

# Labour Cost Index (Salary and Wage Rates): March 2014 quarter

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## Key facts

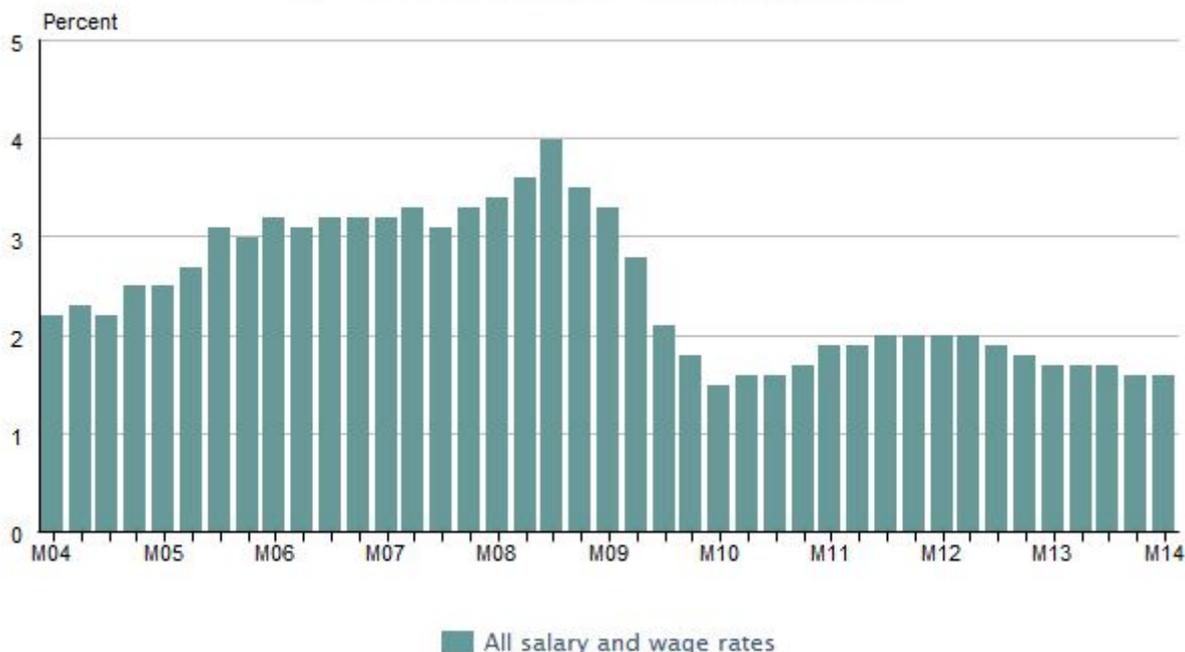
In the March 2014 quarter, salary and wage rates (including overtime) rose 0.4 percent.

In the year to the March 2014 quarter:

- Salary and wage rates (including overtime) increased 1.6 percent.
- Overtime wage rates increased 2.1 percent.
- Private sector salary and ordinary time wage rates increased 1.6 percent.

Sector	Salary and ordinary time wage rates Percentage change		All salary and wage rates (including overtime) Percentage change	
	From previous quarter	From previous year	From previous quarter	From previous year
All sectors	0.3	1.5	0.4	1.6
Public sector	0.2	1.2	0.2	1.2
Private sector	0.3	1.6	0.3	1.7

**All salary and wage rates**  
Percentage change from same quarter of previous year



Source: Statistics New Zealand

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## Commentary

- Annual wage rates grow 1.6 percent
- Annual wage rate growth flat for private sector while public sector eases
- Annual median increase lowest in over 13 years
- Analytical unadjusted LCI shows annual growth of 2.8 percent
- QES and LCI ordinary time rises
- Comparison with consumer prices
- Construction: wage growth edges up in Canterbury and rest of New Zealand

## Annual wage rates grow 1.6 percent

The labour cost index (LCI) increased 1.6 percent in the year to the March 2014 quarter – the same as in the year to the December 2013 quarter.

In contrast, in the year to the March 2013 quarter, the LCI increased 1.7 percent.



**Salary and ordinary time wage rates** increased 1.5 percent in the year to the March 2014 quarter. This follows a 1.6 percent increase in the year to the December 2013 quarter.

