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Labour Cost Index (Salary and Wage Rates): September 2008 quarter

Revised 2 February 2009 (see Commentary and tables)

Highlights

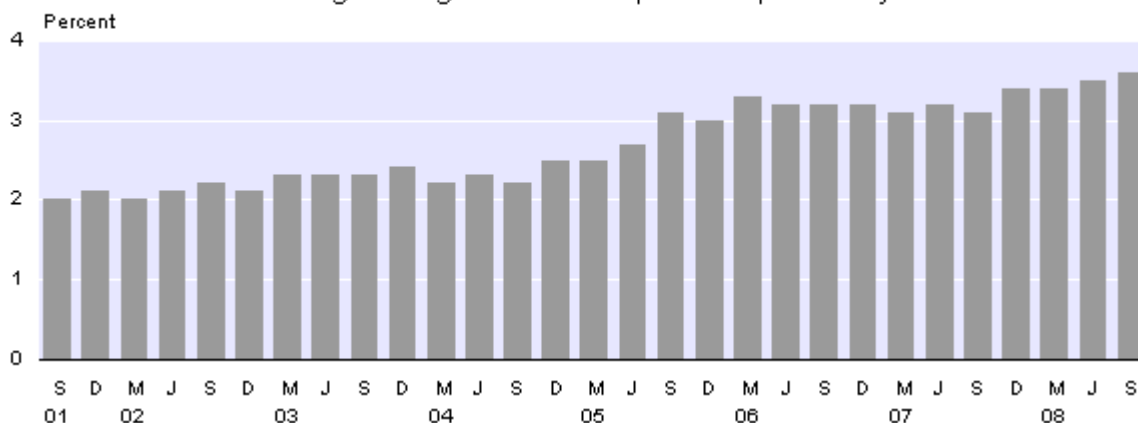
From the September 2007 quarter to the September 2008 quarter:

- Salary and wage rates (including overtime) increased 3.6 percent.
- Overtime wage rates increased 3.6 percent.
- Private sector salary and wage rates (including overtime) increased 3.7 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	1.2	3.6	1.1	3.6
Public sector	1.1	3.6	1.1	3.6
Private sector	1.1	3.7	1.1	3.7

All Salary and Wage Rates

Percentage change from same quarter of previous year



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See also [Labour Cost Index and Quarterly Employment Survey: September 2008 quarter – Media release.](#)

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Commentary

Revision

'LCI expenditure weights updated' section revised 2 February 2009. See [Labour Cost Index \(Salary and Wage Rates\): December 2008 quarter](#) for further details.

Overview

The Labour Cost Index (LCI) showed a rise of 3.6 percent in salary and wage rates (including overtime) from the September 2007 quarter to the September 2008 quarter (in the year to the September 2008 quarter). This annual increase is the largest since the series began in the December 1992 quarter, surpassing the previous record increase of 3.5 percent in the year to the June 2008 quarter. In comparison, the Quarterly Employment Survey (QES) average hourly earnings increased 5.5 percent in the year to the September 2008 quarter.

The QES average earnings statistics reflect not only changes in pay rates, but also compositional and other changes across and within the paid workforce. In comparison, the 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 the performance of individual employees are not shown in the index.

In the LCI, salary and wage rates (including overtime) increased 1.1 percent in the September 2008 quarter. This is the equal-largest quarterly increase since the series began, matching the 1.1 percent increase in the December 2007 quarter. This follows increases of 0.8 percent and 0.7 percent in the June 2008 and March 2008 quarters, respectively.

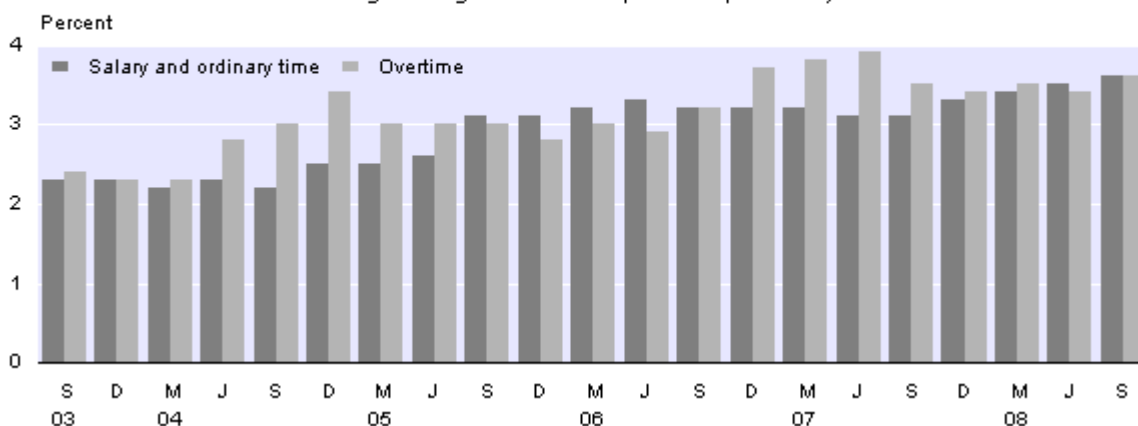
Salary and ordinary time wage rates increased 3.6 percent in the year to the September 2008 quarter, the largest annual increase recorded since the series began. In the September 2008 quarter, salary and ordinary time wage rates increased 1.2 percent. This is the largest quarterly increase since the series began.

