

Household Labour Force Survey: March 2013 quarter

Embargoed until 10:45am – 09 May 2013

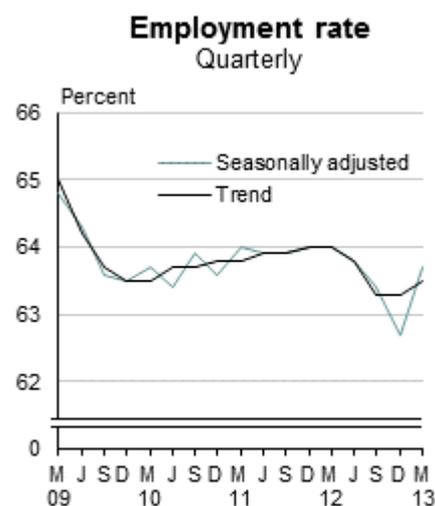
Key facts

In the March 2013 quarter compared with the December 2012 quarter:

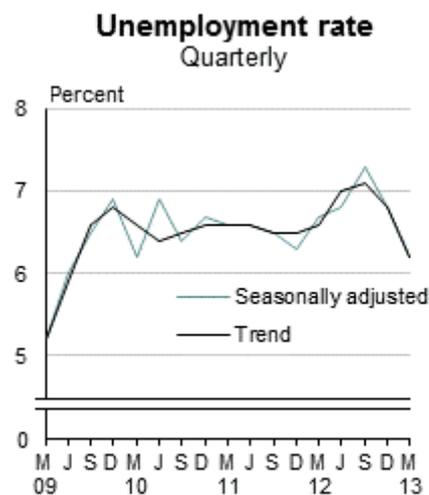
- The employment rate increased to 63.7 percent, up 1.0 percentage points.
- The number of people employed increased by 38,000 (up 1.7 percent).
- The unemployment rate fell 0.6 percentage points, to 6.2 percent.
- The number of people unemployed decreased by 15,000 people (down 9.1 percent).
- The labour force participation rate increased 0.6 percentage points, to 67.8 percent.
- The number of people not in the labour force decreased by 19,000.

All figures are seasonally adjusted.

	March 2013 quarter	Quarterly change	Annual change
	(000)	(Percent)	
Employed	2,234	+1.7	+0.3
Unemployed	146	-9.1	-9.1
Not in the labour force	1,128	-1.7	+3.5
Working-age population	3,508	+0.1	+0.9
	(Percent)	(Percentage points)	
Employment rate	63.7	+1.0	-0.3
Unemployment rate	6.2	-0.6	-0.5
Labour force participation rate	67.8	+0.6	-0.8



Source: Statistics New Zealand



Source: Statistics New Zealand

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Commentary

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Labour force improves this quarter – overview

In the March 2013 quarter, the **employment rate** increased 1.0 percentage points to 63.7 percent in seasonally adjusted terms. This follows three quarters of consecutive declines and leaves the employment rate down 0.3 percentage points over the year. This is mirrored in the trend series, which also increased after weakness throughout 2012.

The number of **people employed** increased by 38,000 in the quarter, with more people employed in full-time work.

The **unemployment rate** fell in the quarter, down 0.6 percentage points to 6.2 percent, from 6.8 percent (revised) the previous quarter. This decrease reflects 15,000 fewer people **unemployed**, with fewer men and women unemployed this quarter.

The **labour force** grew by 24,000 people, with the rise in employment greater than the fall in unemployment. The **labour force participation rate** increased 0.6 percentage points in the quarter, to 67.8 percent.

The number of **people not in the labour force** decreased in the quarter – down 19,000 people. The fall came from a decrease in the number of women not in the labour force.

The labour market
 March 2013 quarter
 Seasonally adjusted figures



Employment recovers after weakness

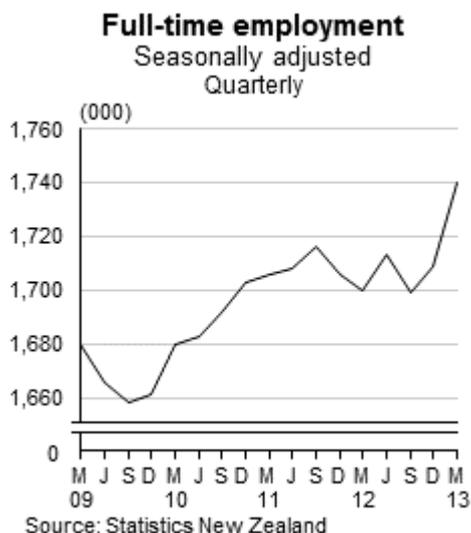
In the March 2013 quarter, the employment rate increased to 63.7 percent – up 1.0 percentage points, in seasonally adjusted terms. This is the first increase in the employment rate since December 2011. However, the employment rate is still down 0.3 percentage points over the year, and well below levels seen before the 2008 and 2009 recession.

Both the seasonally adjusted series and the trend series fell over 2012, although the fall in the trend series was not as pronounced. Since the September 2012 quarter the trend series has increased slightly, up 0.2 percentage points, but the rate remains lower than a year ago.

The female employment rate increased for the quarter, up 1.3 percentage points to 58.4 percent – returning to levels seen a year ago. The male employment rate increased 0.6 percentage points to 69.2 percent.

