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Labour Cost Index (Salary and Wage Rates): June 2009 quarter

Highlights

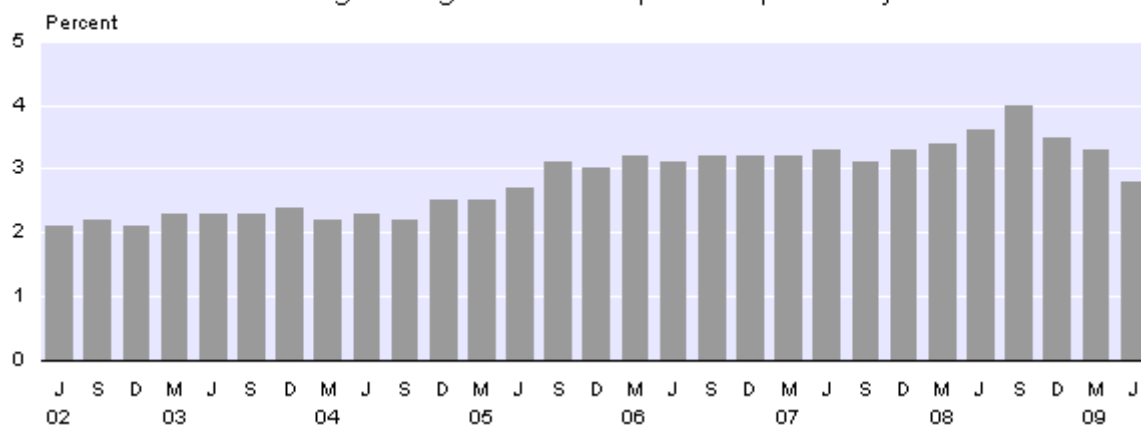
From the June 2008 quarter to the June 2009 quarter:

- Salary and wage rates (including overtime) increased 2.8 percent.
- Overtime wage rates increased 3.5 percent.
- Private sector salary and ordinary time wage rates increased 2.6 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	2.9	0.3	2.8
Public sector	0.4	3.6	0.4	3.6
Private sector	0.3	2.6	0.3	2.7

All Salary and Wage Rates

Percentage change from same quarter of previous year



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Commentary

Overview

The labour cost index (LCI) showed an increase of 2.8 percent from the June 2008 quarter to the June 2009 quarter (ie the year to the June 2009 quarter). This is the lowest annual increase recorded in the series since a 2.7 percent increase in the year to the June 2005 quarter and is down from a 3.3 percent increase in the year to the March 2009 quarter. In comparison, the Quarterly Employment Survey (QES) average hourly earnings increased 4.5 percent in the year to the June 2009 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 0.3 percent in the June 2009 quarter, the lowest rise recorded in the series since an identical increase in the June 1999 quarter. The latest quarterly rise follows rises of 0.6 percent in the March 2009 quarter and 0.7 percent in the December 2008 quarter. The increase this quarter was influenced by the 4.2 percent increase in the minimum wage, which took effect on 1 April 2009. There were also a small number of respondents who reported drops in pay rates as a result of the economic downturn, specifically in the construction, wholesale trade, and manufacturing industries.

