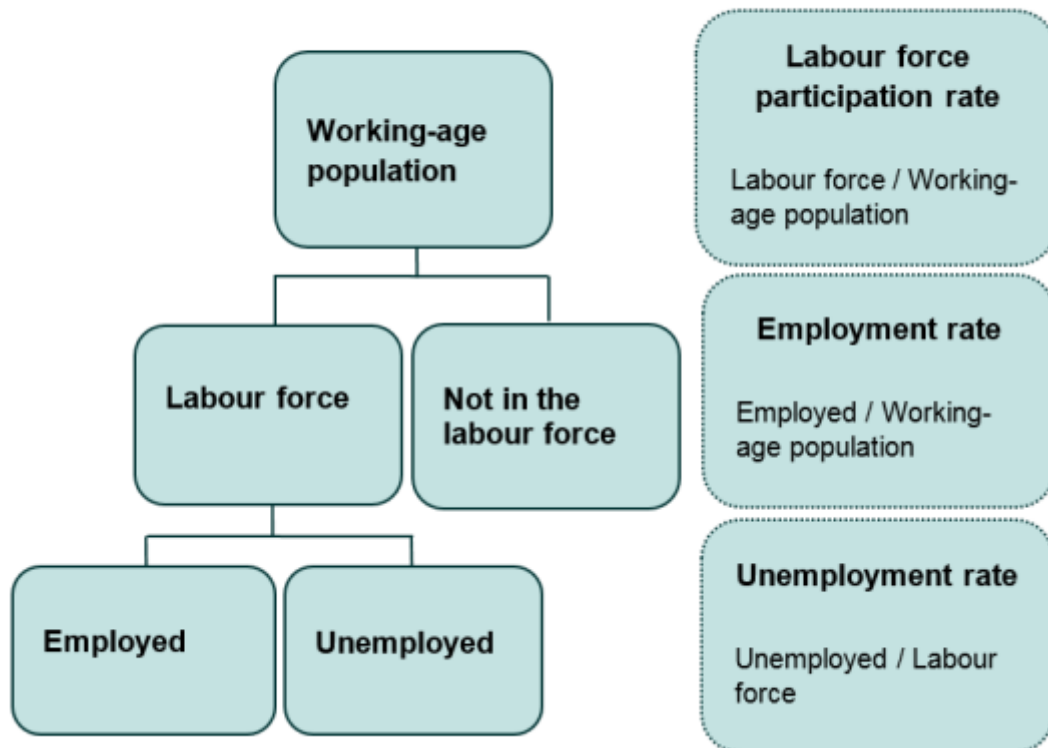
The labour market statistics information release combines data from three surveys to present a broad picture of the labour market.

From the **Household Labour Force Survey (HLFS)** we provide a picture of New Zealand's labour force – these statistics relate to employment, unemployment, and people not in the labour force.

The **Quarterly Employment Survey (QES)** estimates the demand for labour by New Zealand businesses – the levels and changes in employment, total weekly gross earnings, total weekly paid hours, average hourly and average weekly earnings, and average weekly paid hours in the industries we survey.

The **Labour Cost Index (LCI)** measures changes in salary and wage rates for a fixed quantity and quality of labour input. It is a measure of wage inflation, reflecting changes in the rates that employers pay to have the same job done to the same standard.

Overview of the labour market



[Labour force categories used in the Household Labour Force Survey](#) has more information.

More definitions

Business Register: the list of all economically significant enterprises in New Zealand, which is maintained by Statistics NZ.

Employed: people in the working-age population who, during the reference week, did one of the following:

- worked for one hour or more for pay or profit in the context of an employee/employer relationship or self-employment
- worked without pay for one hour or more in work which contributed directly to the operation of a farm, business, or professional practice owned or operated by a relative
- had a job but were not at work due to: own illness or injury, personal or family responsibilities, bad weather or mechanical breakdown, direct involvement in an industrial dispute, or leave or holiday.

Employment rate: the number of employed people expressed as a percentage of the working-age population. The employment rate is closely linked to the working-age population definition.

Enterprise: a business or service entity operating in New Zealand.

Filled jobs: the total number of full-time jobs, part-time jobs, and working proprietors.

Full-time equivalent (FTE) jobs: the total number of full-time jobs plus half the number of part-time jobs. Does not include working proprietors.

Full-time jobs: jobs where the employee works for 30 hours or more per week.

Full-time/part-time status: full-time workers usually work 30 hours or more per week, even if they did not do so in the survey reference week because of sickness, holidays, or other reasons. Part-time workers usually work fewer than 30 hours per week.

Hours worked: actual hours are the number of hours a person worked in the reference week (including overtime). Usual hours refers to the number of hours a person normally works in a week (including overtime).

Index reference period: the benchmark with which prices in other periods are compared (eg if the index number in a later period is 1150, prices have increased by 15.0 percent since the index reference period). Prices for later periods can also be compared in the same fashion. The LCI has an index reference period of the June 2009 quarter (=1000).