The number of people employed grew by 38,000 in the quarter. The numbers of both men and women employed rose – up 13,000 and 25,000, respectively. There was also an increase in the number of people in full-time employment.

Over the year to March 2013, the number of people employed remained relatively steady, up 7,000 (0.3 percent) to 2,234,000. The number of men employed decreased by 2,000 (down 0.1 percent) and the number of women employed increased by 9,000 (up 0.9 percent).



Rise in full-time workers pushes up employment growth

Full-time employment increased in the March 2013 quarter, up 1.8 percent to reach 1,740,000. Over the year, there were 40,000 more people in full-time employment – up 2.3 percent.

Part-time employment increased by a smaller amount in the quarter – up 1.3 percent to 494,000. However, over the year part-time employment decreased by 6.4 percent.

Full-time employment by industry

The annual industry figures below are not seasonally adjusted.

Overall, full-time employment rose across a broad range of industries. There was an increase in full-time employment in the health care and social assistance industry over the year to March 2013 (up by 15,500). During the same period, full-time employment in the wholesale trade industry fell (down by 8,600). Both these changes were statistically significant.

Actual hours worked increases

In the March 2013 quarter, the seasonally adjusted number of hours people actually worked per week increased to 75.6 million hours (up 3.2 percent). Usual hours worked also grew, up 2.2 percent to 81.6 million hours.

The increase in hours is greater than the increase in employment, partly reflecting the strength in full-time employment relative to part-time employment.

Underemployment down over the year

A new measure of underemployment was introduced this quarter. Underemployed people are now defined as part-time workers who are available and want to work more hours. An availability constraint has been added to the definition of underemployment, allowing us to distinguish between people who 'voluntarily' worked fewer hours than their preference in the reference week and those who did not. The new measure is now in line with the definition used by the International Labour Organization, making our data more internationally comparable.

The following figures are not seasonally adjusted, and are based on annual changes that were statistically significant unless otherwise stated.

Over the year to March 2013, the total number of people underemployed fell by 9,800 (10.5 percent) to 83,300. As a result, the underemployment rate decreased 0.5 percentage points to 3.7 percent.

The fall in part-time employment over the year was a large contributor to the fall in underemployment. The proportion of part-time workers who were underemployed also declined over the year. This indicates that fewer of those people who are currently employed part-time want to work more hours.

Number of employees and employers increase over the year

The following figures are not seasonally adjusted, and are based on annual changes that were statistically significant unless otherwise stated.

Over the year to March 2013, the total number of people employed increased by 8,900 (up 0.4 percent). There was an increase in the number of people employed as wage and salary earners, up 37,100 (2.0 percent), and in the number of employers, up 17,800 (18.7 percent).

The number of self-employed people decreased by 46,100 (down 18.2 percent). Self-employment has been decreasing since its peak in the December 2011 quarter. 'Self-employment' was the only employment type to significantly decrease over the year.

More Asian people in employment over the year

The following figures are not seasonally adjusted, and are based on annual changes that were statistically significant unless otherwise stated.

The total number of employed people who identified as Asian increased over the year – up 36,300 (15.7 percent). This increase was made up of both Asian men and women – up 21,200 and 15,100, respectively – and reflected significant growth in the Asian population over the year.

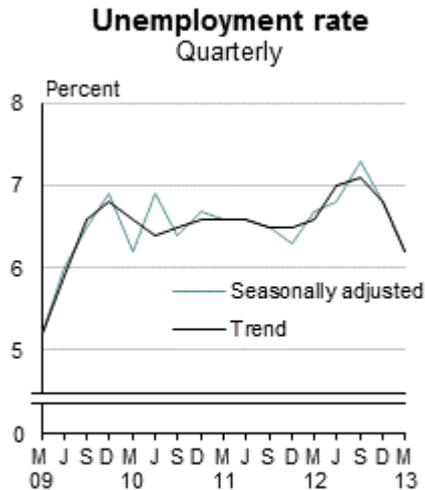
Unemployment falls for the quarter

In seasonally adjusted terms, the unemployment rate fell to 6.2 percent over the March 2013 quarter. This is a 0.6 percentage point fall from 6.8 percent (revised) the previous quarter.

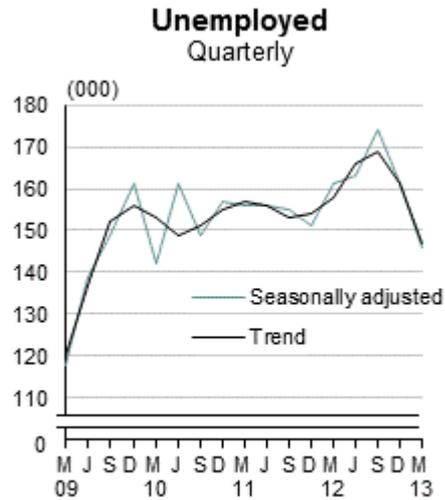
The unemployment rate for men fell 0.7 percentage points to 5.5 percent – the lowest level since the March 2009 quarter. The female unemployment rate also fell after rising for four consecutive quarters – down 0.7 percentage points to 6.9 percent.

The number of unemployed people fell 15,000 for the quarter, to 146,000. The number of both men and women unemployed fell – down 9,000 and 6,000 respectively.

