

# Quarterly Employment Survey: September 2014 quarter

Embargoed until 10:45am – 05 November 2014

## Key facts

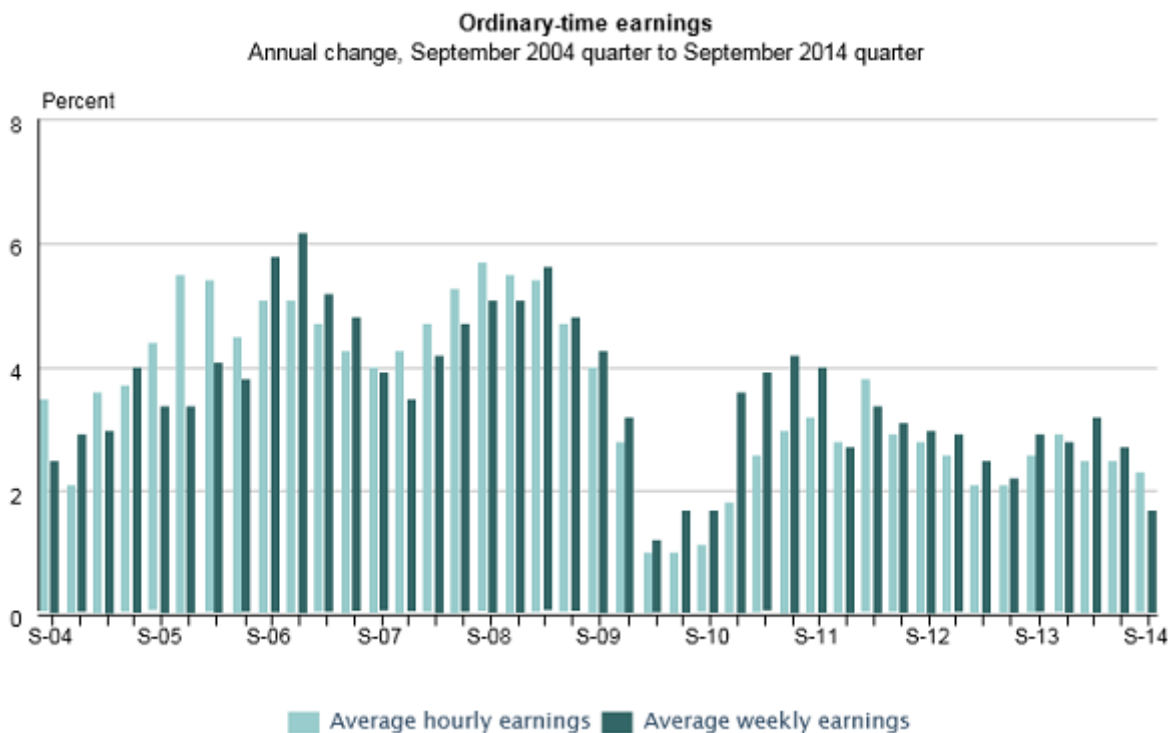
In the September 2014 quarter compared with the June 2014 quarter:

- The number of filled jobs rose 1.0 percent.
- Unadjusted, average ordinary-time hourly earnings rose 1.4 percent.
- Average ordinary-time weekly earnings (for full-time equivalent (FTE) jobs) rose 0.3 percent.

In the September 2014 quarter compared with the September 2013 quarter:

- The number of filled jobs rose 3.0 percent.
- Unadjusted, average ordinary-time hourly earnings rose 2.3 percent.
- Average ordinary-time weekly earnings (by FTE) rose 1.7 percent.

All figures are seasonally adjusted unless otherwise stated.



Liz MacPherson, Government Statistician  
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## Commentary

- [Annual growth in filled jobs highest in over six years](#)
- [Growth in average earnings steady](#)
- [We're changing the way we report our labour market statistics](#)

The Quarterly Employment Survey (QES) is a business survey that measures the number of jobs, paid hours, and earnings for [economically significant enterprises](#).

See the [Household Labour Force Survey \(HLFS\)](#) and [Labour Cost Index \(LCI\)](#) for complementary labour market and wage inflation measures.

See [data quality](#) for detailed information on differences between the HLFS and QES.

Employment, hours, gross earnings, and average weekly earnings figures in this release are seasonally adjusted unless otherwise stated. Hourly earnings figures, and subnational and industry estimates in the QES are not seasonally adjusted. LCI figures are not seasonally adjusted.