Industry: determined from the Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006. Businesses in QES are classified using ANZSIC06 industries. See ANZSIC 2006 – industry classification for more information about ANZSIC06 and its implementation into the QES and other Statistics NZ collections.

Jobless: people who are either officially unemployed, available but not seeking work, or actively seeking but not available for work. The 'available but not seeking work' category is made up of the 'seeking through newspaper only', 'discouraged', and 'other' categories.

Labour force: members of the working-age population, who during the survey reference week, were classified as 'employed' or 'unemployed'.

Labour force participation rate: the total labour force expressed as a percentage of the working-age population. Labour force participation is closely linked to how the working-age population is defined.

NEET (not in employment, education, or training): young people aged 15–24 years who are unemployed (part of the labour force) and not engaged in education or training, and those not in the labour force and not engaged in education or training for many reasons.

NEET rate: the total number of youth (aged 15–24 years) who are not in education, employment, or training (NEET), as a proportion of the total youth working-age population.

Not in the labour force: any person in the working-age population who is neither employed nor unemployed. For example, this residual category includes people who:

- are retired
- have personal or family responsibilities such as unpaid housework and childcare
- attend educational institutions
- are permanently unable to work due to physical or mental disabilities,
- were temporarily unavailable for work in the survey reference week
- are not actively seeking work.

Part-time jobs: jobs where the employee works for less than 30 hours per week.

Price index: measures the change in price between time periods for a given set of goods and services. It summarises a set of prices for a variety of goods and services collected from a number of outlets.

Seasonally adjusted series: removes the seasonal component present when dealing with quarterly data. Seasonal patterns obscure the underlying behaviour of the series.

Statistically significant: statistical assessment of whether a change in the series is systematic or simply due to chance. Systematic movements occur when the change is greater than its respective sampling error.

Trend series: removes both the seasonal and irregular component of the series and reveals the underlying direction of movement in a series.

Unemployed: all people in the working-age population who, during the reference week, were without a paid job, available for work, and had either actively sought work in the past four weeks ending with the reference week, or had a new job to start within the next four weeks.

Unemployment rate: the number of unemployed people expressed as a percentage of the labour force.

Working proprietors: includes sole proprietors, partners, or shareholders in a limited liability company who actively engage in the business or its management. Please note that working proprietors in businesses with no employees are outside the scope of the QES and are not included in the estimate of filled jobs.

Working-age population: the usually resident, non-institutionalised, civilian population of New Zealand aged 15 years and over.

Related links

Next release

Labour Market Statistics: June 2016 quarter will be released on 3 August 2016.

[Subscribe to information releases](#), including this one, by completing the online subscription form.

[The release calendar](#) lists information releases by date of release.

Past releases

[Labour Market Statistics](#) has links to past releases (from December 2014 quarter).

[Household Labour Force Survey](#) has links to past releases.

[Quarterly Employment Survey](#) has links to past releases.

[Labour Cost Index \(Salary and Wage Rates\)](#) has links to past releases.

Related information

[Improving labour market statistics for information](#) (including papers and other relevant data) on the Household Labour Force Survey redevelopment

[Household Labour Force Survey population rebase from 2013 Census: Includes regional benchmarks](#) for the revised HLFS results, which provides information on the recent population rebase.

[A guide to unemployment statistics \(second edition\)](#) (published 2014) provides guidance to data users on the different features of four unemployment measures.

[User guide for wage and income measures](#) (published 2013) has more information on the various Statistics NZ income and wage measures.

[Extended region and age series now available](#) (published 2014) introduces two key classifications in response to our users' needs.

[Future of the Household Labour Force Survey](#) (published 2014) outlines changes to the HLFS and how these changes will affect the survey from mid-2016 onwards.

[See Employment and unemployment](#) for more reports and articles about New Zealand's labour market.

Data quality

Period-specific information

This section is for information that changes between periods.

- [Response rates](#)
- [Rounding in LCI](#)

General information

This section has information about data that does not change between releases.

- [Comparison between HLFS and QES](#)
- [Comparison between LCI and QES](#)
- [Data sources](#)
- [Survey samples](#)
- [Coverage](#)
- [Weights](#)
- [Outliers](#)
- [Sampling errors](#)
- [Classifications](#)
- [Imputation](#)
- [Seasonal adjustment](#)
- [Rounding](#)
- [LCI-specific information](#)
- [More information](#)

Period-specific information

Response rates

Survey	Reference period	Response rate	Sample rate
HLFS	Each week during the quarter (3 January 2016 – 2 April 2016)	Target: 90 percent Achieved: 86.6 percent	Target: 76 percent Achieved: 74.9 percent
QES	The pay week ending on, or before, 19 February 2016	Target: 89 percent Achieved: 87.7 percent	N/A
LCI	Pay rates at 15 February 2016	Target: 94 percent Achieved: 95.4 percent	N/A

HLFS

See [New quality measures for the Household Labour Force Survey](#) for more information on the sample rate and response rates.