In March quarters, seasonal factors usually cause unemployment to rise. Due to the atypical fall in seasonally unadjusted unemployment over the March 2013 quarter, this increase has not occurred, and the unusual movements were accentuated once usual seasonal influences were removed.



Source: Statistics New Zealand



Source: Statistics New Zealand

Short-term unemployment down over the year

The following figures are not seasonally adjusted, and are based on annual changes that were statistically significant unless otherwise stated.

Over the year to March 2013, the number of people in short-term unemployment decreased by 16,200, to 92,900 (down 14.8 percent). Short-term unemployment is defined as being unemployed for less than 26 weeks.

Youth labour market improves

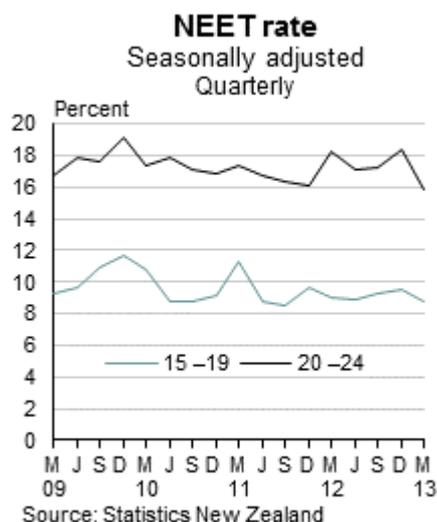
In the year to March 2013, there was a large fall in unemployment for people aged 15–24 years (down 10,500). This fall can be largely attributed to a decrease in unemployed 20–24-year-olds (down 11,200). This was an atypical fall in unemployment, as the number of people unemployed for this age group usually increases during March quarters. The unemployment rate for people aged 20–24 years fell 4.1 percentage points to 10.9 percent – the lowest rate since the September 2009 quarter.

The employment rate for 20–24-year-olds rose over the year to March 2013. There was also an increase in the number of people aged 15–24 years not in the labour force over the year. Behind this was a rise in the number of young people outside the labour force who are studying (up 25,000). The number of both 15–19-year-olds and 20–24-year-olds in study rose – up 16,200 and 8,800 respectively.

NEET rate declines

In seasonally adjusted terms, the NEET (not in employment, education or training) rate for youth (aged 15–24 years) decreased 1.5 percentage points, to 12.5 percent in the March 2013 quarter. This is the lowest youth NEET rate since the September 2011 quarter. The NEET rate for people aged 20–24 years fell 2.4 percentage points to 15.9 percent.

The female youth NEET rate decreased for the first time since September 2011 – down 1.2 percentage points to 16.2 percent. The male NEET rate also fell 2.0 percentage points, to 8.9 percent, after being relatively flat for the last three quarters.



Participation up for the quarter but down over the year

In seasonally adjusted terms, the number of people in the labour force increased by 24,000 (up 1.0 percent) in the March 2013 quarter – mainly from a 19,000 rise in the number of women in the labour force. Alongside the rise in the labour force, the number of people not in the labour force fell by 19,000 people (down 1.7 percent).

The strong growth in the labour force saw the labour force participation rate increase by 0.6 percentage points, to 67.8 percent. Despite the increase in the quarter, the labour force participation rate has decreased over the year – down 0.8 percentage points.

Coinciding with this fall, there has been an increase in the number of people not in the labour force compared with a year ago. In unadjusted terms, there was an increase in both the number of people out of the labour force who are studying (30,700) and those who are retired (17,500).

Canterbury unemployment falls over the year

In the year to March 2013, Canterbury employment rose by 2,100 (0.6 percent), while unemployment decreased by 4,000 (21.3 percent). The decrease in unemployment came almost entirely from males – down 3,800 (33.4 percent) – while female unemployment showed little change. Overall, Canterbury's unemployment rate decreased 1.2 percentage points, to 4.3 percent over the year to March 2013.

Over the year, there was also a decline of 13,400 people in Canterbury's working-age population. Underneath this, there was a fall of 11,500 (7.4 percent) in the number of people not in the labour force.

The decline in the number of people not in the labour force helped push up the region's labour force participation and employment rates – up 1.6 and 2.2 percentage points, respectively. The rise in the employment rate was the only significant change in Canterbury over the year.

Excluding Canterbury from the national estimates shows a much weaker labour market. In the rest of the country, the employment rate fell over the year, as did the labour force participation rate. While the unemployment rate fell in both Canterbury and the rest of New Zealand, Canterbury's fall was larger than the fall in the national estimate.

The total number of actual and usual hours worked per week increased in Canterbury – up 3.5 percent and 0.8 percent, respectively. Similar to the national estimates, hours in Canterbury have increased at a greater rate than employment over the year.