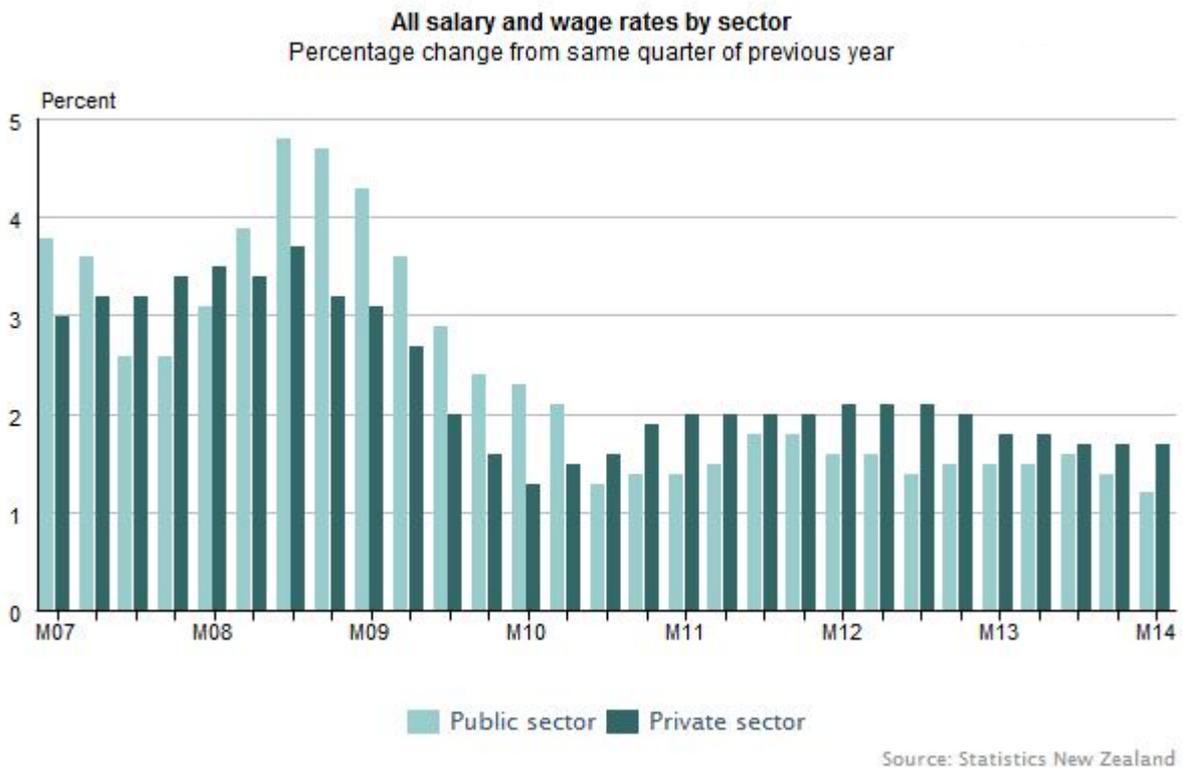
Due to timing of wage settlements, March and June quarters often see a smaller proportion of surveyed wage rates increasing compared with the September and December quarters. In the December 2013 quarter, 17 percent of surveyed salary and ordinary time wage rates increased, leading to wage rate growth of 0.5 percent. This compares with 12 percent of wage rates increasing in the March 2014 quarter, leading to growth of 0.3 percent.

**Overtime wage rates** increased 2.1 percent in the year to the March 2014 quarter – the same as in the year to the December 2013 quarter.

### Annual wage rate growth flat for private sector while public eases

**Private sector** salary and wage rates (including overtime) increased 1.7 percent in the year to the March 2014 quarter – the same as in the year to the December 2013 quarter.

**Public sector** salary and wage rates (including overtime) increased 1.2 percent in the year to the March 2014 quarter, after a 1.4 percent increase in the year to the December 2013 quarter. The latest annual growth in the public sector came from increases in central government (up 1.1 percent) and local government (up 1.8 percent). This is the lowest annual increase for central government since the year to the March 1995 quarter.



### Annual median increase lowest in over 13 years

Of all salary and ordinary time wage rates in the LCI sample, 54 percent rose in the year to the March 2014 quarter. This compares with 54 percent in the year to the December 2013 quarter and 56 percent in the year to the March 2013 quarter.

Of the 54 percent that increased in the year to the March 2014 quarter, there was:

- a median (middle) annual increase of 2.3 percent (the lowest since the June 2000 quarter)
- a mean annual increase of 3.1 percent.

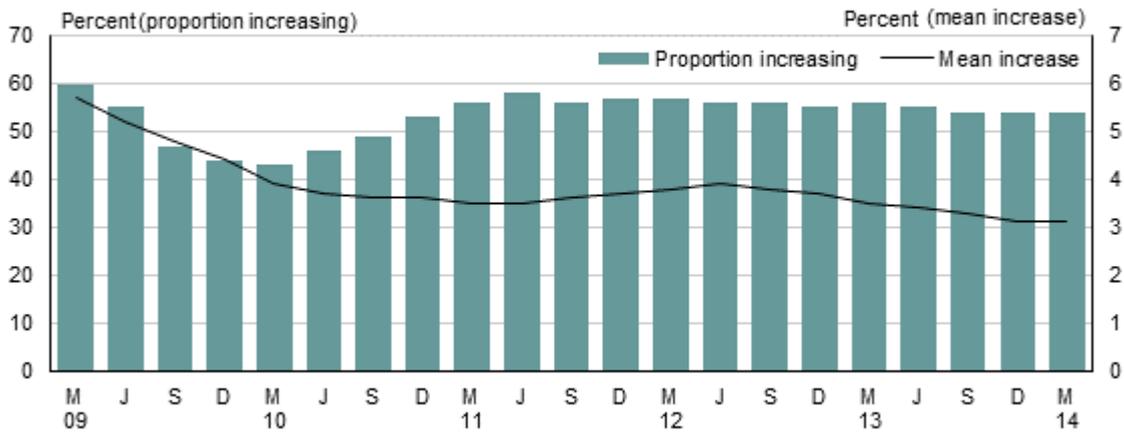
In the March 2014 quarter, 12 percent of all salary and ordinary time wage rates rose. This compares with 17 percent in the December 2013 quarter and 13 percent in the March 2013 quarter.