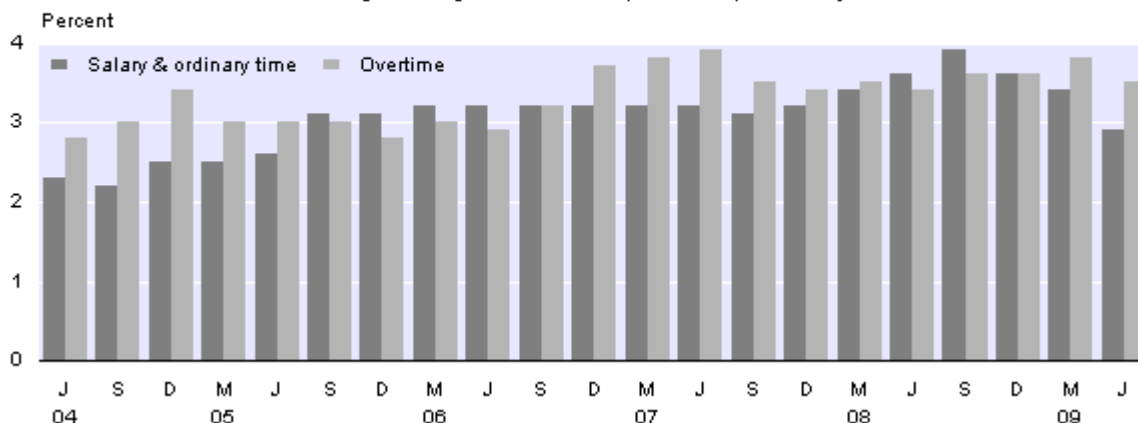
Salary and ordinary time wage rates increased 2.9 percent in the year to the June 2009 quarter, the lowest annual increase recorded in the series since a 2.6 percent rise in the year to the June 2005 quarter. The latest annual increase follows rises of 3.4 percent and 3.6 percent in the years to the March 2009 and December 2008 quarters, respectively. In the June 2009 quarter, salary and ordinary time wage rates increased 0.3 percent, down from the 0.6 percent and 0.7 percent increases recorded in the March 2009 and December 2008 quarters, respectively. The latest quarterly rise is the lowest recorded in the series since an identical increase in the September 2000 quarter.

Overtime wage rates increased 3.5 percent in the year to the June 2009 quarter, following a 3.8 percent increase in the year to the March 2009 quarter. In the June 2009 quarter, overtime wage rates increased 0.5 percent, following rises of 0.8 percent in the March 2009 quarter and 1.0 percent in the December 2008 quarter. The latest quarterly rise is the lowest recorded for the series since a 0.4 percent rise in the March 2006 quarter.

Salary & Ordinary Time and Overtime Wage Rates

All sectors combined

Percentage change from same quarter of previous year



In the year to the June 2009 quarter, the mean increase for all surveyed salary and ordinary time wage rates that rose was 5.2 percent, down from 5.7 percent in the year to the March 2009 quarter. In the June 2009 quarter, the mean increase for all surveyed salary and ordinary time wage rates that rose was 3.9 percent, down from 4.5 percent in the March 2009 quarter.

Sector movements

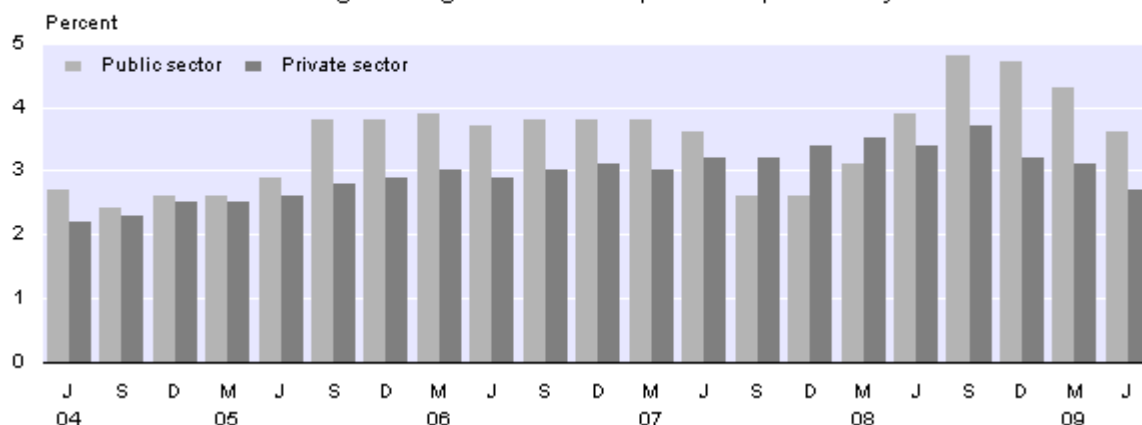
Salary and wage rates (including overtime) for the public sector increased 3.6 percent in the year to the June 2009 quarter. This followed increases of 4.3 percent in the year to the March 2009 quarter, 4.7 percent in the year to the December 2008 quarter, and 4.8 percent in the year to the September 2008 quarter. The increase in the year to the June 2009 quarter was a result of a 3.8 percent increase in the central government sector and a 2.5 percent increase in the local government sector.