QES

In the March 2016 quarter, there were 16,509 businesses in the final sample for the Quarterly Employment Survey. Due to a system issue, 2.6 percent of these businesses were originally excluded from the sample and were not sent survey requests. The result of these businesses not receiving surveys was a slightly lower response rate than usual, and a slightly higher number of units being imputed for. The response rate by weighted FTEs achieved for the remaining sample was 90.2 percent, above the targeted response rate of 89 percent. We applied the standard imputation method to the units that did not receive survey requests, to impute for their missing data.

Rounding in LCI

We round index numbers to the nearest index point, which affected some percentage increases in the March 2016 quarter. Below is a table of percentage changes calculated on rounded and unrounded index numbers.

Percentage changes calculated from rounded and unrounded index numbers, March 2016 quarter				
	Quarter percentage change		Annual percentage change	
	rounded	unrounded	rounded	unrounded
All salary and wage rates				
All sectors	0.4	0.4	1.6	1.7
Public sector	0.4	0.3	1.4	1.3
Central government	0.4	0.3	1.4	1.3
Ordinary time wage rates				
Private sector	0.4	0.4	1.8	1.7
Public sector	0.4	0.3	1.4	1.3
Central government	0.4	0.3	1.3	1.3

General information

Comparison between HLFS and QES

Use

HLFS – measures the number of people employed from an individual perspective. Measures the number of hours people usually and actually work. Regional estimates are more robust due to how they are weighted.

QES – use when wanting to measure the number of filled jobs from a business's perspective, or when wanting to measure the number of hours businesses pay for.

Coverage

HLFS – includes agricultural workers, self-employed workers, unpaid family workers, and those on unpaid leave among the employed. Limited to the working-age population, aged 15 years and older.

QES – jobs filled by overseas workers resident in New Zealand for less than 12 months are included. Filled jobs are not limited by age.

Reference period

HLFS – surveys all weeks of the quarter.

QES – based on a reference week in the middle of the quarter.

Comparison between LCI and QES

Use

LCI – measures changes in wage inflation.

QES – measures the change in hourly earnings a business has to pay on average across all jobs.

Coverage

LCI – jobs filled by paid employees in all occupations and in all industries except private households employing staff.

QES – does not include the earnings of those working in agriculture, fisheries, or earnings from self-employment.

Measures

LCI

- Adjusted LCI measures the rates employers pay to have the same job completed to the same standard.
- Controls for changes in sector, industry, and occupation by assigning fixed weights. Weights reflect relative importance of job descriptions for different combinations of sectors of ownership, occupation, and industry.
- Unadjusted LCI measures the rates employers pay to have the same job completed to a differing standard (allowing the quality of labour within occupations to improve).

QES

- Reflects changes in composition of paid workforce, and changes to earnings paid by surveyed businesses within industries, and between industries.
- Compositional effects between industries can affect the QES when industries with higher or lower earnings than the average total hourly earnings for all industries change in relative importance (eg make up a bigger share of the total hours).
- Compositional changes within industries can affect the QES, as the composition of the paid workforce is reflected (eg the occupations that firms hire).

Data sources

HLFS

We source HLFS data through surveying and interviewing across a period of 13 weeks. The information obtained relates to the week before the interview. We first interview respondents face-to-face at their home. Subsequent interviews are by telephone wherever possible. Respondents can also file self-completed questionnaires.

Where practicable, we obtain information directly from each household member. Otherwise, a proxy interview is conducted, in which we obtain details from another adult in the household.

QES

Data source is quarterly electronic and postal surveys. We collect quarterly data from businesses for the middle month of the respective quarter.

LCI

A quarterly postal survey of employers provides data for a fixed set of job descriptions. Each quarter, we survey salary and wage rates for what employers pay at the 15th of the middle month of the quarter.

Survey samples

HLFS

The sample contains about 15,000 private households and about 30,000 individuals each quarter. We sample households on a statistically representative basis from areas throughout New Zealand. The HLFS is sampled so that is representative of geographic region, urban and rural areas, ethnic density, and socio-economic characteristics of the population.

Households stay in the survey for two years. Each quarter, one-eighth of the households in the sample is rotated out and replaced by a new set of households.

Following every census we review the HLFS sample. After the 2013 Census, we implemented an improved sample design.

The new sample will be rolled in over eight quarters. Each quarter, one-eighth of the households in the old sample is rotated out and replaced by a set of households in the new sample. By changing the sampling units one rotation group at a time, we reduce the risk of affecting the labour force outcomes. The first set of respondents in the improved design was rotated in for the December 2014 quarter.

Every quarter we monitor the quality of the sample. We did not find any evidence to suggest the new rotation group was driving unexpected movements in labour force outcomes.

QES

Sample of approximately 18,000 business locations selected from a population of economically significant enterprises in surveyed industries.

LCI

We collect salary and ordinary time wage rates for about 6,000 job descriptions each quarter (and nearly 1,000 overtime descriptions).

Approximately 2,000 businesses provide information.