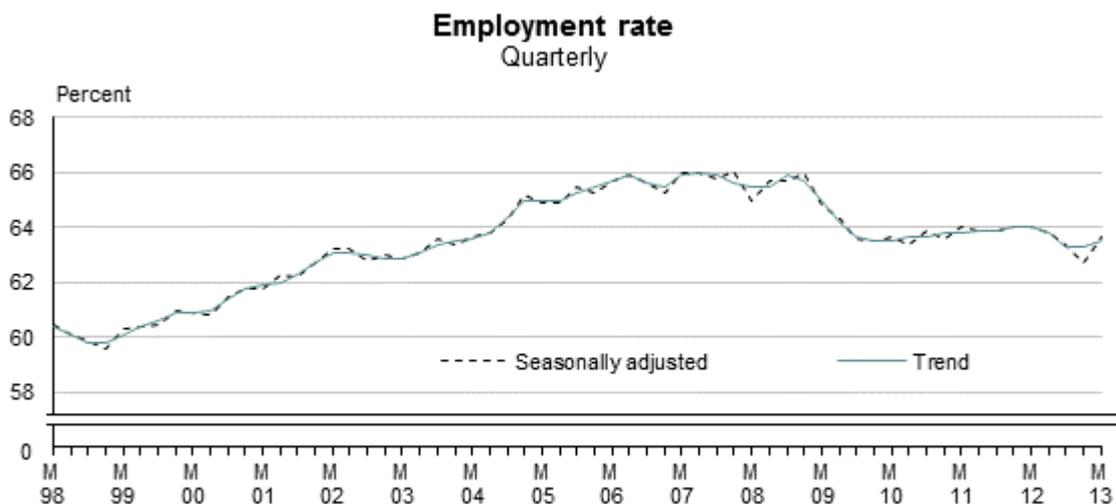
Supplementary Excel tables with detailed data for the Canterbury region are available from the 'Downloads' box.

Changes to the release for June 2013 quarter

The *Quarterly Employment Survey: June 2013 quarter*, the *Labour Cost Index (Salary and Wage Rates): June 2013 quarter*, as well as the *Household Labour Force Survey: June 2013 quarter* will be released on the same day. This will provide a more comprehensive labour market overview. There is likely to be a minor date change for this release. Any changes will be announced well in advance.

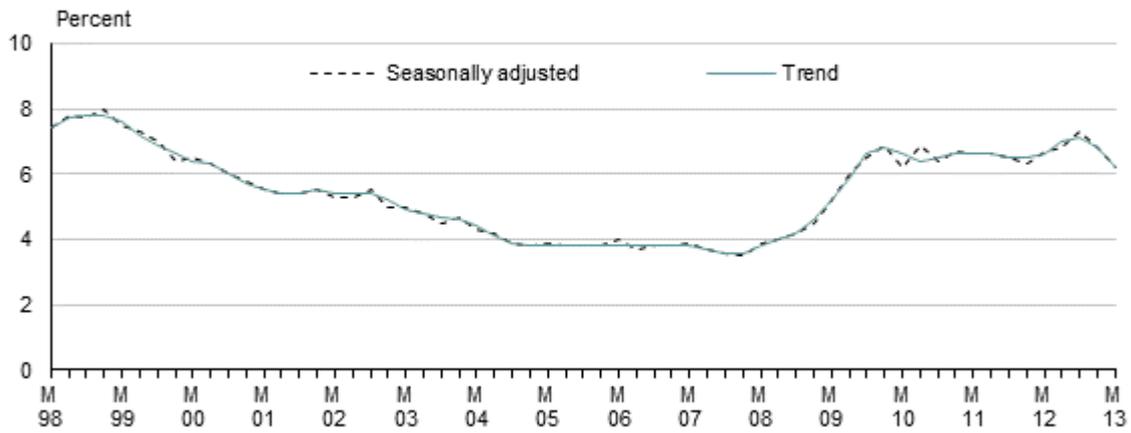
Longer time series

The following graphs show the HLFS series for the employment rate, the labour force participation rate, and the unemployment rate over a 15-year period. A complete time series from March 1986 onwards is available on [Infoshare](#).



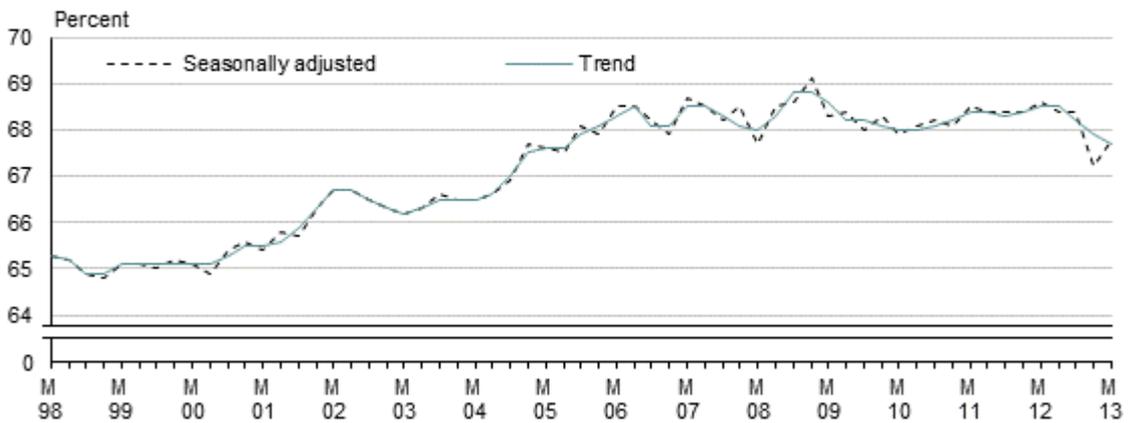
Source: Statistics New Zealand

Unemployment rate Quarterly



Source: Statistics New Zealand

Labour force participation rate Quarterly



Source: Statistics New Zealand

For more detailed data see the Excel tables in the 'Downloads' box.