Overtime wage rates increased 3.6 percent in the year to the September 2008 quarter, following rises of 3.4 percent and 3.5 percent in the years to the June 2008 and March 2008 quarters, respectively. In the September 2008 quarter, overtime wage rates increased 1.2 percent. This is the largest quarterly increase since a 1.3 percent rise recorded in the September 2006 quarter.

Salary and Ordinary Time and Overtime Wage Rates

All sectors combined

Percentage change from same quarter of previous year



In the year to the September 2008 quarter, the mean increase for all surveyed salary and ordinary time wage rates that rose was 6.1 percent. The mean increase for all surveyed salary and ordinary time wage rates that rose in the September 2008 quarter was 5.0 percent.

Sector movements

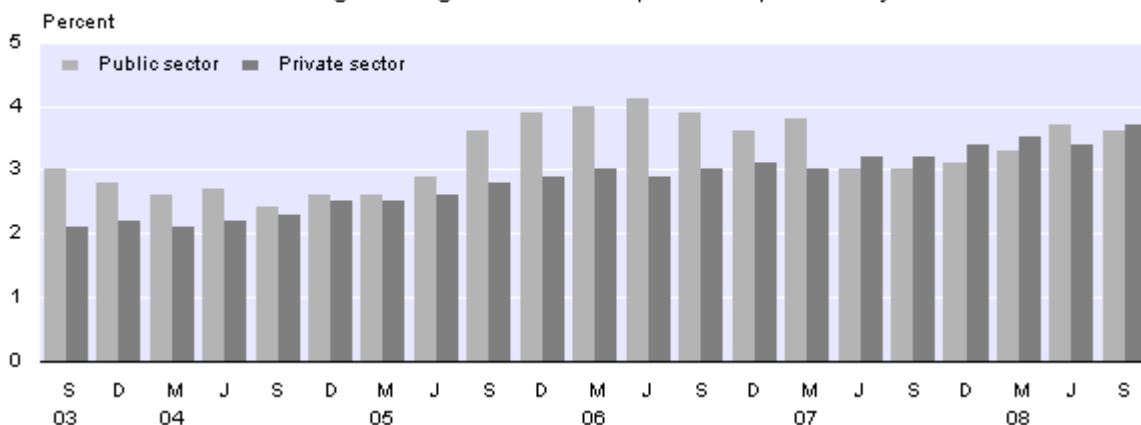
In the year to the September 2008 quarter, private sector salary and wage rates (including overtime) increased 3.7 percent. This is the largest annual increase recorded for the private sector since the series began, surpassing the previous largest annual increase of 3.5 percent recorded in the year to the March 2008 quarter.

In the September 2008 quarter, salary and wage rates (including overtime) for the private sector increased 1.1 percent, following increases of 0.8 percent and 0.7 percent in the June 2008 and March 2008 quarters, respectively. The latest quarterly increase is the equal-largest recorded since the series began, matching the 1.1 percent increase recorded in the December 2007 quarter.

Public sector salary and wage rates (including overtime) increased 3.6 percent in the year to the September 2008 quarter, down from the 3.7 percent increase recorded in the year to the June 2008 quarter. The increase in the year to the September 2008 quarter was a result of a 5.0 percent rise in the local government sector and a 3.4 percent increase in the central government sector.

Salary and wage rates (including overtime) in the public sector rose 1.1 percent in the September 2008 quarter, following rises of 0.7 percent and 0.8 percent in the June 2008 and March 2008 quarters, respectively. The latest quarterly increase is the largest recorded for the public sector since a 1.3 percent increase in the September 2007 quarter.

All Salary and Wage Rates by Sector
Percentage change from same quarter of previous year



Industry movements

In the year to the September 2008 quarter, the industry groups with the largest annual increases in salary and wage rates (including overtime) were:

- Health and community services – 5.7 percent
- Local government administration – 5.4 percent.

Other industry groups with notable movements in the year to the September 2008 quarter included:

- Petrol, coal, chemical and associated manufacturing – 4.3 percent
- Agriculture – 3.3 percent
- Communication services – 3.0 percent.

Salary and wage rates (including overtime) for the health and community services industry increased 5.7 percent in the year to the September 2008 quarter. This is the largest annual increase recorded for the industry since the series began in the June 2001 quarter, and follows a 5.1 percent rise recorded in the year to the June 2008 quarter. In the September 2008 quarter, salary and wage rates (including overtime) for the health and community services industry rose 1.6 percent, up from the two previous quarterly increases of 1.1 percent in the June 2008 quarter and 1.0 percent in the March 2008 quarter. The main reason respondents provided for the latest quarterly increase was collective employment agreements coming in to effect.