### Annual growth in filled jobs highest in over six years

The annual increase in filled jobs was the largest in six years (up 3.0 percent) for economically significant enterprises. The number of full-time jobs increased 3.3 percent in the year to the September 2014 quarter, while part-time jobs increased 2.5 percent. The largest contributions to the rise in filled jobs came from three industries:

- accommodation and food services
- construction
- health care and social assistance.

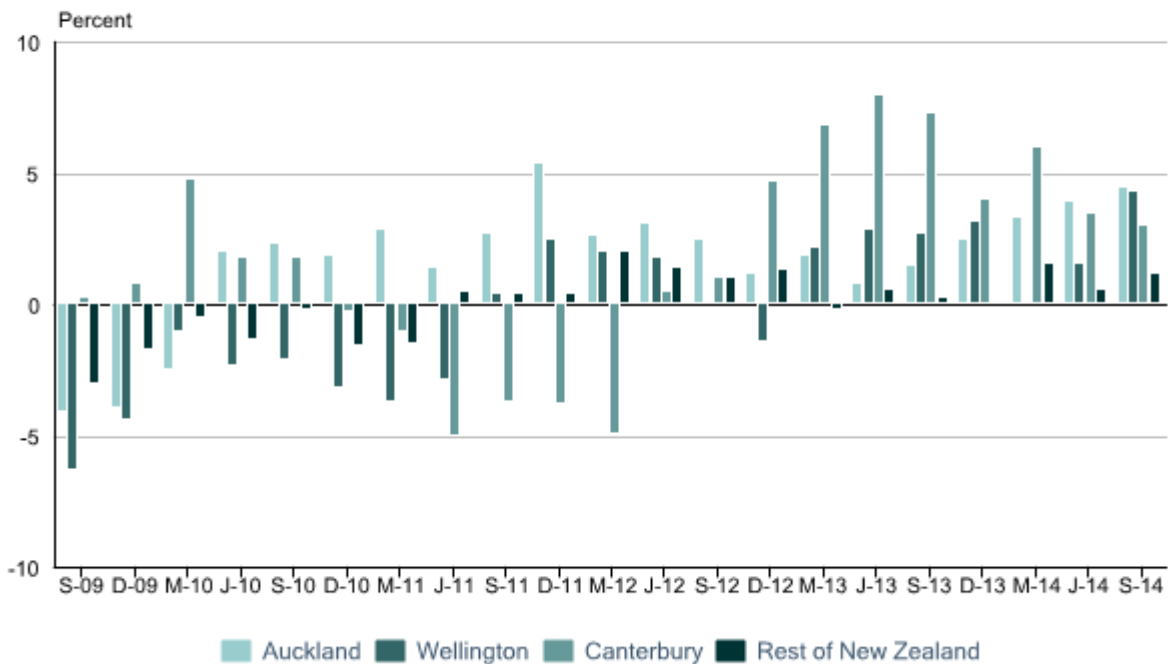
Filled jobs by selected industry  
Annual change, September 2011 quarter to September 2014 quarter



Source: Statistics New Zealand

Auckland, Wellington, and Canterbury regions added filled jobs at a greater rate in the September 2014 year than the rest of New Zealand.

Filled job by region  
Annual change, September 2009 quarter to September 2014 quarter



Source: Statistics New Zealand

## Growth in average earnings steady

While businesses are filling their demand for work, the average amount employers pay per hour of labour continues to rise on average between 2 and 3 percent annually.

The QES and the labour cost index (LCI) are complementary wage measures. See [data quality](#) to find out about the conceptual differences between the two measures.

- The QES average ordinary-time hourly earnings increased 2.3 percent. This measures the average hourly wage bill across all jobs.
- The LCI increased 1.7 percent. This is a measure of wage inflation, reflecting changes in the rates that employers pay to have the same job done to the same standard.
- The unadjusted LCI increased 2.5 percent. This measures quality change within occupations as well as wage inflation.



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

## We're changing the way we report our labour market statistics

We are strongly focused on delivering the information New Zealand needs to grow and prosper, and one of the ways we're doing this is by presenting our information in a more holistic and joined-up way.

We can provide a more complete picture of the labour market by combining the Household Labour Force Survey, the Quarterly Employment Survey, and the Labour Cost Index information releases. Doing this doesn't involve any changes to the surveys themselves, but will ensure that labour market information is easy for our users to understand. In developing this approach we worked with users to ensure this change will meet our customers' needs.

We're keen to get your feedback and comments. See [Contacts](#) for our contact details.

The first joint labour market information release is scheduled for the December quarter results on 4 February 2015.