Definitions

About the Household Labour Force Survey

The Household Labour Force Survey (HLFS) provides a regular, timely, and comprehensive portrayal of New Zealand's labour force. Each quarter, Statistics NZ produces a range of statistics relating to employment, unemployment, and people not in the labour force.

The survey started in October 1985 and the first results published were for the March 1986 quarter.

More definitions

The labour force category to which a person is assigned depends on their actual activity during a survey reference week.

This section includes definitions used in the HLFS release. These conform closely to the international standard definitions specified by the International Labour Organization.

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 type: Four different employment types are measured by the HLFS: employee, employer, self-employment, and unpaid family worker. The HLFS defines a person as self-employed if they work for themselves and do not have any employees.

Employment rate: the number of employed people expressed as a percentage of the working-age population. The employment rate is closely linked to how the working-age population is defined. See the 'Data quality' section for more details about how the employment rate used in this release is calculated.

Formal study statistics: to be participating in formal study, a person must be working towards a qualification that takes three or more months of full-time study to complete. Full-time study is defined as 20 or more hours per week.

Full-time/part-time status: full-time workers are those who 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 are those who 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).

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. See the 'Data quality' section for more details about how the labour force participation rate used in this release is calculated.

NEET rate: The rate is calculated as 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.

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

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

Underemployment: employed people who work part time (ie usually work less than 30 hours in all jobs) and are willing and available to work more hours than they usually do.

Underemployment rate: the number of underemployed people as a percentage of employed people.

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.

Young people not in employment, education, or training (NEET): 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.

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

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

Related links

Upcoming releases

The *Household Labour Force Survey: June 2013 quarter* is planned to be released on 8 August 2013. As both the HLFS, the Quarterly Employment Survey (QES) and the Labour Cost Index (LCI) for the June 2013 quarter will be released on the same day, this date may change. Any changes will be announced well in advance.

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

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

Past releases

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

Related information

[Skill levels of New Zealand jobs](#) (published 2013) presents information on the skill levels of jobs done by New Zealanders.

[Dynamics of the New Zealand labour market](#) (published 2013) discusses measures of labour market dynamics.

[Introducing new measures of underemployment](#) (published 2013) introduces a new underemployment measure, to be added to the suite of labour market statistics available from the *Household Labour Force Survey: March 2013 quarter* onwards.

[Introducing the employment rate](#) provides information on the employment rate added to the Household Labour Force Survey (HLFS).

[Introducing the youth not in employment, education, or training indicator](#) provides information on youth not in employment, education, or training (NEET).

[Ongoing impact of Canterbury earthquakes on the Household Labour Force Survey](#) provides information on the impact of the Canterbury earthquakes on the Household Labour Force Survey.

[Quarterly Employment Survey](#) includes statistics on total gross earnings, total paid hours, filled jobs, average hourly and weekly earnings, and average weekly paid hours, based on the Quarterly Employment Survey.

[Linked Employer-Employee Data \(LEED\)](#) provides statistics on filled jobs, job flows, worker flows, mean and median earnings for continuing jobs and new hires, and total earnings. LEED information is based on tax data.

Data quality

Period-specific information

This section is for information that changes between periods.

- [Achieved sample and response rate](#)
- [Ethnic statistics](#)
- [Underemployment](#)

General information

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

- [Data source](#)
- [Accuracy of the data](#)
- [How labour force statistics are classified](#)
- [Comparability with other datasets](#)
- [Interpreting the data](#)
- [Timing of published data](#)
- [Confidentiality](#)
- [More information](#)

Period-specific information

Achieved sample and response rate

In the March 2013 quarter 30,212 people in 14,701 households responded to the Household Labour Force Survey (HLFS).

The target response rate for the HLFS is 90 percent. The response rate for the March 2013 quarter was 85.8 percent.

Ethnic statistics

Single/combination

The HLFS currently uses the total response output method for classifying ethnicity. An alternate method uses the single/combination output method. Using this output, we count people just once according to the ethnic group or combination of ethnic groups they report. This means the total number of responses equals the total number of people who stated an ethnicity.

The table below shows single/combination data for the working-age population for the March 2013 and March 2012 quarters of the HLFS. Ethnicity data using the single/combination output method is available on [Infoshare](#).

Single/combination HLFS ethnicity data for working-age population		
Ethnic group	March 2012 quarter	March 2013 quarter
European only	2,377,500	2,368,400
Māori only	246,700	255,600
Pacific peoples only	152,100	149,600
Asian only	351,100	403,200
MELAA only ⁽¹⁾	29,200	24,900
Other ethnicity only	69,200	67,600
European/Māori	166,700	169,400
Two or more groups not elsewhere included	76,200	67,200
Residual categories	15,200	7,100
Total all ethnic groups	3,483,900	3,512,900

1. MELAA = Middle Eastern/Latin American/African.

[New Zealand statistical standard for ethnicity \(2005\)](#) has more information.

Underemployment

The definition of underemployed has changed from 'employed people who work part time (ie usually work less than 30 hours in all jobs) and would prefer to work more hours' to 'employed people who work part-time (ie usually work less than 30 hours in all jobs) and are willing and available to work more hours than they usually do'. The underemployment rate is the number of underemployed people as a percentage of employed people. These changes are reflected in table 11 in the 'Downloads' box.

[Introducing new measures of underemployment \(published 2013\)](#) has more information.