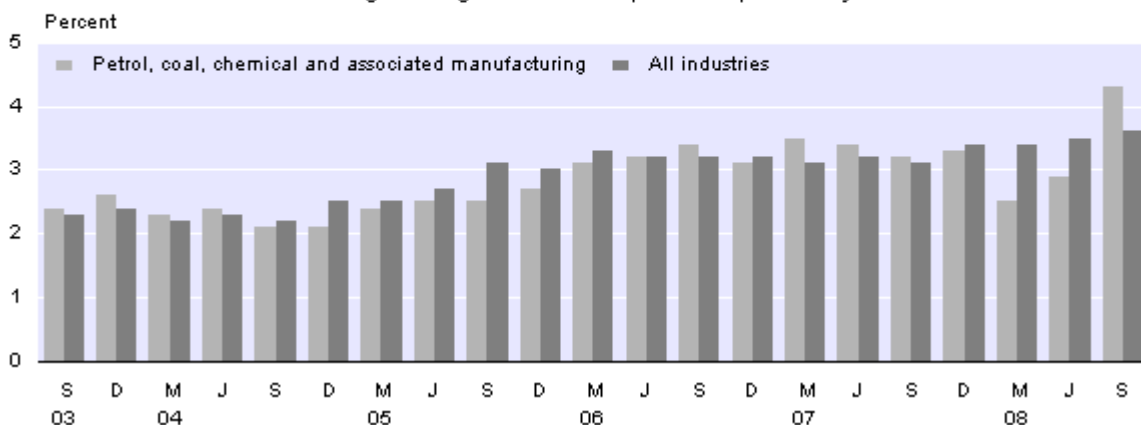
In the year to the September 2008 quarter, salary and wage rates (including overtime) for the petrol, coal, chemical and associated manufacturing industry increased 4.3 percent. This is the largest annual increase recorded in the industry since the series began in the June 2001 quarter, and followed a rise of 2.9 percent in the year to the June 2008 quarter. In the September 2008 quarter, salary and wage rates for the petrol, coal, chemical and associated manufacturing industry rose 1.8 percent, following quarterly rises of 0.9 percent in the June 2008 quarter and 0.7 percent in the March 2008 quarter. The latest quarterly increase is the largest recorded for the industry since the series began. Reflecting the cost of living was the main reason respondents gave for the latest quarterly increase.

Agriculture industry salary and wage rates (including overtime) increased 3.3 percent in the year to the September 2008 quarter, the largest annual increase in the index since the series began in the June 2001 quarter. The latest annual rise followed increases of 2.8 percent and 2.6 percent in the years to the June 2008 and March 2008 quarters, respectively. In the September 2008 quarter, salary and wage rates (including overtime) for the agriculture industry increased 1.4 percent, following rises of 0.6 percent in the June 2008 quarter and 0.4 percent in the March 2008 quarter. The latest quarterly increase is the largest recorded for the industry since the series began. The main reason provided by respondents to explain the most recent quarterly increase was to reflect the cost of living.

All Salary and Wage Rates of Petrol, Coal, Chemical and Associated Manufacturing, and All Industries

All sectors combined

Percentage change from same quarter of previous year



Salary and wage rates (including overtime) in the communication services industry rose 3.0 percent in the year to the September 2008 quarter, following rises of 1.0 percent in the year to the June 2008 quarter and 0.6 percent in each of the years to the March 2008, December 2007 and September 2007 quarters. The latest annual increase is the largest recorded for the communication services industry since a 3.3 percent rise in the year to the March 2004 quarter. In the September 2008 quarter, salary and wage rates (including overtime) increased 2.2 percent, the largest quarterly increase recorded since the series began in the June 2001 quarter. Matching market rates was the main reason respondents provided for the latest quarterly increase, while collective employment agreements coming into effect also had some impact.

Occupation movements

In the year to the September 2008 quarter, overall annual increases in salary and wage rates (including overtime) for the three broad occupation groups were:

- Managers, professionals and technicians – 3.4 percent
- Clerks, service and sales workers – 3.8 percent
- Other occupations – 3.9 percent.

Across all occupation groups, annual increases ranged from 2.6 percent (for teaching professionals) to 5.4 percent (for personal and protective services workers). Personal and protective services workers' salary and wage rates (including overtime) increased 5.4 percent in the year to the September 2008 quarter. This followed increases of 5.9 percent recorded in the year to the June 2008 quarter and 5.7 percent recorded in the year to the March 2008 quarter. This is the fifth consecutive quarter in which personal and protective service workers have recorded the largest annual increase in salary and wage rates (including overtime) across all occupation groups. In the September 2008 quarter salary and wage rates (including overtime) increased 1.0 percent for this occupation. This follows a 1.1 percent increase recorded in both the June 2008 and March 2008 quarters. The main reasons respondents provided for the latest quarterly increase were to reflect the cost of living and as a result of collective employment agreements coming into effect.

Salary and wage rates (including overtime) for agriculture and fisheries workers increased 3.4 percent in the year to the September 2008 quarter. This is the equal-largest annual increase since the series began in the December 1992 quarter, matching the 3.4 percent increase recorded in the year to the June 2006 quarter. The latest annual increase follows a 2.5 percent increase in the year to the June 2008 quarter and a 2.7 percent increase in the year to the March 2008 quarter. In the September 2008 quarter salary and wage rates (including overtime) increased 1.5 percent. This is the largest quarterly increase recorded since the series began and surpasses the previous record increase of 1.3 percent recorded in the September 2005 quarter. The latest quarterly rise follows increases of 0.5 percent recorded in both the June 2008 and March 2008 quarters. The main reason provided by respondents for the latest quarterly increase was to reflect the cost of living.