## Definitions

### About the Quarterly Employment Survey

The Quarterly Employment Survey (QES) estimates the demand for labour by New Zealand businesses. From the survey responses, we estimate 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.

QES estimates the number of jobs filled, not the number of people employed. This means a person with multiple jobs during the reference week could be counted multiple times.

Data from QES about the total paid hours is used in compiling gross domestic product – economic activity for selected industries. QES average earnings statistics are used in calculating superannuation and paid parental leave.

### More definitions

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

**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.

**Industry:** determined from the Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006. Businesses in QES are classified using ANZSIC06 industries.

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

**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.

See [ANZSIC 2006 – industry classification](#) for more information about ANZSIC06 and its implementation into the QES and other Statistics NZ collections.

## Related links

[The Household Labour Force Survey \(HLFS\)](#), [the Quarterly Employment Survey \(QES\)](#), and [the Labour Cost Index \(LCI\)](#) for the December 2014 quarter will be combined into a single labour market statistics information release. The next labour market statistics release will be on 4 February 2015.

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

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

## Past releases

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

## Related information

[Labour Cost Index \(Salary and Wage Rates\)](#) provides information on movements in base salary and ordinary time wage rates, overtime wage rates, and the following non-wage costs: annual leave and statutory holidays, superannuation, ACC employer premiums, and medical insurance.

[Household Labour Force Survey \(HLFS\)](#) provides New Zealand's official employment and unemployment statistics. The HLFS surveys about 30,000 people in about 15,000 households across the country.

[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.

[New Zealand Income Survey](#) provides information on wages and salaries, self-employment, government transfers, and other transfer income.

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

## Data quality

### Period-specific information

This section contains information about data that has changed since the last release.

- [Special imputation in the September 2014 quarter](#)
- [Reference period](#)
- [Response rate](#)

### General information

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

- [Data source](#)
- [Imputation](#)
- [Accuracy of survey data](#)
- [Seasonally adjusted and trend series](#)
- [Consistency with other labour market statistics](#)
- [More information](#)

## Period-specific information

### Special imputation in the September 2014 quarter

Data was imputed for a large component in the education and training industry from the March 2013 quarter onwards. We receive provisional data for this component but because the quality of the data could not be guaranteed, the data has been modelled for this unit.

The large quantity of missing data meant we used a special imputation method instead of the standard imputation normally used for missing data. Initially, we used special imputation for the March, June, September, and December 2013 quarters based on historic movements. However, the responses received for this component for the March, June, and September 2014 quarters have reached a point where we trust the movements over time and our imputation method has changed to incorporate these movements. The quality of some variables and levels in the data are still not guaranteed, therefore we have continued to impute for this component.

Use data for the education and training industry in the March 2013 quarter onwards with care.

For more information about our imputation methods, or the effects on the final dataset, email [info@stats.govt.nz](mailto:info@stats.govt.nz).

### Reference period

The reference period for the *Quarterly Employment Survey: September 2014 quarter* is the payweek ending on, or before, 20 August 2014.

### Response rate

Our desired response rate by weighted FTEs is 89.0 percent. The September 2014 quarter response rate by weighted FTEs was 90.0 percent.



## General information

### Data source

The Quarterly Employment Survey (QES) is a sample of approximately 18,000 business locations selected from a population of economically significant enterprises in surveyed industries. Weights are allocated to each of the selected business locations. These represent the population weights based on employee counts sourced from the Business Register.

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 and involved in agriculture or forestry.

Businesses in the following Australian and New Zealand Industrial Classification 2006 (ANZSIC06) industries are not surveyed as part of the QES:

- A01 Agriculture
- A02 Aquaculture
- A04 Fishing, hunting, and trapping
- A052 Agriculture and fishing support services
- L6711 Residential property operators
- O7552 Foreign government representation
- O76 Non-civilian defence staff
- S96 Households employing staff
- T99 Not included elsewhere.

### Imputation

Imputation is the process of estimating data for surveyed businesses that do not respond. One of two methods of imputation is used.

- Ratio imputation – used for businesses entering the sample in the current quarter. Data is imputed using the employee count from the Business Register. This assumes the relationship between the employee count and earnings and hours data is robust.
- Historical imputation – used for businesses that are in the sample in consecutive quarters. The imputed data is calculated by multiplying the previous quarter's data by the average movement of responding businesses that are in the same industry and of similar size.

For further information about the imputation methods, or the effects of imputation on the final dataset, please email [info@stats.govt.nz](mailto:info@stats.govt.nz).

### Accuracy of survey data

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 a sample of eligible businesses, rather than the entire population, is surveyed. 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.

