



Quarterly Employment Survey

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Quarterly Employment Survey

Quarterly Employment Survey Data Collection - QES Data Collection

QES Data Collection

The Quarterly Employment Survey data provides information about employment, earnings and hours paid at industry and national levels. Data is obtained from economically significant businesses for the reference period of the pay week ending on, or before the 20th of the middle month of the quarter. When businesses do not answer questions in the Quarterly Employment Survey, Statistics NZ imputes the data using historical and ratio imputation techniques.

#####General Information

#####Data Source

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

The QES has a sample of over 3900 kind-of-activity units (KAUs) selected from a population of economically significant enterprises in surveyed industries.

#####Coverage

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(see the population set for all exclusions), or earnings from self-employment.

#####Weights

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

#####Sample 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.

Sampling errors in the QES are calculated using the Horvitz Thompson method.

#####Imputation

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

The QES uses the following types of imputation:

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.

#####Rounding

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.

#####Seasonally adjusted and trend series

The X-13-ARIMA-SEATS 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

#####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).

Spatial Coverage	The Quarterly Employment Survey (QES) is a sample of over 3,900 kind-of-activity units (KAUs) selected from the population of economically significant enterprises in surveyed industries. Weights are allocated to each of the selected KAU. These represent the population weights based on employee counts sourced from the Business Register.
Highest Level	New Zealand

Variables

Published Variables

Name	Range
Average ordinary time hourly earnings	Numeric
Average ordinary time weekly earnings (FTEs)	Numeric
Average overtime hourly earnings	Numeric
Average overtime weekly earnings (FTEs)	Numeric
Average total weekly earnings (FTEs)	Numeric
Average total hourly earnings	Numeric
Filled jobs	Numeric
Full-time equivalent (FTE)	Numeric
Full-time jobs	Numeric
Part-time jobs	Numeric
Total Paid Hours	Numeric
Total Gross Earnings	Numeric
Average ordinary time weekly earnings (Employees)	Numeric
Average overtime weekly earnings (Employees)	Numeric
Average total weekly earnings (Employees)	Numeric
Average ordinary time weekly paid hours (FTEs)	
Average overtime weekly paid hours (FTEs)	
Average total weekly hours (FTEs)	
Average ordinary time weekly paid hours (Employees)	
Average overtime weekly paid hours (Employees)	
Average total weekly paid hours (Employees)	

Concepts

QES Concepts

Name	Description
Business Register	Business Register The list of all economically significant enterprises in New Zealand, which is maintained by Statistics NZ.

Earnings	Earnings estimates are based on payroll data received from economically significant businesses. Businesses provide the total amount of wages/salaries paid to employees by gender and from here earnings figures such as average hourly earnings, and average weekly earnings are derived. Gross earnings can include shift, penal and other allowances, ACC earners premiums, bonuses, paid leave and commissions earned in the pay period. However, it excludes payments not earned in the pay period (e.g. back pay, redundancy or severance pay) and non-taxable payment (e.g. tool money).
Employment	Employment estimates are based on filled jobs in economically significant businesses. If a person has a paid job in the reference week they are considered employed. This includes employees even if they are absent from work (e.g. due to sickness, being on leave, on strike or temporary lay-off, etc.) whether paid or not. This also includes all managerial or executive staff (e.g. Chief Executive).
Enterprise	Enterprise A business or service entity operating in New Zealand.
Full-time equivalent (FTE) jobs	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	Full-time jobs Jobs where the employee works for 30 hours or more per week.
Hours Paid	Hours paid is represented by any ordinary time and overtime hours for which an employee has been paid. The concept of hours paid includes paid travelling time, hours represented by holiday pay, sick pay, etc. It is not restricted to just hours that have been worked.
Industry	Industry Determined from the Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006. Businesses in QES are classified using ANZSIC06 industries.
Part-time jobs	Part-time jobs Jobs where the employee works for less than 30 hours per week.
Working proprietors	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.
Filled jobs	Filled jobs The total number of full-time jobs and part-time jobs.