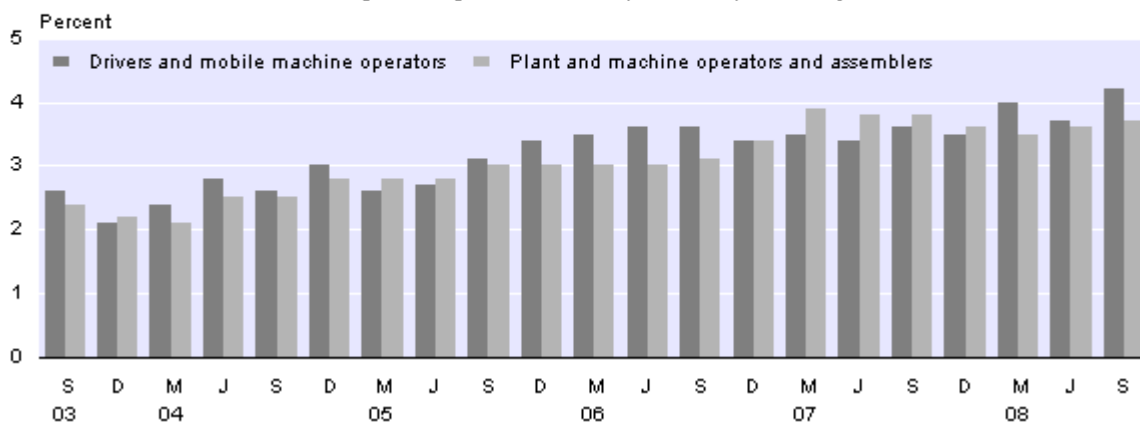
Drivers and mobile machinery operators' salary and wage rates (including overtime) increased 4.2 percent in the year to the September 2008 quarter. This is the second time the annual increase has been at least 4.0 percent for this occupation group. The latest annual increase is the largest recorded since the series began in the December 1992 quarter, and follows a 3.7 percent increase and a 4.0 percent increase in the year to the June 2008 quarter and the year to the March 2008 quarter, respectively. In the September 2008 quarter salary and wage rates (including overtime) increased 1.9 percent for this occupation. This is the largest quarterly increase since the series began, and follows a 0.4 percent increase in the June 2008 quarter and a 1.0 percent increase in the March 2008 quarter. The reason provided by respondents for the latest quarterly increase was to reflect the cost of living.

Plant and machine operators and assemblers, the major occupation group that contains drivers and mobile machinery operators, recorded a 3.7 percent increase in salary and wage rates (including overtime) in the year to the September 2008 quarter. This is the largest annual increase since the index rose 3.8 percent in the year to the September 2007 quarter. The latest annual increase followed a 3.6 percent rise in the year to the June 2008 quarter and a 3.5 percent increase in the year to the March 2008 quarter. In the September 2008 quarter salary and wage rates (including overtime) increased 1.2 percent, the largest quarterly increase recorded for the occupation since an identical 1.2 percent increase in the December 2006 quarter. The latest quarterly increase followed a 0.7 percent increase in both the June 2008 quarter and the March 2008 quarter. The main reasons respondents provided for the latest quarterly increase were collective employment agreements coming in to effect and to reflect the cost of living.

All Salary and Wage Rates of Drivers and Mobile Machine Operators, and Plant and Machine Operators and Assemblers

All sectors combined

Percentage change from same quarter of previous year



Distribution of pay rates

In the year to the September 2008 quarter, 61 percent of salary and ordinary time wage rates in the survey sample increased. This matches the 61 percent increasing in the year to the June 2008 quarter. In the September 2008 quarter 22 percent of salary and ordinary time wage rates in the survey sample increased, up from 16 percent in the June 2008 quarter.

Twelve percent of salary and ordinary time wage rates increased by no more than 3 percent, 25 percent increased by more than 3 percent but no more than 5 percent, and 25 percent increased by more than 5 percent in the year to the September 2008 quarter.

Sixty-five percent of overtime wage rates increased in the year to the September 2008 quarter, while 35 percent were unchanged.

Survey respondents were asked to give reasons for each movement in pay rates. In the year to the September 2008 quarter, 43 percent of increases in salary and wage rates were, at least in part, to reflect the cost of living; 32 percent were to match market rates; 28 percent were due to collective employment agreements coming into effect; 15 percent were to retain staff; and 2 percent were to attract staff.

Median and mean increases

The median (ie middle) increase for all surveyed salary and ordinary time wage rates that rose in the year to the September 2008 quarter was 4.3 percent, up from 4.1 percent in the year to the June 2008 quarter.

The median increase for the September 2008 quarter was 4.0 percent, matching the median increase for the June 2008 quarter.

The mean increase for all surveyed salary and ordinary time wage rates that rose in the year to the September 2008 quarter was 6.1 percent, up from 5.8 percent in the year to the June 2008 quarter. The mean increase recorded in the year to the September 2008 quarter is the largest since the series began in the December 1992 quarter.

In the September 2008 quarter, the mean increase was 5.0 percent, down from the 5.6 percent mean increase recorded in the June 2008 quarter.

Median and mean increases for salary and ordinary time wage rates by sector				
Sector	Percentage change from previous quarter		Percentage change from same quarter of previous year	
	Median increase*	Mean increase*	Median increase*	Mean increase*
Local government	4.0	4.9	5.0	6.3
Central government	3.9	4.3	4.0	5.5
Public sector	4.0	4.5	4.3	5.8
Private sector	4.0	5.2	4.3	6.1
All sectors	4.0	5.0	4.3	6.1

* Does not include decreases or rates that remained unchanged.