## **Seasonally adjusted and trend series**

The X-12-ARIMA package is used to produce the seasonally adjusted estimates and trend estimates for selected QES series. Seasonal adjustment aims to eliminate the impact of regular seasonal events on time series. This makes the data for adjacent quarters more comparable, and ensures that the underlying movements in the time series are more visible.

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

While seasonally adjusted series have the seasonal component removed, trend series have both the seasonal and the irregular components removed. Trend estimates reveal the underlying direction of movement in a series, and are likely to indicate turning points more accurately than seasonally adjusted estimates.

Trend estimates towards the end of the series incorporate new data as it becomes available. They can therefore change as more observations are added to the series. Revisions can be particularly large if an observation is treated as an outlier in one quarter, but is found to be part of the underlying trend as further observations are added to the series. Typically, only the estimates for the most recent quarter will be subject to substantial revisions.

## **Consistency with other labour market statistics**

Statistics NZ publishes a suite of labour market employment statistics. These include:

- Household Labour Force Survey
- Linked Employer-Employee Dataset.

Because of differences in coverage and timing, each of these measures provides a different view of employment.

See [Comparing our labour market statistics](#) for more information.

## **Comparing the QES and the Household Labour Force Survey (HLFS)**

The QES and the HLFS are complementary measures of the labour market. However, there are important differences between the two. The HLFS measures the number of people employed and the number of hours they usually work, for residents of New Zealand households (labour supply); the QES measures the number of filled jobs and paid hours at economically significant New Zealand businesses (labour demand).

### **Coverage**

The HLFS is the broadest measure of employment and has wider coverage than the QES. The

HLFS includes agricultural workers, self-employed workers, unpaid family workers, those on unpaid leave, and private household workers, among the employed. These groups are excluded from the QES. Conversely, overseas workers resident in New Zealand for less than 12 months are included in the QES but are excluded from the HLFS.

The HLFS includes employees who may not be captured by the QES, including those working in businesses that do not meet the economic significance criteria, such as those with few or no employees. The HLFS is limited to the working-age population of 15 years of age and older. QES filled jobs are not limited by age.

### **Reference period**

Another significant difference in coverage is the survey period. The HLFS averages over all weeks of the quarter, whereas the QES is based on a reference week in the middle of the quarter. This means that any exceptional events affecting employment, which fall outside the reference week of the QES, will not necessarily have an immediate impact on the QES but will affect the HLFS. Also, any employees working outside the reference week may not be counted in the QES but do appear in the HLFS.

### **Measure**

Weights in the HLFS are designed to produce estimates that reflect the entire civilian non-institutional population. The population is based on estimated national resident population estimates adjusted to be consistent with the scope of the HLFS. Weights in the QES are based on employee counts sourced from the Business Register. The Business Register contains a list of all economically significant businesses in New Zealand. Weights are allocated to each of the selected business locations to effectively estimate the total Business Register population employee count for each industry.

Because the HLFS measures employees, and the QES measures filled jobs in businesses, a single employee with multiple jobs is counted once in the HLFS but multiple times in the QES.

### **Comparing the QES and the labour cost index (LCI)**

The QES average earnings and LCI salary and wage rates are measures of labour costs paid by New Zealand businesses in the form of salary and wages.

The QES and LCI information releases provide useful information on labour costs. The LCI provides a good measure of pure wage inflation, whereas the QES is a good measure of average hourly earnings, average number of hours paid in a week, or average weekly earnings from wages or salaries.

The following series are discussed below:

- QES average ordinary-time hourly earnings (QES)
- LCI salary and ordinary-time wage rates (LCI)
- LCI analytical unadjusted salary and ordinary-time wage rates (LCI analytical unadjusted).

### **QES average ordinary-time hourly earnings**

#### **Coverage**

The QES has a sample of approximately 18,000 business locations selected from a population of economically significant enterprises in surveyed industries. The QES includes jobs filled by paid employees of all ages. The QES does not include the earnings of those working in agriculture,

fisheries, several smaller industries (see [data source](#) for all exclusions), or earnings from self-employment.

### **Reference period**

The QES reference period is the payweek ending on, or before, the 20th of the middle month of the quarter.

### **Measure**

The QES measures the average gross earnings paid to employees in economically significant businesses. The QES reflects changes in the composition of the paid workforce, and changes to earnings paid by surveyed businesses within industries and between industries. These compositional influences do not affect the LCI series, as it controls for changes in surveyed job descriptions and the standard of job performed, as well as for changes in the relative importance of job descriptions within each sector, occupation, and industry.