Of the 12 percent that increased this quarter, there was:

- a median (middle) quarterly increase of 2.2 percent (down from 2.3 percent in the December 2013 quarter)
- a mean quarterly increase of 2.9 percent (up from 2.7 percent in the December 2013 quarter).

### Annual proportion increasing and mean increase

All sectors combined  
Surveyed salary and wage rates



Source: Statistics New Zealand

In the year to the March 2014 quarter, the mean increases by sector were:

- private sector, 3.3 percent
- public sector, 2.3 percent.

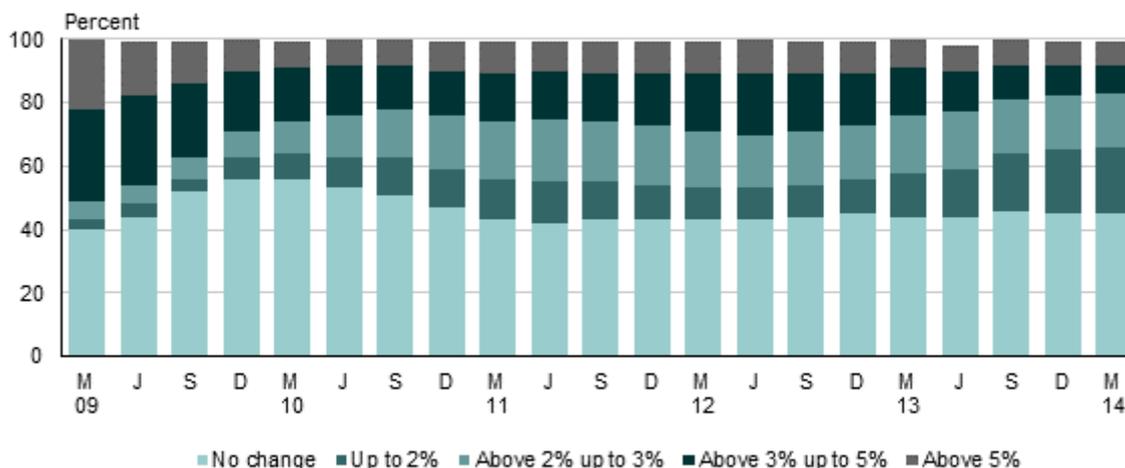
This is the lowest annual mean increase for the public sector since the series began in the September 2003 quarter.

In the year to the March 2014 quarter:

- 38 percent of salary and wage rates rose **no more than 3 percent**
- 17 percent of salary and wage rates rose **more than 3 percent**.

## Distribution of annual movements

All sectors combined  
Surveyed salary and wage rates



Source: Statistics New Zealand

In contrast, in the year to the March 2013 quarter:

- 32 percent of salary and wage rates rose **no more than 3 percent**
- 24 percent of salary and wage rates rose **more than 3 percent**.

## Analytical unadjusted LCI shows annual growth of 2.8 percent

The analytical unadjusted series is an additional measure that complements the official LCI and Quarterly Employment Survey (QES) indicators. Like the LCI, the unadjusted series measures changes in salary and wage rates for a fixed quantity of labour, but reflects quality change within occupations in addition to price change.

Unadjusted salary and ordinary time wage rates increased 2.8 percent in the year to the March 2014 quarter, after increasing 3.0 percent in the year to the December 2013 quarter.

Private sector unadjusted salary and ordinary time wage rates increased 3.1 percent in the year to the March 2014 quarter, after increasing 3.2 percent in the year to the December 2013 quarter.