Analytical unadjusted series

The analytical unadjusted series is an additional measure that is intended to complement the official LCI and 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 in addition to price change.

Unadjusted salary and ordinary time wage rates increased 5.3 percent in the year to the September 2008 quarter, down from the increase of 5.5 percent recorded in the year to the June 2008 quarter, and the 5.4 percent increase recorded in the year to the March 2008 quarter. In the September 2008 quarter, unadjusted salary and ordinary time wage rates rose 1.5 percent. This is up from the three previous quarterly increases – 1.1 percent in the June 2008 quarter, 1.2 percent in the March 2008 quarter, and 1.4 percent in the December 2007 quarter.

Private sector unadjusted salary and ordinary time wage rates rose 5.4 percent in the year to the September 2008 quarter, following consecutive increases of 5.5 percent in the years to the June 2008 and March 2008 quarters. Unadjusted salary and ordinary time wage rates for the private sector increased 1.5 percent in the September 2008 quarter, up from consecutive quarterly increases of 1.2 percent in both the June 2008 and March 2008 quarters.

Unadjusted salary and ordinary time wage rates recorded larger increases than adjusted salary and ordinary time wage rates, both for the year to the September 2008 quarter and in the September 2008 quarter.

Analytical unadjusted and adjusted salary and ordinary time wage rates Private sector and all sectors combined				
Sector	Percentage change from previous quarter		Percentage change from same quarter of previous year	
	Adjusted salary and ordinary time wage rates	Unadjusted salary and ordinary time wage rates	Adjusted salary and ordinary time wage rates	Unadjusted salary and ordinary time wage rates
Private sector	1.1	1.5	3.7	5.4
All sectors	1.2	1.5	3.6	5.3

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LCI expenditure weights updated (revised 2 February 2009)

This section was revised 2 February 2009. See *Labour Cost Index (Salary and Wage Rates): December 2008 quarter* for more details. The LCI wage and salary rate indexes have been reweighted to reflect the changes in industry and occupation structures of the labour market. The data sources used were:

- 2006 Census of Population and Dwellings information on the relative importance of occupations within each sector by industry group in terms of jobs, and, in some cases, wages
- Quarterly Employment Survey figures for the year to June 2008 on the relationship between full- and part-time paid employees, and figures for the June 2008 quarter on average earnings per job
- Business Frame (BF) 2008 information on the relative importance of industry groups within each sector of ownership
- pay rates surveyed in the Labour Cost Survey for the June 2008 quarter.

The industry breakdown of the reweighted index is based on the Australian and New Zealand Standard Industrial Classification (ANZSIC96) and the occupation breakdown on the New Zealand Standard Classification of Occupations (NZSCO99).

The LCI has not been re-expressed and is still based on the June 2001 quarter (=1000). The LCI was last reweighted using 2001 Census of Population and Dwellings information.

The changes in the LCI expenditure weights reflect real changes in the labour market, and to some extent changes to the data sources and methods used to calculate the weights. Real changes are the result of relative changes in quantity and price levels. For example, if an industry has experienced higher growth in paid employees and higher wage increases than average over the seven years between reweights, then that industry will experience an increase in its expenditure weight percentage. Industries with decreases or below average increases will have a percentage weight in 2008 that is lower than the 2001 percentage weight.

For all sectors, and industries (and occupations) combined, the BF and other information showed a 35 percent increase from 2001 to 2008 in full-time equivalent (FTE) jobs. The salary and wage rates (including overtime) LCI for all sectors, industries and occupations combined increased 21 percent over the same period. The overall level of expenditure on wages and salaries (which the weights are based on) increased 65 percent over the seven-year period.