Coverage

HLFS

The target population for the HLFS is the civilian, usually resident, non-institutionalised population aged 15 years and over. The statistics in this release do not cover:

- long-term residents of homes for older people, hospitals, and psychiatric institutions
- inmates of penal institutions
- members of the permanent armed forces
- members of the non-New Zealand armed forces
- overseas diplomats
- overseas visitors who expect to be a resident in New Zealand for less than 12 months.

QES

The QES samples economically significant enterprises in surveyed industries. An economically significant enterprise is one that meets at least one of the following criteria:

- has greater than \$30,000 annual GST expenses or sales
- has at least three employees for its rolling mean employment (the average employee count over the previous 12 months)
- recorded over \$40,000 of income in the IR10 annual tax return
- is part of a group of enterprises
- is a new GST registration that is compulsory, special, or forced
- is registered for GST.

The QES does not include data from the agriculture, fisheries, and several smaller industries.

LCI

Jobs filled by paid employees in all occupations and in all industries except private households employing staff. We extended coverage to include jobs filled by paid employees aged under 15 years when the index was reweighted and re-expressed on a base of the June 2001 quarter (=1000).

Weights

HLFS

Obtaining a sample that represents the population is essential when it comes to producing reliable labour force estimates. The HLFS goes through three stages of weighting to achieve this.

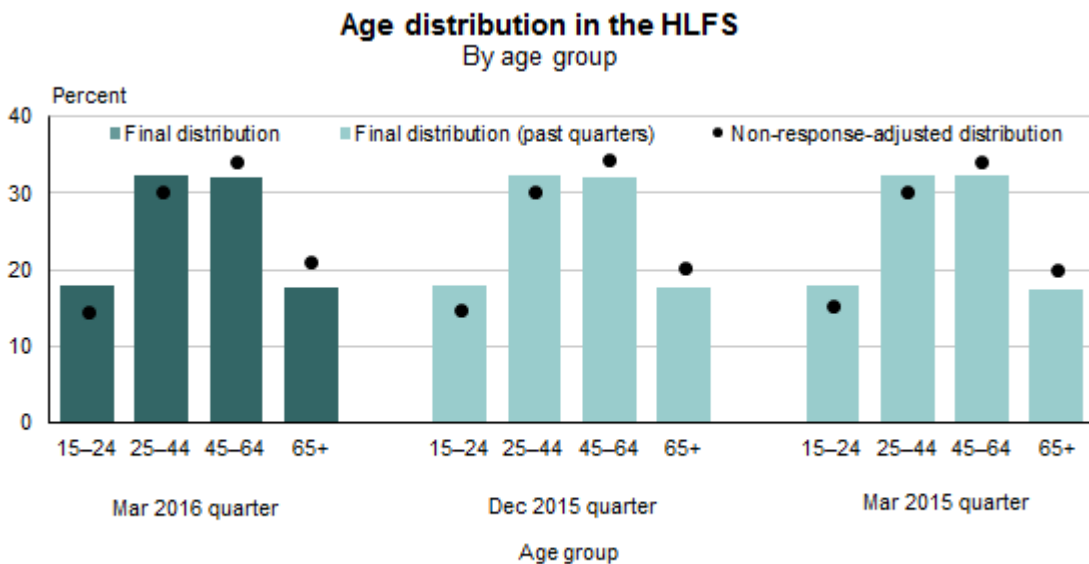
First, we give every household in the HLFS sample an initial weight. This is based on the probability of the household being selected for the survey. Currently the HLFS is in a period of sample transition, where we are replacing existing sampling units with units drawn using a different design and frame. The sample transition will occur between the December 2014 and September 2016 quarters. This will affect the probabilities of a given household being selected into the survey. We apply an adjustment to the initial weights during the transition period to use data collected from both new and existing sampling units.

Second, this weight is adjusted, by month and region, for households that did not respond. This results in a 'non-response-adjusted' weight.

Third, we adjust the sample weights to known population benchmark totals (calibration process). The HLFS benchmarks are: overall sex by five-year age groups, Māori by sex by age group, and the 12 regions. This process results in a final weight for each household.

Pre- and post-calibration weight

The following figure shows that while the distribution of the pre- and post-calibration weights differs within a quarter, the difference between the weights typically does not change from quarter to quarter.



Source: Statistics New Zealand

The undercoverage rate indicates how representative the pre-calibrated sample is. The higher the undercoverage rate, the less representative the pre-calibrated sample.

Usually the undercoverage rate in the HLFS is around 20 percent. The overall undercoverage rate for the HLFS in the March 2016 quarter was 19.2 percent. This compares with 19.8 percent in the December 2015 quarter and 16.9 percent in the March 2015 quarter.

QES

We allocate weights to each of the selected business locations. These represent the population weights based on employee counts sourced from the Business Register.

LCI

Each job description used in calculating the index is assigned a weight that reflects the relative importance of the job description within its sector of ownership, industry, and occupation group.