### Analytical unadjusted and adjusted salary and ordinary time wage rates

Private sector and all sectors combined

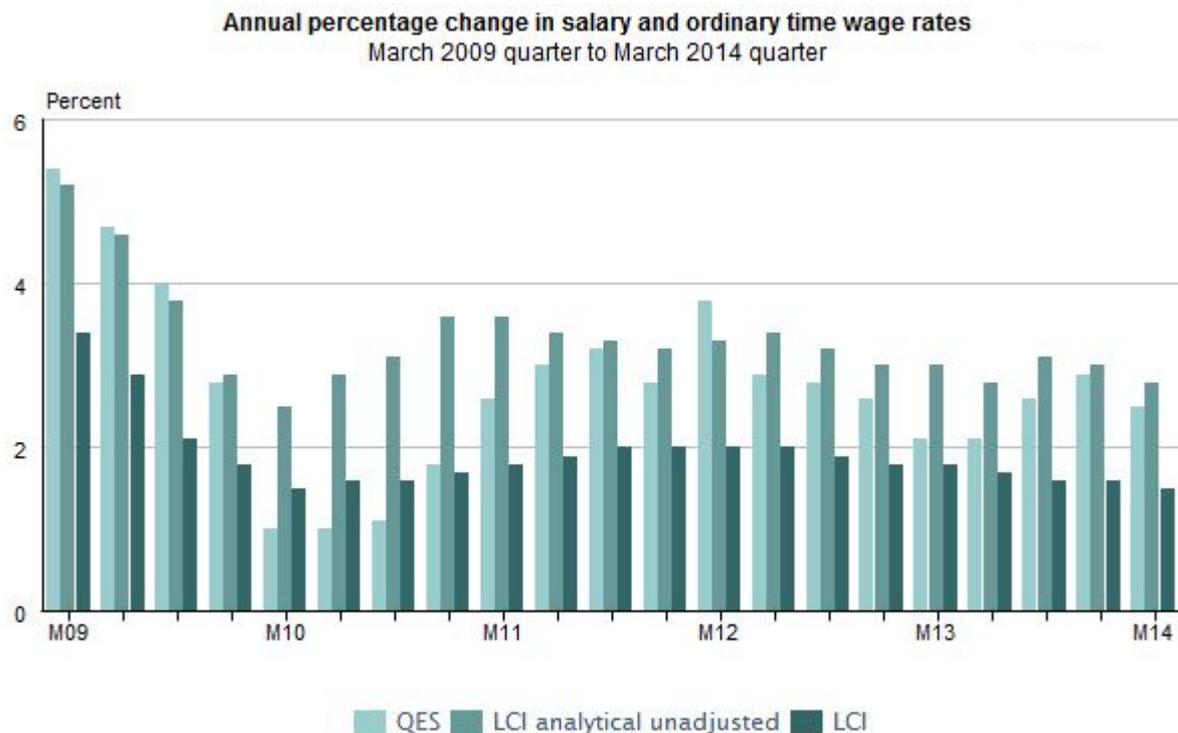
March 2014 quarter

Sector	Percentage change from previous quarter		Percentage change from same quarter of previous year	
	Adjusted	Unadjusted	Adjusted	Unadjusted
Private sector	0.3	0.6	1.6	3.1
All sectors	0.3	0.5	1.5	2.8

## QES and LCI ordinary time rises

Annual percentage changes in salary and ordinary time wage rates vary between the QES and LCI measures. For the year to the March 2014 quarter:

- LCI salary and ordinary time wage rates were up 1.5 percent
- QES average ordinary time hourly earnings increased 2.5 percent
- the LCI analytical unadjusted series was up 2.8 percent.



The QES average earnings statistics are often compared with the LCI salary and ordinary time wage rates. However, the QES average earnings statistics reflect not only changes in salary and wage rates, but also compositional changes between and within businesses in surveyed industries.

In comparison, the LCI measures changes in salary and wage rates that employers pay to have the same job done to the same standard. Rises to match the market, retain staff, or reflect the cost of living are shown in the LCI, while rises reflecting individual performance or years of service are filtered out.

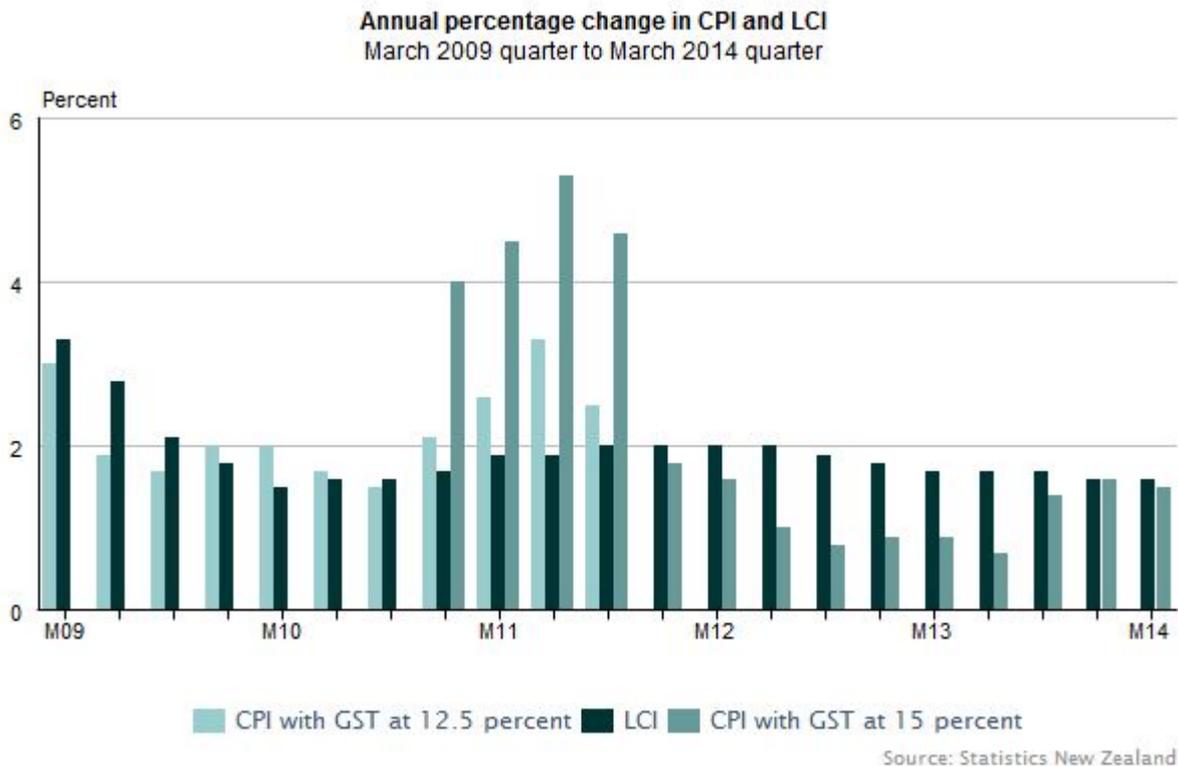
The LCI analytical unadjusted series fixes the amount of work, but reflects quality changes within the occupations (such as individual performance or years of service) in addition to price change.