General information

Data source

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
- those aged under 15 years.

Accuracy of the data

Sample design

The HLFS 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, and obtain information for each member of the household. The sample is stratified by geographic region, urban and rural areas, ethnic density, and socio-economic characteristics.

Households stay in the survey for two years. Each quarter, one-eighth of the households in the sample are rotated out and replaced by a new set of households. Therefore, up to seven-eighths of the same people are surveyed in adjacent quarters. This overlap improves the reliability of quarterly change estimates.

The period of surveying/interviewing is 13 weeks. The information obtained relates to the week before the interview (referred to as the 'survey reference week'). We first interview respondents face-to-face at their home. Subsequent interviews are by telephone wherever possible. Respondents also have the option to file self-completed questionnaires.

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

Sampling errors

Sampling errors can be measured. They quantify the variability that occurs by chance because a sample rather than an entire population is surveyed.

We calculate sampling errors using the jackknife method. It is based on the variation between estimates, based on different subsamples taken from the whole sample. This is an attempt to see how estimates would vary if we were to repeat the survey with new samples of individuals.

We calculate sampling errors for each cell in the published tables and for estimates of change between adjacent quarters. For example, the estimated total number of people employed in the March 2013 quarter is 2,239,800 before seasonal adjustment. This estimate is subject to a sampling error of plus or minus 22,400, or 1.0 percent (measured at the 95 percent confidence level). This means that there is a 95 percent chance that the true number of employed people lies between 2,262,200 and 2,217,400.

Smaller estimates, such as the number of people who are unemployed, are subject to larger relative sampling errors than larger estimates. For example, the estimated total number of people unemployed in the March 2013 quarter is 155,800 before seasonal adjustment. This estimate is subject to a sampling error of plus or minus 9,700 or 6.2 percent (measured at the 95 percent confidence level). This means that there is a 95 percent chance that the true number of unemployed people lies between 146,100 and 165,500.

Estimates of change are also subject to sampling error. For example, the survey estimate of change in total employment from the March 2012 quarter to the March 2013 quarter is an increase of 8,900. This estimate is subject to a sampling error of plus or minus 26,700 (at the 95 percent confidence level). Therefore, the true value of the change in surveyed employment from the March 2012 quarter to the March 2013 quarter has a 95 percent chance of lying between -17,800 and 35,600.

A change in an estimate, either from one adjacent quarter to the next, or between quarters a year apart, is said to be statistically significant if it is larger than the associated sampling error. Therefore, the example quoted above does not represent a significant movement.

In general, the sampling errors associated with subnational estimates (eg breakdowns by regional council area or ethnic group) are larger than those associated with national estimates.

A non-sampling error is very difficult to measure, and if present can lead to biased estimates. Statistics NZ endeavours to minimise the impact of these errors by applying best survey practices and monitoring known indicators (eg non-response).

Achieved sample and response rates

The achieved sample size measure is the number of eligible households and individuals that responded to the HLFS in the quarter. The achieved sample size typically increases over time as the population grows and more dwellings are added to the survey sample.

The response rate is calculated by determining the number of eligible households that responded to the survey, as a proportion of the estimated number of total eligible households in the sample.

The following table shows the HLFS achieved sample and response rates for the last five quarters.

HLFS achieved sample and response rates			
Quarter	National response rate (percent)	Achieved sample Individuals	Achieved sample Households
March 2012	87.3	29,737	15,171
June 2012	87.7	28,823	15,135
September 2012	85.0	26,850	14,442
December 2012	86.7	28,139	14,776
March 2013	85.8	30,212	15,434

Recent investigations have identified a possible issue with the calculated level of recent response rates. Despite a lower response rate in the March 2013 quarter, overall quality measures show no impact on the quality of our estimates. A recent change in the practice of how non-responding households and individuals have been classified brought this to light. Further investigation is underway to determine what the appropriate classification should be. Our response rates may be recalculated and revised as a result of this investigation.

We will publish a report introducing a broader suite of quality measures prior to the June 2013 quarter release. This report will also outline our findings from the investigation above.

Seasonal adjustment and trend series

In the labour market, cyclical events that affect labour supply and demand occur around the same time each year. For example, in summertime a large pool of student labour is both available for, and actively seeking, work. Demand for labour in the retail sector and in many primary production industries also increases.

For any series, the estimates can be broken down into three components: trend, seasonal, and irregular. Seasonally adjusted series have had the seasonal component removed. Trend series have had both the seasonal and irregular components removed, and reveal the underlying direction of movement in a series.

The series for each labour market statistic is adjusted separately. For this reason, the sum of the seasonally adjusted estimates for employment, unemployment, and people not in the labour force will usually not add up to the working-age population estimates.

Seasonal adjustment has more information about how we seasonally adjust our statistics. Seasonal adjustment makes data for adjacent quarters more comparable by smoothing out the

effect on the times series of any regular seasonal events. This ensures that the underlying movements in the time series are more visible.

See the 'Revisions' section for information on the change in estimates between the current and previous publication for the seasonally adjusted and trend data.

All seasonally adjusted and trend series are produced using the X-12-ARIMA Version 0.2.10 package developed by the U.S. Census Bureau.

Quality of seasonal adjustment

We monitor our data to make sure that our seasonal adjustment is robust.