Weights were calculated using: 2013 Census of Population and Dwellings information on the relative importance of occupations within each sector by industry group, Business Register

(previously known as Business Frame) information on the relative importance of industry groups within each sector, and pay rates surveyed in the June 2014 quarter.

Outliers

During the seasonal adjustment process, X-13-ARIMA-SEATS can give less weight to the irregular component. Specifically, if the estimated irregular component at a point in time is sufficiently large compared with the standard deviation of the irregular component as a whole, then the irregular component at that point can be downweighted or removed completely and re-estimated. We refer to such observations as partial- and zero-outliers, respectively. In practice, the downweighting of outliers does little to seasonally adjusted data, but the impact of the outliers on the trend series will generally be reduced. However, if an outlier ceases to be an outlier as more data becomes available, then significant revisions to the trend series become possible.

The table below shows any partial (P) and zero (Z) outliers for the last year of each time series.

Outliers						
Quarters	Male employed	Female employed	Male unemployed	Female unemployed	Male not in the labour force	Female not in the labour force
Jun 2015						
Sep 2015	Z					
Dec 2015				P		
Mar 2016						

Sampling errors

Survey data is subject to two types of possible error: sampling error and non-sampling error.

Sampling error is a measure of variability that occurs by chance because we survey a sample of eligible businesses, rather than the entire population. The magnitude of the sampling error is controlled by the size of the sample and sound sample selection practice.

Non-sampling error includes errors arising from biases in the patterns of response and non-response, inaccuracies in reporting by respondents, errors introduced by modelled data, and errors in the recording and coding of data. Non-sampling error is, by definition, difficult to measure. The magnitude of non-sampling error is not measured.

If a movement is larger than its corresponding sampling error, it is statistically significant.

HLFS

Sampling errors are calculated using the jackknife method. It is based on the variation between estimates of different subsamples taken from the whole sample.

When we conduct a proxy interview, more than 90 percent of related people answer correctly for key variables. A typical proxy rate in the HLFS is around 30–35 percent. This excludes quarters when a supplement was attached to the HLFS.

QES

Sampling errors are calculated using the Horvitz Thompson method.

LCI

Based on a purposive sample (ie based on judgement); sampling errors are difficult to estimate.

Classifications

The labour market statistics release includes specific statistics about industry, occupation, study, ethnicity, and region. This section lists the classifications we use for these statistics.

- Industry statistics (NZSIOC, based on ANZSIC06): see [Industrial classification](#) for more information
- Occupation statistics (ANZSCO): see [occupation](#) for more information
- Skill level (ANZSCO): see [skill levels of New Zealand jobs](#) for more information
- Māori benchmarks see [Household Labour Force Survey Population Rebase: December 2008 quarter](#) for more information
- Region: see [regional council](#) for more information
- Total response ethnicity: see [Statistical Standard for Ethnicity – 2005](#) for more information

Email info@stats.govt.nz for further information about the classifications we use.

Imputation

Imputation is the process of estimating data for surveyed respondents or businesses that do not respond.

HLFS

We impute for people who have missing values for their sex, age, or full-time employment variables (ie whether the respondent is in or seeking full-time or part-time employment).

QES

Ratio imputation – used for businesses entering the sample in the current quarter. We use employee count from the Business Register to impute.

Historical imputation – used for ongoing businesses. Data is imputed by multiplying the previous quarter's data by the average movement of responding businesses of similar characteristics.

LCI

We carry forward the previous price for the relevant position that did not reply.

Email info@stats.govt.nz for further information about the imputation methods, or the effects of imputation on the final dataset.

Seasonal adjustment

For any series, we can break the estimates down into three components:

- trend (direction of the series) – for example, women increasing their labour force participation over time
- seasonal (typical calendar events) – for example, a large pool of students looking for work in the summertime
- irregular (random movements) – for example, increase in employment for a one-off event.

Seasonally adjusted series have the seasonal component removed. Trend series have both the seasonal and irregular components removed, and reveal the underlying direction of movement in a series.

We revise seasonally adjusted figures each quarter. This enables the seasonal component to be better estimated and then removed from the series.

See [Seasonal adjustment in Statistics New Zealand](#) for more information.

Rounding

HLFS

We round seasonally adjusted and trend series to the nearest thousand. Unadjusted series are rounded to the nearest hundred. We calculate quarterly and annual changes for figures on unrounded numbers. The one exception is percentage-point changes – which are based on rounded figures.

QES

Filled jobs, FTEs, total hours, and total earnings are rounded to the nearest hundred. Average hours, average earnings, and hourly earnings are rounded to two decimal places.

LCI

Index numbers are rounded to the nearest whole number. We calculate percentage changes on rounded numbers. For this reason, total percentage changes for an index may not appear consistent with the percentage changes for its components.

LCI-specific information

Index calculation formula and base

We calculate the LCI using the price-relatives form of the base-weighted Laspeyres formula, and express it on a base of the June 2009 quarter (=1000). The index's calculation base is periodically updated to reflect changes in the sector of ownership of organisations.