For more information about the differences between the LCI and the QES, please see 'Comparing the QES and the LCI' under the data quality section of [Quarterly Employment Survey: March 2014 quarter](#).

## Comparison with consumer prices

The prices of goods and services bought by households, as measured by the consumers price index (CPI), increased 1.5 percent in the year to the March 2014 quarter (see [Consumers Price Index: March 2014 quarter](#)). The LCI salary and wage rates (including overtime) increased 1.6 percent over the same period.

GST rose from 12.5 percent to 15 percent on 1 October 2010. This affected annual CPI movements from the December 2010 quarter to the September 2011 quarter. The graph below shows what the annual CPI percentage increases would be if prices collected from the December 2010 quarter to the September 2011 quarter were processed with GST of 12.5 percent for goods and services that are subject to GST.



Personal income tax rates decreased at the same time as the GST rate rose. However, since the LCI measures changes in gross salary and wage rates, it did not directly reflect the reductions in income tax rates.

## Construction: wage growth edges up in Canterbury and rest of New Zealand

In the year to the March 2014 quarter, salary and wage rate growth (including overtime) in the Canterbury construction industry increased 3.0 percent. This compares with an increase of 2.8 percent in the year to the December 2013 quarter. For the rest of New Zealand, wage rate growth in the construction industry rose 1.7 percent in the year to the March 2014 quarter, up from a 1.4 percent increase in the year to the December 2013 quarter.

The first earthquake in Canterbury occurred in September 2010. Salary and wage rates for the September 2010 quarter were collected as at 15 August. Since then, wage rates have

increased 13.0 percent in the Canterbury construction index. This compares with a 7.2 percent increase for the rest of New Zealand.



In the year to the March 2014 quarter, the mean increase for surveyed salary and ordinary time wage rates that rose for the Canterbury construction industry continued to be higher than for the rest of New Zealand.

The mean increases of the rates that rose for the year to the March 2014 quarter were:

- 5.0 percent for the Canterbury region
- 3.9 percent for the rest of New Zealand.

For further information, refer to the supplementary tables with this information release.

In response to the Canterbury earthquakes, we created six new regional analytical series from the existing LCI sample. These may be revised as the classification by region is refined.

The LCI is designed to measure changes in salary and wage rates at a national level and is not intended to provide accurate regional estimates. See [data quality](#) for more information.

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

# Definitions

## About the labour cost index

The labour cost index (LCI) measures changes in salary and wage rates for a fixed quantity and quality of labour input. Service increments, merit promotions, and increases (or decreases) relating to performance of the individual employee are not shown in the index.

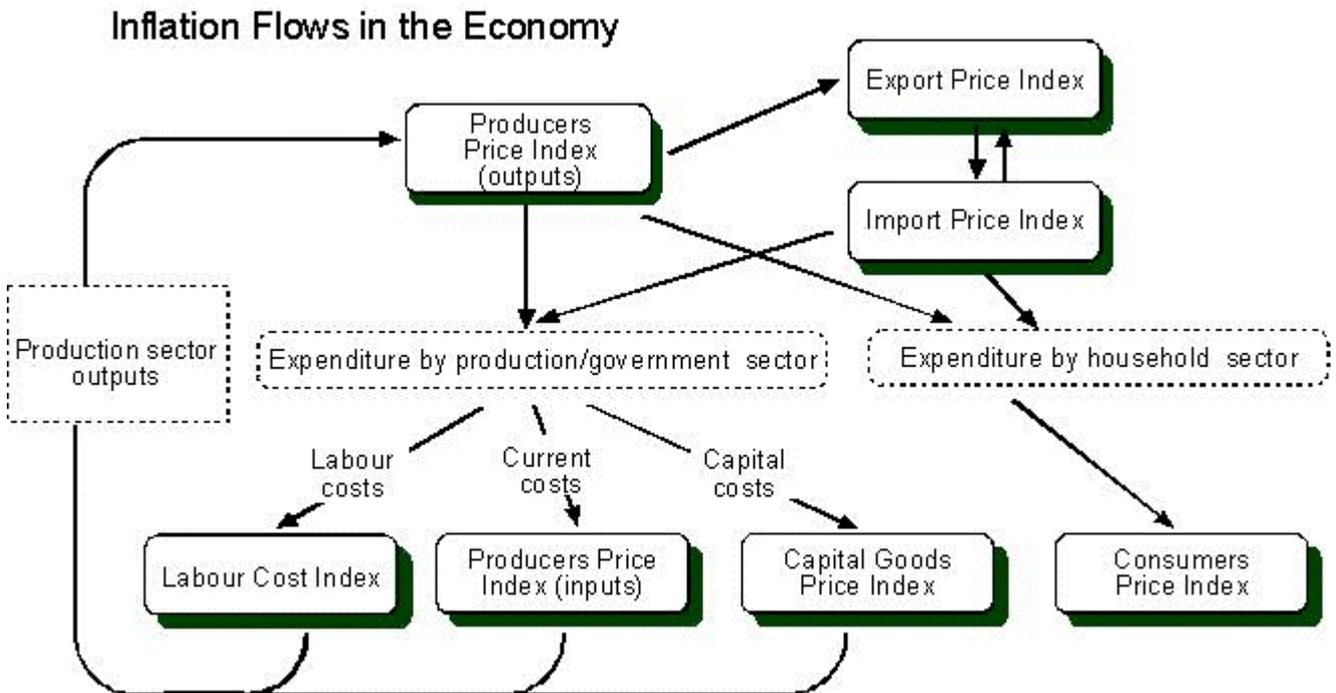
The **salary and wage rates component** of the LCI measures movements in base salary and ordinary time wage rates, and overtime wage rates.