Salary and wage rates (including overtime) increased 0.4 percent in the June 2009 quarter for the public sector. This followed increases of 0.6 percent in the March 2009 quarter, 0.8 percent in the December 2008 quarter, and 1.8 percent in the September 2008 quarter.

Salary and wage rates (including overtime) for the private sector increased 2.7 percent in the year to the June 2009 quarter, following increases of 3.1 percent, 3.2 percent, and 3.7 percent in the years to the March 2009 quarter, December 2008 quarter, and September 2008 quarter, respectively. The latest annual increase is the lowest since a 2.6 percent increase in the year to the June 2005 quarter.

Salary and wage rates (including overtime) increased 0.3 percent in the June 2009 quarter for the private sector, the lowest quarterly increase since a 0.3 percent increase in the June 2000 quarter. The latest quarterly increase followed increases of 0.6 percent, 0.7 percent, and 1.1 percent in the March 2009 quarter, December 2008 quarter, and September 2008 quarter, respectively.

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



Industry movements

In the year to the June 2009 quarter, the industry groups with the largest annual increases in salary and wage rates (including overtime) were:

- Health and community services – 4.4 percent
- Education – 4.0 percent.

Other industry groups with notable movements in the year to the June 2009 quarter were:

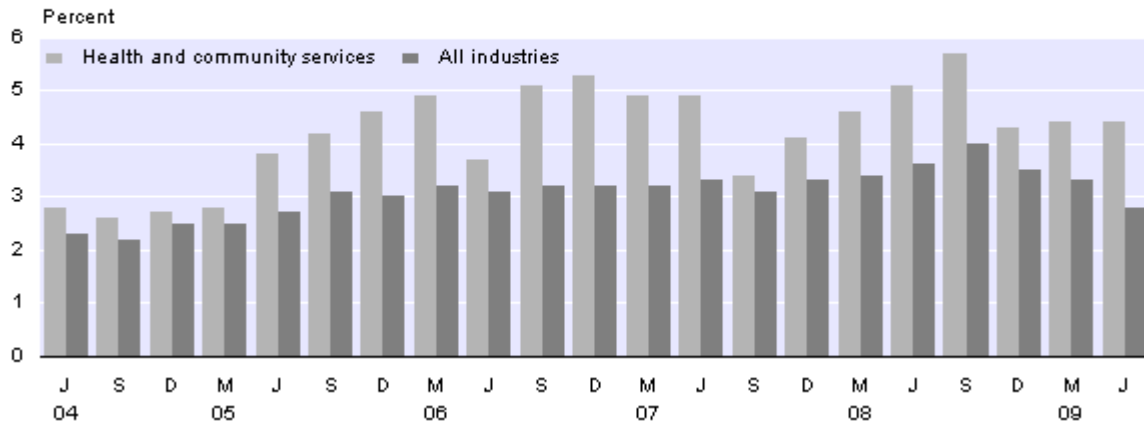
- Communication services – 3.2 percent
- Furniture and other manufacturing – 1.0 percent.

Salary and wage rates (including overtime) increased 4.4 percent in the year to the June 2009 quarter for the health and community services industry. This matched the identical rise of 4.4 percent recorded in the year to the March 2009 quarter and was up from the 4.3 percent increase in the year to the December 2008 quarter. In the June 2009 quarter, salary and wage rates (including overtime) increased 1.1 percent for this industry. This followed an identical 1.1 percent rise in the March 2009 quarter and a 0.5 percent increase in the December 2008 quarter. Collective employment agreements coming into effect was the main reason provided by respondents for the latest quarterly rise.