The X-12-ARIMA programme is highly customisable and can produce a wide variety of possible adjustments for any particular input series. Consequently, X-12-ARIMA produces a number of diagnostics which are useful in assessing the quality of the chosen adjustment.

The following table provides a selection of diagnostics. The reference value indicates the desired value for each. Most are acceptable, though there is evidence of a changing seasonal pattern for the number of males who are unemployed and females who are not in the labour force. More detail about seasonal adjustment in the HLFS is available on request.

Seasonal adjustment diagnostics							
Diagnostics		Series					
	Reference value	Male employed	Female employed	Male unemployed	Female unemployed	Male not in labour force	Female not in labour force
Test for seasonality	<0.10	0.00	0.00	0.00	0.00	0.00	0.00
Test for moving seasonality	>0.10	0.15	0.67	0.03	0.34	0.75	0.06
Period until trend dominates	<3	1	1	1	2	2	2
Trend contribution to change	<20	33.11	42.04	47.15	15.25	13.84	21.16
Seasonal contribution to change	>50	58.24	42.48	36.07	67.18	73.89	49.96
Irregular contribution to change	<20	8.66	15.47	16.77	17.57	12.27	28.88
Quality statistic	<1	0.43	0.56	0.83	0.71	0.62	1.03

Outliers

During the seasonal adjustment process, X-12-ARIMA 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.

Such observations are referred to as partial and zero-outliers, respectively. In practice, the downweighting of outliers will do 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 partial (P) and zero (Z) outliers for the last year of each time series.

Outliers						
Quarter	Male employed	Female employed	Male unemployed	Female unemployed	Male not in the labour force	Female not in the labour force
Jun 2012						
Sep 2012			P			
Dec 2012		Z				Z
Mar 2013						

Suppression of data

Cells with estimates of less than 1,000 are suppressed and appear as 'S' in the tables. These estimates are subject to sampling errors too great for most practical purposes.

Rounding procedures

Figures presented in this release are rounded. Figures are rounded to the nearest hundred or to the nearest thousand for seasonally adjusted and trend estimates. This may result in a total disagreeing slightly with the sum of the individual items as shown in the table. Where figures are rounded the unit is shown as (000) for thousands.

Any quarterly and annual changes for figures are calculated on unrounded numbers. However quarterly and annual percentage point changes for rates are done on rounded rates.

How labour force statistics are classified

The HLFS release includes specific statistics about industry, occupation, study, ethnicity, and region. This section defines what we measure for each of these statistics.

Industry statistics

Since the September 2009 quarter, the industry statistics have been based on the Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC06), the latest edition of the classification. When ANZSIC06 was introduced, Statistics NZ developed the New Zealand Standard Industrial Output Categories (NZSIOC). Classifying industries using NZSIOC helps to standardise outputs. Industry outputs defined using ANZSIC06 are not comparable with those based on ANZSIC96, the version used before the September 2009 quarter.

[Implementing ANZSIC 2006 in the Household Labour Force Survey](#) has more information.

Occupation statistics

Since the September 2009 quarter, we have used the Australian and New Zealand Standard Classification of Occupations (ANZSCO) to classify occupation data in the HLFS. ANZSCO is a harmonised classification developed by Statistics NZ, the Australian Bureau of Statistics, and the Australian Department of Employment and Workplace Relations, for use in both Australia and New Zealand. Occupation data was previously based on the New Zealand Standard Classification of Occupations 1999 (NZSCO99). The occupation data is available on [Infoshare](#).

[Implementing ANZSCO in the Household Labour Force Survey](#) has more information.

Māori benchmarks

Before April 2009, we did not benchmark the Māori working-age population to population estimates. This, along with other sample design restrictions, caused a high degree of volatility in Māori statistics in the HLFS. Movements in the working-age population estimates of certain ethnic groups, such as Māori, may reflect this volatility rather than a real change in the estimated ethnic demographic. Including Māori benchmarks in the working-age population mitigates the known undercount of Māori in the HLFS and also results in smoother time series for Māori statistics in the HLFS. However, introducing the Māori population benchmarks does not necessarily translate to improved estimates for non-Māori ethnic groups.

Household statistics

A household's labour force status is derived by looking at the labour force status of household members aged 18–64 years. For example, if a couple is living by themselves and one is aged 64 years and the other is aged 65 years, this couple will be assigned to the 'All employed' or 'None employed' category, depending on the labour force status of the 64-year-old.

Households that have no members aged 18–64 years are excluded from this analysis. The household categories incorporate the concept of dependent children rather than just children. A child is a person of any age who usually resides with at least one parent (natural, step, adopted, or foster) and who does not usually reside with a partner or child(ren) of his or her own. Statistics NZ defines a dependent child as a child under the age of 18 years and not in full-time employment.

Updated regional classification

In November 2010, the new Auckland territorial authority replaced the existing Rodney district, North Shore city, Auckland city, Waitakere city, Manukau city, Papakura district, and part of Franklin district councils. This resulted in a minor change in the boundary between the Auckland and Waikato regions.

From the June 2011 quarter, the statistics in the HLFS release were produced using the new boundaries and backcast for the March 2011 quarter. The new boundaries do not significantly affect measures from the HLFS.

Total response ethnicity

From the December 2011 quarter, the HLFS publishes ethnicity data using the total response ethnicity output in the information release. Using this method, people who reported that they belonged to more than one ethnic group are counted once in each group reported. This means that the total number of responses for all ethnic groups can be greater than the total number of

people who stated their ethnicities.