The **non-wage component** measures changes in the following costs to employers:

- annual leave and statutory holidays
- superannuation
- Accident Compensation Corporation (ACC) employer premiums
- medical insurance
- motor vehicles available for private use
- low-interest loans.

The LCI sits alongside the producers price inputs index (which measures changes in businesses' current costs of production, excluding labour and capital costs, as defined by the New Zealand System of National Accounts' concept of intermediate consumption) and the capital goods price index (which measures changes in businesses' capital costs). This is shown in figure 1 below. These three indexes provide measures of the extent to which changes in businesses' input costs put pressure on the output prices they charge for goods and services.

Figure 1



By comparison, the average earnings measures from the Quarterly Employment Survey (QES) reflect not only changes in pay rates, but also compositional change (ie changes in the mix of labour from period to period).

## **More definitions**

**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).

**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.

## **Related links**

### **Upcoming releases**

The *Labour Cost Index (Salary and Wage Rates): June 2014 quarter* will be released on 6 August 2014.

[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**

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

### **Related information**

[Quarterly Employment Survey](#) provides statistics on employment in New Zealand, including the levels of, and changes in, total earnings, hours paid for, filled jobs, average hourly and weekly earnings, and average weekly paid hours.

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

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

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

## Data quality

### Period-specific information

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

- [Reference period](#)
- [Response rate](#)
- [Data influencers](#)

### General information

This section contains information that does not change between releases.

- [Data source](#)
- [Coverage](#)
- [Sample size](#)
- [Implementation of new classifications](#)
- [How skill levels are determined](#)
- [Index calculation formula and reference period](#)
- [Index number rounding](#)
- [Weights](#)
- [Quality control](#)
- [Contract indexation](#)
- [Mean and median increases](#)
- [Analytical unadjusted series](#)
- [Regional analytical series for construction industry](#)

## Period-specific information

### Reference period

For the March 2014 quarter, the salary and wage rates surveyed were those that employers paid at 15 February 2014.

### Response rate

#### Key firms

Achieved: 100 percent

Target: 100 percent

#### Total response rate

Achieved: 94.78 percent

Target: 94 percent

### Data influencers

Index numbers are rounded to the nearest index point, and this affected some percentage increases in the March 2014 quarter. If percentage changes were calculated on unrounded index numbers, the labour cost index (LCI) all salary and wage rates for:

- all sectors would have increased 0.3 percent (instead of 0.4 percent)

- the public sector would have increased 0.3 percent (instead of 0.2 percent)
- local government would have increased 0.2 percent (instead of 0.3 percent).

In the March 2014 quarter, salary and ordinary time wage rates for local government would have increased 0.2 percent (instead of 0.3 percent).

## **General information**

### **Data source**

Salary and ordinary time and overtime wage rates for a fixed set of job descriptions are obtained using a quarterly postal survey of employers. Each quarter, salary and wage rates are surveyed for what employers pay at the 15th of the middle month of the quarter.

### **Coverage**

The LCI covers 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 under 15 years of age when the index was reweighted and re-expressed on a base of the June 2001 quarter (=1000).

### **Sample size**

There are about 6,000 job descriptions for which salary and ordinary time wage rates are collected each quarter.

Nearly 1,000 overtime descriptions designed to survey changes in overtime wage rates, are attached to ordinary time wage descriptions in the survey.

Approximately 2,000 respondents provide information.

### **Implementation of new classifications**

The September 2009 quarter release was the first that used the updated 2006 version of the Australian and New Zealand Standard Industrial Classification (ANZSIC06) and the Australian and New Zealand Standard Classification of Occupations (ANZSCO).

ANZSIC06 and ANZSCO have been jointly developed by Statistics NZ and the Australian Bureau of Statistics to ensure that the classifications remain current and relevant, reflecting the changes that have occurred in the structure and composition of industry and occupation.

### **How skill levels are determined**

ANZSCO assigns each occupation to one of five skill levels. A skill level is based on the range and complexity of tasks performed in a particular occupation. The greater the range and complexity of the tasks, the higher the skill level of an occupation.

In general, a skill level is measured by:

- the level or amount of formal education and training
- the amount of previous experience in a related occupation

- the amount of on-the-job training.