Sector of ownership

**Base Expenditure Weights
by Sector of Ownership**
All salary and wage rates
1992, 2001 and 2008

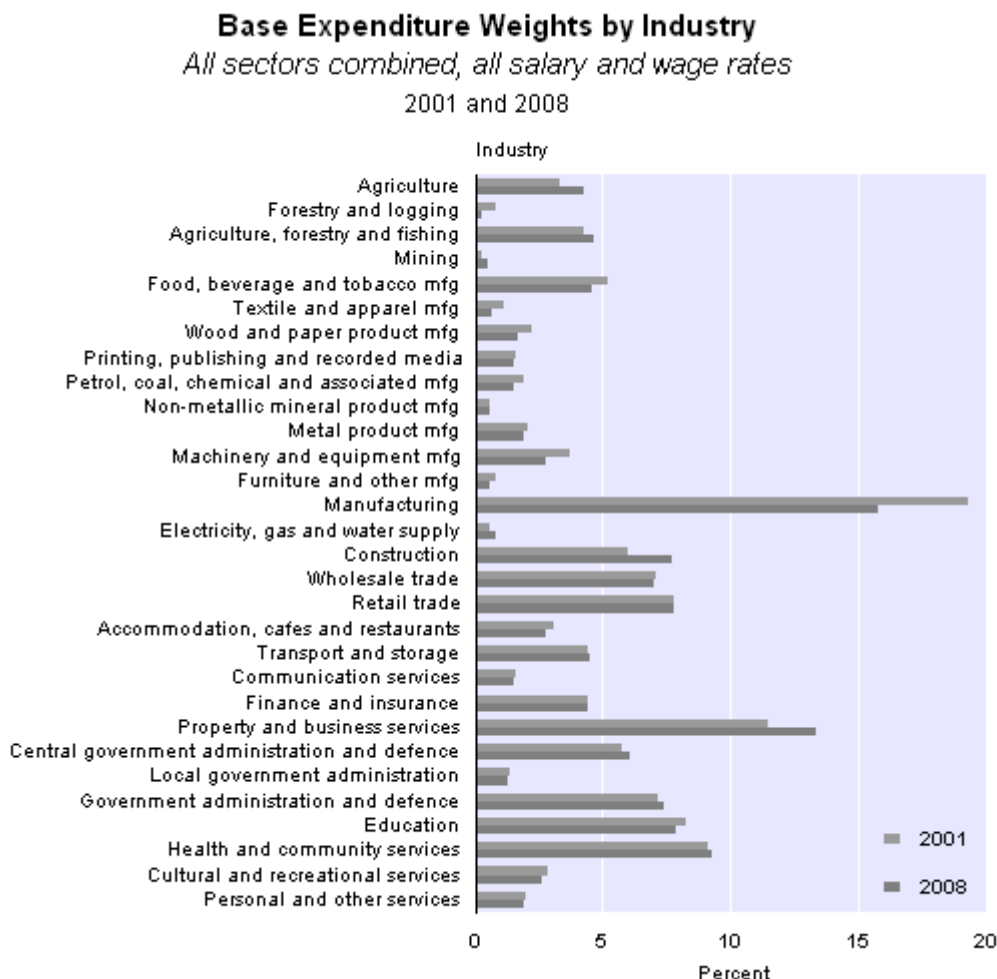


Table 9.1 shows that the public sector has increased its relative expenditure share by 1.8 percentage points to 23.3 percent, and the private sector has decreased its share to 76.7 percent. This is partly due to greater-than-average LCI pay rate movements in the public sector of 23.4 percent, compared with 20.2 percent in the private sector. Changes in the sector of ownership of individual businesses between 2001 and 2008 has also had an impact.

The private sector weights for salary and ordinary time wage rates, and overtime wage rates change slightly to 96.9 and 3.1 percent, respectively. The public sector has shown a decrease of 0.3 of a percentage point, to 98.4 percent for salary and ordinary time wage rates. The weight for overtime wage rates for the public sector increased from 1.3 percent to 1.6 percent. For all sectors combined, the weights for salary and ordinary time wage rates, and overtime wage rates are unchanged at 97.2 and 2.8 percent, respectively.

Industry

The following graph shows there has been some movement in the industry weights since the 2001 reweight.



The following industries have shown the largest relative increases:

- agriculture (from 3.3 percent to 4.3 percent)
- mining (from 0.3 percent to 0.5 percent)
- electricity, gas and water supply (from 0.6 percent to 0.8 percent)
- construction (from 6.0 percent to 7.7 percent)
- property and business services (from 11.5 percent to 13.4 percent).

Property and business services recorded the highest percentage points increase of 1.9, followed by construction and by agriculture, with 1.7 and 1.0 percentage point increases, respectively.

These upward movements can be partly explained by the increase each industry has experienced in BF-based FTE counts over the seven-year period. Construction had the highest increase in FTEs with 81 percent, followed by agriculture and mining, both up 63 percent. Property and business services increased 57 percent, and electricity, gas and water supply rose 42 percent. These are five of the six largest industry increases and all are above 35 percent, which is the overall BF-based FTE increase over the same period.

Coupled with above-average increases in the number of jobs, most of these industries also experienced strong growth for salary and wage rates, according to the LCI. The LCI shows that mining increased 24.6 percent, construction 24.0 percent, and electricity, gas and water supply 22.8 percent. This compares with the overall LCI increase of 20.9 percent.

Forestry and logging, and textile and apparel manufacturing had the largest relative downward movements. Forestry and logging had the largest relative fall, with a percentage weight of 0.8 in 2001 declining to 0.3 percent in 2008. Textile and apparel manufacturing went from 1.1 percent to 0.7 percent. It is interesting to note that the relative importance of all manufacturing industries decreased over the seven-year period (except for non-metallic mineral product manufacturing, which stayed constant). Manufacturing had a weight of 19.3 percent at the last reweight in 2001, and now has a weight of 15.8 percent.

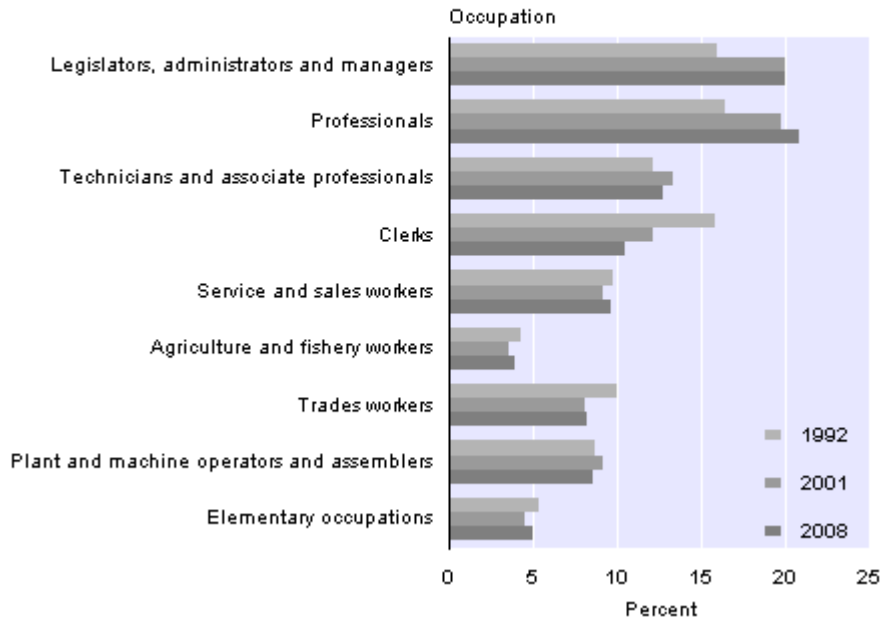
Forestry and logging saw a 25 percent fall in BF-based FTE figures, and textile and apparel manufacturing decreased 22 percent. While FTE jobs in total manufacturing increased by 12 percent, this was below the overall BF-based FTE increase.