Quality control

The LCI is a quality-controlled measure. Only changes in salary and wage rates for the same quality and quantity of work are reflected in the index. We achieve this by asking respondents to provide reasons for movements in salary and wage rates. If a movement is due to more than one

reason, we also ask the respondents to indicate how much of the movement is due to each reason.

In theory, these job descriptions should remain fixed between index revisions. In practice, many descriptions change over time, usually as a result of changes to contractual arrangements or because specific employees are being tracked through time. If a newly negotiated contract involves an increase in the number of ordinary time hours worked per week, then we amend the description and an adjustment is made to ensure that the pay rate movement used in the index relates to the same quantity of work as specified in the new contract.

Similarly, rates being paid for job descriptions in the survey may change partly or wholly because employees undertaking these jobs have become more experienced, more (or less) proficient or productive, better qualified, have taken on additional responsibilities, or have been promoted. Components of salary and wage rate movements that are due to changes of this type in the quality of work are not reflected in index movements. The policy of excluding increases due to service increments and merit promotions is consistent with this approach.

We also exclude one-off payments in lieu of pay rises, as they do not result in changes to pay rates, as such.

Regular fixed allowances and regular fixed bonuses are included in surveyed pay rates. Where included, these are specified in job descriptions. However, we exclude payments such as commissions and irregular bonuses, as these payments are usually performance related.

In instances where allowances, penal rates, and other payments (eg commissions), which have not previously been included in surveyed rates, are incorporated into base rates, only the overall effect of such changes is reflected in the index.

Contract indexation

Parties that engage in commercial contracts use a range of price indexes produced by Statistics NZ in their indexation clauses (also known as contract escalation clauses). An indexation clause provides both parties to a contract with an agreed procedure for adjusting an originally contracted price, to reflect changes in costs or prices during the life of the contract.

Contract indexation: A Guide for Businesses (published 2009) provides information on the price indexes we produce and issues relating to their use in indexation clauses. The guide also outlines some points to consider when preparing an indexation clause, and includes an example of the mechanics of a simple indexation formula.

Analytical unadjusted series

An analytical unadjusted index series, based on ordinary time pay rates collected in the LCI sample, is available in the tables of this release (see the 'Downloads' box). The analytical unadjusted series is an additional measure intended to complement the official LCI and QES indicators and provide customers with a fuller picture on the wages front. The analytical unadjusted series is not affected by relative employment shifts between industries and between occupations, but, in addition to price change, it does reflect quality change within occupations.

In simple terms, the approaches we take in compiling the published and analytical unadjusted series are summarised as:

Published index:

- often tracks employees, but does not show performance-related increases or service increments
- commonly links in new employees (without showing change).

Analytical unadjusted index:

- often tracks employees, and shows performance-related increases and service increments
- shows any change when new employees replace incumbents.

The LCI is a price index that measures change in pay rates for a fixed quality and quantity of labour input. We show price-related change in rates reported by respondents, such as those to reflect the cost of living, to match market rates, to retain staff, and to attract staff. We don't show changes in reported rates that are the result of service increments, merit promotions, increases (and decreases) relating to the performance of individual employees, and change in hours worked are not shown in the index, as they are considered to represent quality or quantity change.

The analytical unadjusted index retains fixed weights for occupations within industries, within sectors of ownership, but is based on a matched sample of reported rates for the previous and current quarters before quality control. In addition to price change, it reflects quality change within occupations, such as change in the performance of individual employees, change in the qualifications, responsibility, or experience of employees filling surveyed positions, and the effect of different employees replacing incumbent employees in surveyed positions at lower or higher rates.

Rates for which the pay periods reported by respondents (eg per year, week, or hour) differ from those for the previous period, and rates where change is wholly or partly due to change in hours worked, are excluded from the matched sample. Typically, we exclude between 1 and 2 percent of surveyed rates from the unadjusted index each quarter for these reasons.

We calculate the analytical unadjusted index using a matched sample of reported rates for the previous and current quarters. Expenditure weights are used to weight movements in reported rates from the previous quarter to the current quarter. To derive the expenditure weights, we use the price changes (after quality control) of job positions in the sample (from the base period to the previous quarter) to scale base-period expenditure weights (which are then assigned to job positions in the sample).

Note: the LCI is designed to measure change in pay rates for a fixed quality and quantity of labour input. The sample of surveyed pay rates is not particularly suitable for preparing a measure that includes quality change. This is due in part to the fact that some positions in the survey follow individual employees (with corresponding pay rates subject to both quality and price change) and some positions specify particular points on pay scales (which are usually subject only to price change). In general, we track individual employees for positions surveyed in the private sector, and for positions surveyed in the public sector there is a mix of points on pay scales and individual employees being tracked.