Under ANZSCO, skill level is not a measure of an individual working in a particular job. Rather, it is seen as a measure of those skills that are typically required to competently perform the tasks of a particular occupation. It is irrelevant whether a particular individual working in a job has a certain amount of training or a particular level of competence or not.

The definitions of the five skill levels are:

#### **Skill level 1**

A bachelor's degree or higher qualification is required for this skill level. It may be possible to replace the formal qualification with at least five years of relevant work experience. In some instances, relevant work experience and/or on-the-job training may be needed in addition to the formal qualification. These occupations are typically drawn from major groups 1 – managers, and 2 – professionals.

#### **Skill level 2**

A New Zealand Register diploma or at least three years of relevant work experience is required. In some instances, relevant experience and/or on-the-job training may be required in addition to the formal qualification. These occupations are typically drawn from major groups 1 – managers, 3 – technicians and trade workers, 4 – community and personal service workers, 5 – clerical and administrative workers, and 6 – sales workers.

#### **Skill level 3**

A New Zealand Register level 4 qualification, or at least three years of relevant experience is required. For some occupations relevant experience and/or on-the-job training may be required in addition to the formal qualification. These occupations are typically drawn from major groups 3 – technicians and trade workers, 4 – community and personal service workers, 5 – clerical and administrative workers, and 6 – sales workers.

#### **Skill level 4**

A New Zealand Register level 2 or 3 qualification is required to perform the work. It may also be possible to replace the formal qualification with at least one year of relevant work experience and, in some instances, relevant experience and/or on-the-job training may be required in addition to the formal qualification. These occupations are typically drawn from major groups 4 – community and personal service workers, 5 – clerical and administrative workers, 6 – sales workers, 7 – machinery operators and drivers, and 8 – labourers.

#### **Skill level 5**

A New Zealand Register level 1 qualification is required. In some instances these occupations may require a short period of on-the-job training in addition to or instead of the formal qualification. Other occupations require no formal qualification or on-the-job training. These occupations are typically drawn from major groups 4 – community and personal service workers, 5 – clerical and administrative workers, 6 – sales workers, and 8 – labourers.

### **Index calculation formula and reference period**

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

## Index number rounding

Index number rounding uses standard Statistics NZ rounding procedures. It can occasionally result in movements for a particular cost being slightly higher or lower than would be expected, given movements recorded for component costs.

For example, the all sectors combined increase for salary and ordinary wage rates of 0.4 percent from the September 2009 quarter to the December 2009 quarter is larger than the 0.3 percent increases for both the public sector and the private sector. The lower figure for the private sector was mainly caused by the index number for the September 2009 quarter being rounded up to the nearest index point and the index number for the December 2009 quarter being rounded down to the nearest index point.

## Weights

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

Weights were calculated using 2006 Census of Population and Dwellings information on the relative importance of occupations within each sector by industry group, Business Frame information on the relative importance of industry groups within each sector, and pay rates surveyed in the June 2009 quarter.

The following tables show the occupation group weights at the June 2009 quarter for all salary and wage rates and for the skill levels under ANZSCO.

<b>Occupation group</b>	<b>Weight (Percent)</b>
Managers	21.7
Professionals	25.9
Technicians and trades workers	12.4
<b>Managers, professionals, technicians, and trades workers</b>	<b>60.0</b>
Community and personal service workers	6.1
Clerical and administrative workers	13.2
Sales workers	6.5
<b>Service, clerical, and sales workers</b>	<b>25.8</b>
Machinery operators and drivers	5.8
Labourers	8.3
<b>Machinery operators, drivers, and labourers</b>	<b>14.1</b>
<b>All occupations combined</b>	<b>100.0</b>
<b>Note:</b> Percentages may not sum to totals due to rounding.	

<b>Skill level</b>	<b>Weight (Percent)</b>
1	45.1
2	8.6
3	12.8
4	21.2
5	12.3
<b>All skill levels combined</b>	100.0

### **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. This is achieved in practice by asking respondents to provide reasons for movements in salary and wage rates. If a movement is due to more than one reason, the respondent is also asked to indicate how much of the movement is due to each reason. To further assist the measurement of movements in pay rates for a fixed level of labour input, job descriptions are specified in detail. Surveyed job descriptions typically specify the duties involved, qualifications required, years of service, and number of hours worked.

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 the description is amended 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.

One-off payments in lieu of pay rises are also excluded, 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. Payments such as commissions and irregular bonuses are excluded, however, 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 provides information on the price indexes produced by Statistics NZ 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.

### **Mean and median increases**

The latest quarterly and annual results for the median and mean increases are discussed in the 'commentary' section of this release. The mean tends to be higher than the median because the distribution of changes in pay rates is skewed to the right, with a bulge at the low end and a tail at the high end. The relatively few large increases boost the mean increase but have little effect on the median increase.

The median and mean increases are calculated using the percentage change in recorded salary and ordinary time wage rates. This differs from the quarterly and annual index movements, which measure the percentage change between calculated index numbers.

### **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 of this information release).

The analytical unadjusted series is an additional measure intended to complement the official LCI and Quarterly Employment Survey (QES) indicators and provide users 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 taken in compiling the published and analytical unadjusted series could be summarised as follows:

#### **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. 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, are shown in the index. 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 annum, per week, per 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, between 1 and 2 percent of surveyed rates are excluded from the unadjusted index each quarter for these reasons.