Forestry and logging, and textile and apparel manufacturing showed salary and wage rate increases in the LCI of 13.4 and 20.1 percent, respectively, over the seven years, which is below the 20.9 percent overall increase. Manufacturing had a 20.0 percent increase, and five of the manufacturing sub-industries had increases in the LCI lower than the increase for all industries combined.

Occupation

All occupation major groups had significant absolute growth in expenditure, due to both increased job numbers ranging from 1 percent to 37 percent (according to census) and to higher salaries and wage rates.

Base Expenditure Weights by Occupation
All sectors combined, all salary and wage rates
 1992, 2001 and 2008



The managers, professionals and technicians broad occupation group has had higher-than-average growth in expenditure, resulting in a 0.6 percentage point increase in weight, despite technicians and associate professionals dropping in relative importance. This is due to professionals' overall share climbing 1.1 percentage points to 20.9 percent overall. Interestingly, managers showed strong growth in job numbers. However, its weight has remained relatively stable at 20.1 percent, partly due to managers recording the lowest LCI increase of 16.4 percent over the period from 2001 to 2008.

The weight for clerks fell most in relative terms, losing 1.7 percentage points to 10.5 percent. This is over 5 percentage points lower than in 1992. Service and sales workers, however, have increased slightly to 9.7 percent, returning to just under the weight in 1992 of 9.8 percent. The clerks, service and sales workers broad occupation group has had below average growth in job numbers. Clerks recorded the lowest increase of 0.9 percent (since 2001), and service and sales workers were also below average, up 13 percent. Service and sales workers' higher weighting is partly explained by its above average LCI pay rate increase of 22.1 percent since 2001.

The other occupations broad occupation group had the largest combined weight increase of 0.7 of a percentage point, with increases for agriculture and fishery workers, trades workers, and elementary occupations. Plant and machine operators have fallen from 9.2 percent to 8.6 percent, but still hold the highest weight in this bracket. Plant and machine operators are typically employed in manufacturing, which showed a decrease in relative importance. Trades workers, and elementary occupations each had an increase in relative importance. These occupation groups include carpenters, electricians and builders' labourers. These are occupations typically employed in the construction industry, which has shown an increase in relative importance. All four occupation groups have moved some way back towards their 1992 weights.

Further details about the methods used to compile the new expenditure weights are available on request and can be found in the January 2009 issue of [Price Index News](#).

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Next release ...

Labour Cost Index (Salary and Wage Rates): December 2008 quarter will be released on 2 February 2009.