All Salary & Wage Rates for Health and Community Services and All Industries

All sectors combined

Percentage change from same quarter of previous year



In the year to the June 2009 quarter, salary and wage rates (including overtime) for the education industry rose 4.0 percent. This is down from the previous three annual increases of 5.7 percent, 6.3 percent, and 6.1 percent recorded in the years to the March 2009 quarter, December 2008 quarter, and September 2008 quarter, respectively. In the June 2009 quarter, salary and wage rates (including overtime) rose 0.2 percent for this industry, following rises of 0.7 percent in the March 2009 quarter, 0.4 percent in the December 2008 quarter, and 2.7 percent in the September 2008 quarter. The latest quarterly rise is the equal lowest recorded for this industry since the series began in the June 2001 quarter (matching the 0.2 percent rise recorded in the December 2007 quarter). The main reason provided by respondents for the latest quarterly increase was collective employment agreements coming into effect.

Communication services salary and wage rates (including overtime) increased 3.2 percent in the year to the June 2009 quarter. This is the largest annual increase recorded for this industry since a 3.3 percent rise in the year to the March 2004 quarter, and follows rises of 3.1 percent in both the year to the March 2009 quarter and the year to the December 2008 quarter. Additionally, the communication services industry was the only industry in the LCI to record a higher annual increase in salary and wage rates (including overtime) in the year to the June 2009 quarter than in the year to the March 2009 quarter. In the June 2009 quarter, salary and wage rates (including overtime) rose 0.5 percent, up from the previous two increases of 0.1 percent and 0.3 percent in the March 2009 and December 2008 quarters, respectively, but down from the 2.2 percent rise in the September 2008 quarter. Matching market rates was the main reason provided by respondents for the latest quarterly rise, while collective employment agreements coming into effect also had some impact.

Salary and wage rates (including overtime) for furniture and other manufacturing increased 1.0 percent in the year to the June 2009 quarter. This is the lowest annual increase recorded for the industry since the series began in the June 2001 quarter and is also the lowest annual increase recorded across all industries in the LCI in the year to the June 2009 quarter. The latest annual rise follows increases of 2.5 percent in the year to the March 2009 quarter, and 2.6 percent in the year to the December 2008 quarter. In the March 2009 quarter, salary and wage rates (including overtime) for this industry rose 0.3 percent, up from consecutive quarterly increases of 0.2 percent in both the March 2009 quarter and the December 2008 quarter. The main reason provided by respondents to explain the latest quarterly increase was to reflect the increased cost of living.

Occupation movements

In the year to the June 2009 quarter, overall annual increases in salary and wage rates (including overtime) for the three broad occupation groups were:

- Managers, professionals and technicians – 2.9 percent
- Clerks, service and sales workers – 2.5 percent
- Other occupations – 3.2 percent.

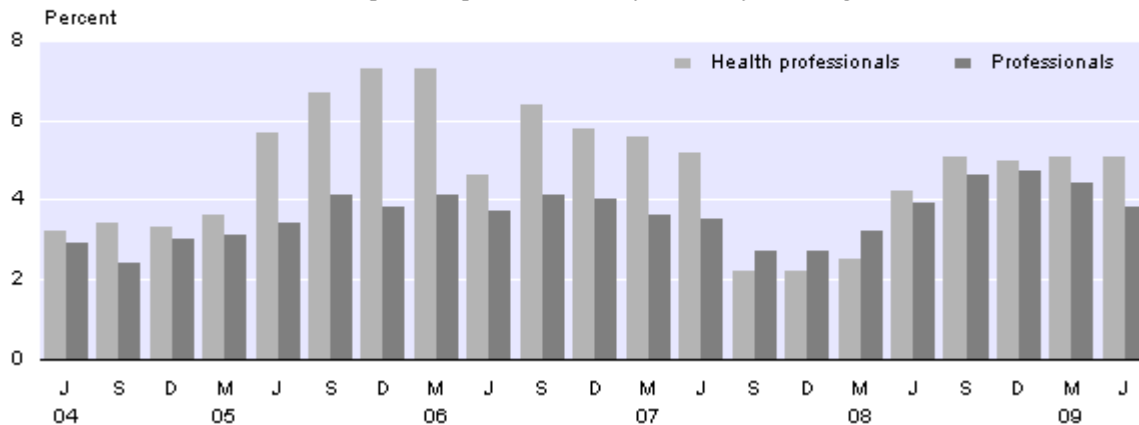
Across all occupation groups, annual increases ranged from 1.9 percent (for salespersons, demonstrators and models) to 5.1 percent for health professionals.