Compositional effects **between** industries can affect the QES. This happens when industries with higher or lower earnings than the average total hourly earnings for all industries change in relative importance (ie make up a bigger share of the total hours), and contribute more or less towards the average total hourly earnings for all industries.

For example, average total hourly earnings in the retail trade industry are lower than the national average, and represent about 10 percent of the total paid hours of all industries combined. If the retail trade industry increased total paid hours relative to other industries, the average total hourly earnings for all industries would fall, everything else being held constant, because there is a relative increase in influence from a lower-paying industry.

Compositional changes **within** industries can affect the QES in different ways. Changes in the composition of the paid workforce are reflected in the QES. Such changes could arise from changes between male and female, part-time and full-time, qualifications, experience, occupations, and the performance of employees. Changes can also arise from changes to paid earnings by surveyed businesses within industries.

For example, the average ordinary-time hourly earnings for the manufacturing industry increased from \$24.51 in the June 2011 quarter to \$24.81 in the September 2011 quarter. This may reflect individual manufacturing employees being paid a higher wage or salary, or higher-paying businesses joining the industry. It may also reflect a change toward higher-paid occupations, or more highly skilled employees, within a manufacturing business. Any of these events would lift manufacturing average ordinary-time hourly earnings. The change in skill level would be reflected in the unadjusted LCI, but not the LCI salary and ordinary-time wage rates.

## **LCI salary and ordinary-time wage rates**

### **Coverage**

The LCI covers jobs filled by paid employees in all occupations and in all industries except private households employing staff. The LCI includes jobs filled by paid employees of all ages. The LCI tracks a sample of nearly 6,000 jobs at 2,100 businesses.

### **Reference period**

Each quarter, salary and wage rates are surveyed to find what employers pay at the 15th of the middle month of the quarter.

### **Measure**

The LCI measures changes in the gross salary and ordinary-time wage rates that employers pay

to have the same job completed to the same standard. This means that only changes for the same quality and quantity of work are reflected in the index. In practice, this means surveying a given set of job descriptions and making adjustments for any changes to hours worked, duties performed, experience, qualifications, or performance of employees filling the jobs.

For example: an adjustment would be made to a skilled job being tracked in the LCI if a new employee who had just completed a bachelor's degree, with no prior work experience, replaced an employee with a bachelor's degree and 10 years' experience in the role. The term 'fixed quantity' refers to a specific amount of labour, in particular hours worked per week.

The LCI shows changes arising from collective employment agreements, and changes to match market rates, retain or attract staff, or reflect the cost of living. Changes to reflect individual performance, experience, qualifications, and responsibilities are not shown.

The LCI controls for changes in sector, industry, and occupation by assigning fixed weights. Weights reflect the relative importance of job descriptions for different combinations of sectors of ownership, occupation, and industry. This means a change in salary and wage rates for managers – which has a high relative importance – has more influence on the overall series than a change of the same size in salary and wages for clerical and administrative workers.

Labour Cost Index (Salary and Wage Rates) has information on the weights for LCI salary and wage measures.

### **LCI analytical unadjusted salary and ordinary-time wage rates**

The LCI analytical unadjusted series has the same **coverage** and **timing** as the LCI.

#### **Measure**

The unadjusted LCI measures changes in salary and ordinary-time wage rates for a fixed quantity of labour. It fixes the relative importance of industries and occupations, but does not fix the quality of labour within occupations. This means that any movement in the series will reflect changes in the cost of living, changes to match market rates, and to retain/attract staff, and may also include changes in labour quality. This could be a change in employee performance, qualifications, responsibilities, and experience.

User guide for wage and income measures has more information on the various income and wage measures.

#### **Timing of published data**

QES data is released within six weeks of the end of the reference quarter.

#### **More information**

See Quarterly Employment Survey for more information.

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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## 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. 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

### Access more data on Infoshare and NZ.Stat

Use [Infoshare](#) to access time-series data specific to your needs. For this release, select the following categories from the Infoshare home page:

Subject category: **Work income and spending**  
Group: **Earnings and Employment Survey (QES) - QEX**

Use [NZ.Stat](#), a free online tool that allows you to access official statistics data and organise it into downloadable tables. To access the release data on NZ.Stat, select the following tables from the home page:

Subject category: **Employment and Unemployment (Labour Market)**  
Table title: **Filled jobs by ANZSIC Group, Sex and Employment (000s)**

Note: NZ.Stat has replaced Table Builder.

For those who have their own databases, NZ.Stat will eventually allow automatic updates, in real time, using machine-to-machine data exchange.