Technical notes

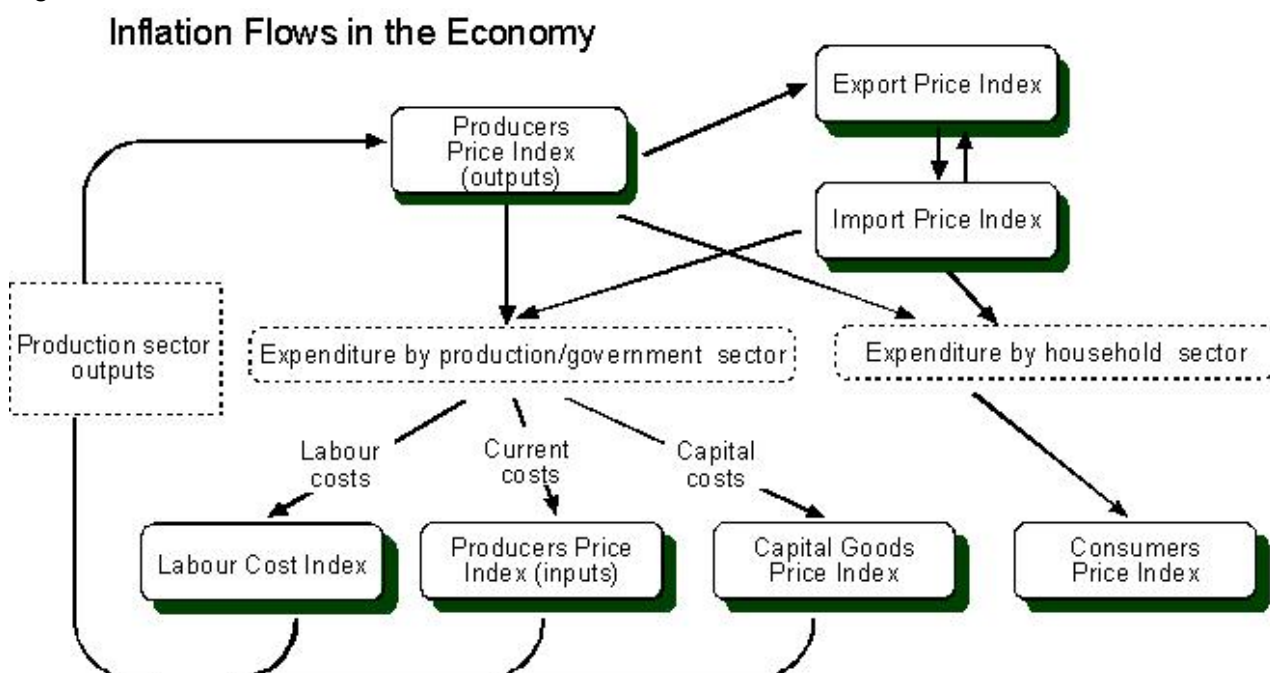
What the index measures

The salary and wage rates component of the Labour Cost Index (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:

- annual leave and statutory holidays
- superannuation
- 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. Information from the Annual Enterprise Survey indicates that labour costs account for about 16 percent of employers' total expenditure (including depreciation).

Figure 1



The LCI has fixed industry and occupation weights, and measures changes in salary and wage rates for a fixed quantity and quality of labour input. Service increments, merit promotions and increases (and decreases) relating to the performance of employees are not shown in the index (see the section on quality control for more details). 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).

Index calculation and base

The index is calculated using the price-relatives form of the base-weighted Laspeyres formula, and is expressed on a base of the June 2001 quarter (=1000). The index's calculation base is periodically updated to reflect changes in the sector of ownership of organisations.

Coverage

The index covers jobs filled by paid employees in all occupations and in all industries except private households employing staff. Coverage was extended 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).

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 (BF) information on the relative importance of industry groups within each sector, and pay rates surveyed in the June 2008 quarter.

Occupation-group weights for all salary and wage rates are given in the following table.

Occupation group	Weight (Percent)
Legislators, administrators and managers	19.9
Professionals	21.0
Technicians and associate professionals	12.8
Managers, professionals and technicians	53.7
Clerks	10.4
Service and sales workers	9.8
Clerks, service and sales workers	20.1
Agriculture and fishery workers	4.0
Trades workers	8.4
Plant and machine operators and assemblers	8.6
Elementary occupations	5.2
Other occupations	26.2
All occupations combined	100.0

Note: Percentages may not sum to totals due to rounding.

How information is obtained

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

Quality control

The index 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. There have been several employment contract settlements in recent years of this type, particularly in the central government sector.

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.

Index number rounding

Index number rounding uses standard Statistics New Zealand 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 0.6 percent from the December 2002 quarter to the March 2003 quarter is larger than the 0.5 percent increases for both the public sector and the private sector. The higher figure for all sectors combined was mainly caused by both the index number for the December 2002 quarter and the public sector index number for the March 2003 quarter being rounded down to the nearest index point.

Median and mean increases

The latest quarterly and annual results for the median and mean increases are discussed in the commentary. The mean tends to be higher than the median because the distribution changes in pay rates are 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. These tables are available on the Statistics NZ website (<http://www.stats.govt.nz/>).

The analytical unadjusted series is an additional measure that is intended to complement the official LCI and 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 prior to 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 2001, so will not take account of the effect of any long-term structural shifts that have occurred since then, on the relative importance of occupations within industries within sectors of ownership. 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

Year/ quarter	Reported pay rate (per annum)	Reason for change	Treatment	Published LCI	Analytical unadjusted index
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

More information

For more information, follow the [link](#) from the Technical notes of this release on the Statistics New Zealand website.

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Tables

Revision

June 2008 quarter expenditure weights in tables 9.1 and 9.2 revised on 2 February 2009.

The following tables are printed with this Hot Off The Press and can also be downloaded from the Statistics New Zealand website in Excel format. If you do not have access to Excel, you may use the [Excel file viewer](#) to view, print and export the contents of the file.

- 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 Proportion of salary and wage rates increasing, all sectors combined
- 6.3 Distribution of annual increases, all sectors combined
- 7 Median and mean increases, all sectors combined
- 8.1 Published and analytical unadjusted indexes, private sector
- 8.2 Published and analytical unadjusted indexes, all sectors combined
- 9.1 Labour cost index weights, base expenditure weights by sector, cost and occupation (Revised 2 February 2009)
- 9.2 Labour cost index weights, base expenditure weights by industry (Revised 2 February 2009)

 [Labour Cost Index \(Salary and Wage Rates\): September 2008 quarter – tables 1–9.2 \(Excel, 470KB\)](#)

Additional tables

The following tables can be downloaded from the Statistics New Zealand website in Excel format. If you do not have access to Excel, you may use the [Excel file viewer](#) to view, print and export the contents of the file.

- 1.1 Distribution of annual increases, reason: cost of living
- 1.2 Distribution of annual increases, reason: match market rates
- 1.3 Distribution of annual increases, reason: retain staff
- 1.4 Distribution of annual increases, reason: attract staff
- 1.5 Distribution of annual increases, reason: match market rates and/or retain/attract staff
- 1.6 Distribution of annual increases, reason: collective employment agreements