The analytical unadjusted index is calculated 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, the price changes (after quality control) of job positions in the sample (from the base period to the previous quarter) are used to scale base-period expenditure weights (which are then assigned to job positions in the sample).

It should be noted that 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, individual employees are tracked 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 make use of 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 2006. 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).

In addition to changes in pay rates, change in the QES measures of total and average gross earnings fully reflect compositional change, such as change from period to period in the proportions of employees and paid hours in different industries and different occupations. The measures reflect relative employment shifts both between and within industries and occupations. These measures are useful in the context of the potential effect that change in gross and average income earned by paid employees might have on the demand for goods and services purchased by the household sector.

An example of how a specific position would be treated in the published LCI and in the analytical unadjusted index follows:

Year	Salary scale				
	Step 1	Step 2	Step 3	Step 4	Step 5
1	\$30,000	\$40,000	\$50,000	\$60,000	\$70,000
2	\$30,900	\$41,200	\$51,500	\$61,800	\$72,100
3	\$31,827	\$42,436	\$53,045	\$63,654	\$74,263
4	\$32,782	\$43,709	\$54,636	\$65,564	\$76,491
5	\$33,765	\$45,020	\$56,275	\$67,531	\$78,786

Year & quarter	Reported pay rate (per annum)	Reason for change	Treatment	Published LCI	Analytical unadjusted index
Y1Q1	\$40,000			1000	1000
Y1Q2	\$40,000			1000	1000
Y1Q3	\$40,000			1000	1000
Y1Q4	\$40,000			1000	1000
Y2Q1	\$41,200	Price adjustment to step 2 of scale to match market rates and reflect the cost of living.	Price change; shown in the published and unadjusted indexes.	1030	1030
Y2Q2	\$51,500	Service increment from step 2 to step 3.	Quality change; shown only in the unadjusted index.	1030	1288
Y2Q3	\$51,500			1030	1288
Y2Q4	\$51,500			1030	1288
Y3Q1	\$53,045	Price adjustment to step 3 of scale to match market rates and reflect the cost of living.	Price change; shown in the published and unadjusted indexes.	1061	1326
Y3Q2	\$42,436	New, less experienced employee placed on step 2 replaces the incumbent.	Quality change; shown only in the unadjusted index.	1061	1061
Y3Q3	\$42,436			1061	1061
Y3Q4	\$42,436			1061	1061
Y4Q1	\$43,709	Price adjustment to step 2 of scale to match market rates and reflect the cost of living.	Price change; shown in the published and unadjusted indexes.	1093	1093
Y4Q2	\$54,636	Service increment from step 2 to step 3.	Quality change; shown only in the unadjusted index.	1093	1366
Y4Q3	\$54,636			1093	1366
Y4Q4	\$54,636			1093	1366
Y5Q1	\$56,275	Price adjustment to step 3 of scale to match market rates and reflect the cost of living.	Price change; shown in the published and unadjusted indexes.	1126	1407
Y5Q2	\$45,020	New, less experienced employee placed on step 2 replaces the incumbent.	Quality change; shown only in the unadjusted index.	1126	1126
Y5Q3	\$45,020			1126	1126
Y5Q4	\$45,020			1126	1126

For more information on the differences between the QES, the LCI, and the LCI analytical unadjusted series, please see 'Comparing the QES and the LCI' under the data quality section of [Quarterly Employment Survey: March 2014 quarter](#).

## Regional analytical series for construction industry

After the September 2010 and February 2011 Canterbury earthquakes, there has been interest in the changes to salary and wage rates in the Canterbury construction industry. In response, we created six new regional analytical series from the existing LCI sample. These series are provisional and may be revised as the classification by region is refined.

The LCI is designed to measure changes in salary and wage rates at a national level and is not intended to provide accurate regional estimates. However, given the continued interest in the impact of the Christchurch rebuild, we classified surveyed positions in the construction industry into 'Canterbury' and 'rest of New Zealand'. We based these classifications on the addresses of construction industry respondents, location information in job descriptions, and other information obtained from construction industry respondents. We used the same weights for the regional price indexes as the occupational shares at the 1-digit Australian and New Zealand Standard Classification of Occupations (ANZSCO) level for the national construction industry, based on the 2006 Census of Population and Dwellings.

These six new regional analytical series are available on Infoshare.

Series references are:

LCIQ.SG53E9C – All salary and wage rates for the construction industry – Canterbury

LCIQ.SG53E9R – All salary and wage rates for the construction industry – rest of New Zealand

LCIQ.SG51E9C – Salary and ordinary time wage rates for the construction industry – Canterbury

LCIQ.SG51E9R – Salary and ordinary time wage rates for the construction industry – rest of New Zealand

LCIQ.SW512AE9C – Annual mean salary and ordinary time increase for the construction industry – Canterbury

LCIQ.SW512AE9R – Annual mean salary and ordinary time increase for the construction industry – rest of New Zealand.

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## Tables

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

- 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

The following supplementary tables relate to the construction industry for Canterbury and the rest of New Zealand. These tables are also available in Excel format from the 'Downloads' box of this release.

- 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

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