Comparability with other datasets

[Comparing our labour market statistics](#) has more information on how the HLFS compares with the other labour market statistics that we produce. This web page explains which measures of employment are included in each of our employment releases, and the timings and coverage of each release.

[A Guide to Unemployment Statistics](#) has more information on comparing the HLFS with other datasets on unemployment. This web page explains which measures of unemployment are included in the HLFS, the unemployment benefit, and the job-seekers register. It also includes information on the timings, coverage, and different purposes of each of these measures.

HLFS comparable series

The HLFS and the Quarterly Employment Survey (QES) are two different measures of employment. The HLFS measures the number of employed people from New Zealand households; the QES measures the number of jobs from New Zealand businesses. The HLFS comparable series (in the table below) removes major differences between HLFS and QES. This provides an HLFS employment series that is more comparable with QES.

It removes the following categories from the HLFS, which are not collected by the QES:

- self-employment
- agricultural industry
- individuals who work without pay in a family business.

	Annual percentage change (%)
HLFS comparable series	+3.0
QES filled jobs	+1.7

While the comparable HLFS series shows stronger employment growth than the QES over the past year, this follows a number of quarters where the comparable HLFS series reported lower employment growth relative to the QES. The HLFS saw falls in self-employment and the agricultural industry over the year that were not captured by the QES.

The comparable series does not make adjustments for all differences between the HLFS and QES.

[Comparing our labour market statistics](#) has more information on the differences between HLFS and QES.

International comparability of the labour force participation rate and the employment rate

Several alternative definitions of labour force participation rate and employment rate are used by other organisations and countries; they differ in the age of the working-age population and the inclusion of military personnel. A common definition is to restrict the labour force and working-age population to the 15–64-year age group, particularly in countries with a compulsory retirement age. Generally, this definition leads to a higher labour force participation rate and employment rate.

Using this definition for the New Zealand HLFS in the March 2013 quarter gives a surveyed figure of 77.9 percent (labour force participation rate) and 72.6 percent (employment rate).

Interpreting the data

Information releases contain seasonally adjusted, trend, and survey statistics for the latest quarter. These statistics are averages for the three-month period and do not apply to any specific point in time. Data sourced from the seasonally adjusted series and trend series are identified as such in the table or section headings. All other data, in the commentary or in tables, are sourced from the original survey series and are unadjusted.

Timing of published data

The HLFS is 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 or households to prepare summary statistics.

More information

[See more information about the Household Labour Force Survey](#)

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Revisions

Each quarter, the seasonal adjustment process is applied to the latest quarter and all previous quarters. This means that seasonally adjusted estimates for any of the previously published quarters may change slightly. The following table lists the changes in estimates between the current and previous publication for the seasonally adjusted data. For example, the seasonally adjusted number of female employment for the March 2012 quarter was 1,043,000. In the March 2013 quarter release, that estimate is revised to 1,042,000. These numbers are rounded to the nearest 1,000, but the relative change derived from the unrounded estimates is a downward revision of 0.07 percent.

Percent revision from last published, seasonally adjusted						
Quarter	Male employed	Female employed	Male unemployed	Female unemployed	Male not in labour force	Female not in labour force
Mar 2012	-0.17	-0.07	0.82	0.34	0.28	0.08
Jun 2012	0.04	0.00	0.89	0.04	-0.09	-0.01
Sep 2012	0.00	0.06	0.28	0.11	0.05	-0.10
Dec 2012	0.13	0.01	-1.86	-0.61	-0.24	0.03

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

Percent revision from last published, trend						
Quarter	Male employed	Female employed	Male unemployed	Female unemployed	Male not in labour force	Female not in labour force
Mar 2012	-0.05	-0.04	0.15	0.06	0.05	0.06
Jun 2012	-0.05	-0.10	0.93	0.23	0.08	0.13
Sep 2012	-0.08	0.25	0.87	0.60	0.08	-0.40
Dec 2012	0.47	1.39	-4.34	-2.48	-0.60	-1.84

Every estimate is subject to revision each quarter as new data is added, though in practice estimates more than two years from the end-point will change little. For example, the trend estimate of males not in the labour force for the March 2012 quarter was 426,000 when first published. In the March 2013 quarter, one year later, the trend estimate of males not in the labour force for the March 2012 quarter is 430,000, an increase of 3,000 (or up 0.80 percent using the unrounded estimates). This is an example of a '4-step ahead' revision.

The table below shows the average of all such absolute revisions, expressed relatively, and gives some indication of how much the current estimates might be revised when the June 2013 data becomes available.

Mean absolute percent revisions				
	Seasonally adjusted		Trend	
	1-step	4-step	1-step	4-step
Male employed	0.05	0.09	0.16	0.17
Female employed	0.07	0.12	0.28	0.27
Male unemployed	0.47	0.70	1.69	1.66
Female unemployed	0.53	0.98	1.90	1.90
Male not in labour force	0.10	0.19	0.37	0.39
Female not in labour force	0.09	0.16	0.38	0.39

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Tables

The following tables are available in Excel format from the 'Downloads' box. If you have problems viewing the files, see [opening files and PDFs](#).

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 area
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. Household composition, by household labour force status
11. Underemployment, 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, by age group, seasonally adjusted

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 the 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.

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.

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