The analytical unadjusted index reflects quality change within occupations. How well this is measured partly depends on how well the sample represents entrances and exits of employees, and on whether the sample replacement practice is unbiased in this regard (eg in some cases, replacement employees are incumbent employees filling other positions rather than new

employees filling the existing positions – this can happen when there is a delay filling vacancies in surveyed positions). In addition, the analytical unadjusted index tends to reflect the effect of turnover in, and the cessation of, existing positions, but not the price and/or quality effect associated with employees being hired to fill new positions. An unadjusted measure designed from scratch might use the average pay rate, within each surveyed firm, of all employees filling jobs in each surveyed occupation.

The published LCI is a fixed-weight price index that measures changes in pay rates for a fixed quality and quantity of labour input. The index is not affected by relative shifts in the occupational and industrial composition of the pool of paid employees. It is useful in the context of the extent to which changes in businesses' input labour costs might put pressure on the output prices they charge for goods and services.

The analytical unadjusted LCI series has fixed weights for occupations within industries, within sectors of ownership, so is not affected by relative employment shifts between industries and occupations. However, it does reflect quality shifts within occupations. The index uses weights based on the mix of employment in occupations and industries evident in 2013.

It does not take account of the effect of any subsequent shifts in the mix of employment in occupations and industries. In addition, it will not reflect:

- the effect of very new or emerging occupations and industries
- the effect of employers mitigating the effect of skill shortages by substituting away from occupations showing high relative price change to occupations showing lower relative price change (eg from carpenter to builder's labourer, or from registered nurse to nurse aide).

Timing of published data

Labour market statistics are published within six weeks after the end of the quarter's reference period.

Confidentiality

Only people authorised by the Statistics Act 1975 are allowed to see your individual information, and they must use it only for statistical purposes. Your information is combined with similar information from other people, households, or businesses to prepare summary statistics.

More information

Household Labour Force Survey – information releases

Find links to previous releases and information about the data.

Quarterly Employment Survey – DataInfo+

Explains general methodology used to produce quarterly employment survey statistics, and related metadata.

Principles and protocols for producers of Tier 1 statistics

Statistics in this release have been produced in accordance with the Official Statistics System principles and protocols for producers of Tier 1 statistics for quality. They conform to the Statistics NZ Methodological Standard for Reporting of Data Quality.

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Revisions

Revisions to Household Labour Force Survey

Each quarter, we apply the seasonal adjustment process to the latest quarter and all previous quarters. Every estimate is subject to revision each quarter as new data is added, which means that seasonally adjusted estimates for previous quarters may change slightly. In practice, estimates more than two years from the end-point will change little.

The December 2015 quarter unemployment rate was revised from 5.3 percent to 5.4 percent after we applied seasonal adjustment.

This table lists the changes in estimates between the current and previous quarters for the seasonally adjusted data.

Percent revision from last estimate, seasonally adjusted						
Quarter	Male employed	Female employed	Male unemployed	Female unemployed	Male not in labour force	Female not in labour force
Mar 2015	-0.06	-0.1	-0.77	-0.31	0.43	0.29
Jun 2015	0.02	-0.07	0.23	-0.08	-0.08	-0.03
Sep 2015	-0.03	0.06	0.11	-0.31	-0.12	0.04
Dec 2015	0.07	0.14	0.5	0.78	-0.26	-0.36

This table presents revisions for the trend estimates. Trend revisions are generally larger than those of the seasonally adjusted data.

Percent revision from last estimate, trend						
Quarter	Male employed	Female employed	Male unemployed	Female unemployed	Male not in labour force	Female not in labour force
Mar 2015	-0.02	-0.05	-0.26	0.06	0.17	0.33
Jun 2015	0.03	-0.07	-0.14	-0.43	0.08	0.06
Sep 2015	0.06	-0.07	0.06	-0.13	0.04	0.11
Dec 2015	0.31	0.42	1.46	4.9	-0.91	-0.84

The table below shows the average of all such absolute revisions, expressed relatively, and gives some indication to what extent the current estimates might be revised when the revised data for the next quarter becomes available.

Mean absolute percent revisions				
	Seasonally adjusted		Trend	
	1-step	4-step	1-step	4-step
Male employed	0.05	0.08	0.16	0.16
Female employed	0.06	0.11	0.24	0.24
Male unemployed	0.49	0.81	1.79	1.86
Female unemployed	0.5	0.85	1.84	1.83
Male not in labour force	0.1	0.17	0.37	0.38
Female not in labour force	0.09	0.15	0.35	0.37

In the table above, a '1-step ahead' revision is one we make to an estimate one quarter later. For example, if in the March 2010 quarter the seasonally adjusted estimate of females employed was first published as 1,020,000, and then in the June 2010 quarter this same estimate was revised to 1,022,000, this would be an upward revision of 0.20 percent.

A '4-step ahead' revision is one we make to an estimate four quarters later. For example, if in the March 2010 quarter release the trend estimate of females not in the labour force was first published as 665,000 and then in the March 2011 release, one year later, the trend estimate of females not in the labour force for the March 2010 quarter was revised to 664,000, this would be a decrease of 1,000, or a downward revision of 0.15 percent.

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Tables

See the Excel tables in the 'Downloads' box on this page. If you have problems viewing the files, see [opening files and PDFs](#).

Household labour force survey tables

1. People employed, unemployed, and not in labour force, by sex, seasonally adjusted series
2. People employed, unemployed, and not in labour force, by sex, trend series
3. People employed, unemployed, and not in labour force, by sex
4. People employed, unemployed, and not in labour force, by age group
5. People employed, unemployed, and not in labour force, by ethnic group
6. People employed, unemployed, and not in labour force, by regional council
7. People employed, by industry and sex
8. The jobless: those without a job and wanting a job, by sex
9. Total actual hours worked
10. People employed, by employment status and sex
11. People underemployed, by sex
12. People employed, unemployed, not in the labour force, and total actual hours worked, seasonally adjusted series
13. Harmonised unemployment rates in OECD countries, latest available
14. People employed, unemployed, and not in labour force, by sex and formal study status
15. Labour force and education status of those aged 15–24 years, by age group, seasonally adjusted series.
16. People employed

Quarterly employment survey tables

1. Full-time equivalent employees (FTEs), actual, seasonally adjusted, and trend series
2. Filled jobs, actual, seasonally adjusted, and trend series
3. Full-time equivalent employees (FTEs), by ANZSIC06 industry
4. Total weekly paid hours, actual, seasonally adjusted, and trend series
5. Total weekly gross earnings, actual, seasonally adjusted, and trend series
6. Average weekly paid hours for FTEs, actual, seasonally adjusted, and trend series
7. Average weekly earnings for FTEs, by sector
8. Average hourly earnings, by sector
9. Average hourly earnings, by sex

Labour cost index tables

1. Salary and wage rates by sector, all industries/occupations combined
 - 2.1 Salary and wage rates by industry and by occupation, public sector
 - 2.2 Salary and wage rates by industry and by occupation, public sector, percentage change from previous quarter
 - 2.3 Salary and wage rates by industry and by occupation, public sector, percentage change from same quarter of previous year
 - 3.1 Salary and wage rates by industry and by occupation, private sector
 - 3.2 Salary and wage rates by industry and by occupation, private sector, percentage change from previous quarter
 - 3.3 Salary and wage rates by industry and by occupation, private sector, percentage change

from same quarter of previous year

4.1 Salary and wage rates by industry, all sectors combined

4.2 Salary and wage rates by industry, all sectors combined, percentage change from previous quarter

4.3 Salary and wage rates by industry, all sectors combined, percentage change from same quarter of previous year

5.1 Salary and wage rates by occupation, all sectors combined

5.2 Salary and wage rates by occupation, all sectors combined, percentage change from previous quarter

5.3 Salary and wage rates by occupation, all sectors combined, percentage change from same quarter of previous year

6.1 Distribution of annual movements, all sectors combined

6.2 Proportions of salary and wage rates increasing, private sector and all sectors combined

6.3 Distribution of annual increases by reason, all sectors combined

7.1 Median and mean increases, all sectors combined

7.2 Median and mean increases by sector

8.1 Published and analytical unadjusted indexes for the private sector

8.2 Published and analytical unadjusted indexes for all sectors combined

9.1 Labour cost index, base expenditure weights by sector, cost, occupation, and skill level

9.2 Labour cost index, base expenditure weights by industry

Supplementary tables

Household labour force survey supplementary tables

The following tables provide unadjusted statistics for the Canterbury region. They are similar to tables 3, 4, 7, 8, 9, 11, and 14 above.

1. People employed, unemployed, and not in labour force in Canterbury, by sex
2. People employed, unemployed, and not in labour force in Canterbury, by age group
3. People employed in Canterbury, by industry and sex
4. The jobless: those without a job and wanting a job in Canterbury, by sex
5. Total actual and usual hours worked in Canterbury
6. Underemployment in Canterbury, by sex
7. People employed, unemployed, and not in labour force in Canterbury, by sex and formal study status

A longer time series of the supplementary tables is available on request.

Quarterly employment survey supplementary tables

1. Average total hourly earnings, by ANZSIC06 industry
2. Filled jobs, by ANZSIC06 industry
3. Part-time employees, by ANZSIC06 industry
4. Full-time employees, by ANZSIC06 industry

Labour cost index supplementary tables

The following supplementary tables relate to the construction industry for Canterbury and the rest of New Zealand.

1. Regional analytical index for the construction industry, all salary and wage rates

2. Regional analytical index for the construction industry, salary and ordinary time wage rates
3. Regional analytical mean increases for the construction industry, all sectors combined

Access more data on Infoshare

Infoshare allows you to organise data in a way that best meets your needs. You can view the resulting tables onscreen or download them.

Use Infoshare

For this release, select the following categories from the Infoshare homepage:

Subject category: **Work Income and Spending**

Groups: **Household Labour Force Survey – [HLF], Earnings and Employment Survey (QES) – [QEX], and Labour Cost Index – [LCI]**

Next release

Labour Market Statistics: June 2016 quarter will be released on 3 August 2016.