Health professionals' salary and wage rates (including overtime) increased 5.1 percent in the year to the June 2009 quarter, following an identical increase in the year to the March 2009 quarter. In the June 2009 quarter, salary and wage rates increased 1.6 percent, following a 1.3 percent increase in the March 2009 quarter and a 0.5 percent increase in the December 2008 quarter. The latest quarterly increase is the fifth above 1.0 percent from the past six quarters. The main reason respondents provided for the latest quarterly increase was a result of collective employment agreements coming into effect.

All Salary & Wage Rates for Health Professionals and Professionals

All sectors combined

Percentage change from same quarter of previous year



Salary and wage rates (including overtime) increased 4.2 percent for teaching professionals in the year to the June 2009 quarter. The latest annual increase follows increases of 5.9 percent in the year to the March 2009 quarter, 6.8 percent in the year to the December 2008 quarter, and 6.6 percent in the year to the September 2008 quarter. In the June 2009 quarter, salary and wage rates (including overtime) increased 0.2 percent, following a 0.5 percent increase in the March 2009 quarter and a 0.2 percent increase in the December 2008 quarter. The main reason respondents provided for the latest quarterly increase was a result of collective employment agreements coming into effect.

Salary and wage rates (including overtime) for professionals (the major occupation group that includes both health professionals and teaching professionals) increased 3.8 percent in the year to the June 2009 quarter. This followed increases of 4.4 percent in the year to the March 2009 quarter, 4.7 percent in the year to the December 2008 quarter, and 4.6 percent in the year to the September 2008 quarter. In the June 2009 quarter, salary and wage rates (including overtime) increased 0.5 percent, following increases of 0.7 percent in both the March 2009 quarter and

December 2008 quarter. The main reason respondents provided for the latest quarterly increase was a result of collective employment agreements coming into effect.

Salary and wage rates (including overtime) for drivers and mobile machinery operators increased 4.3 percent in the year to the June 2009 quarter. This followed increases of 4.4 percent in the year to the March 2009 quarter, 4.1 percent in the year to the December 2008 quarter, and 4.2 percent in the year to the September 2008 quarter. In the June 2009 quarter salary and wage rates (including overtime) increased 0.3 percent, following increases of 1.3 percent in the March 2009 quarter, 0.8 percent in the December 2008 quarter, and 1.9 percent in the September 2008 quarter. The main reasons respondents provided for the latest quarterly increase were to reflect the cost of living and collective employment agreements coming into effect.

Distribution of pay rates

In the year to the June 2009 quarter, 55 percent of salary and ordinary time wage rates in the surveyed sample increased, down from 60 percent that increased in the year to the March 2009 quarter. In the June 2009 quarter, 10 percent of salary and ordinary time wage rates in the surveyed sample rose, down from 13 percent in the March 2009 quarter, and the lowest proportion that increased in a quarter since at least the June 1995 quarter.

Annually, 10 percent of salary and ordinary time wage rates increased by no more than 3 percent, 28 percent by more than 3 percent but no more than 5 percent, and 17 percent increased by more than 5 percent in the year to the June 2009 quarter.

Sixty percent of overtime wage rates increased in the year to the June 2009 quarter, while 40 percent were unchanged.

Surveyed respondents were asked to give reasons for each movement in pay rates. In the year to the June 2009 quarter, 41 percent of increases in salary and ordinary time wage rates were, at least in part, to reflect the cost of living; 34 percent were due to collective employment agreements coming into effect; 26 percent were to match market rates; 11 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 June 2009 quarter was 4.0 percent, down from 4.2 percent in the year to the March 2009 quarter.

The median increase for the June 2009 quarter was 3.6 percent, down from the 4.0 percent mean increase recorded in the previous six quarters.

The mean increase for all surveyed salary and ordinary time wage rates that rose in the year to the June 2009 quarter was 5.2 percent, down from the mean increase of 5.7 percent in the year to the March 2009 quarter.

In the June 2009 quarter, the mean increase was 3.9 percent, down from the 4.5 percent mean increase in the March 2009 quarter.

Median and mean increases for salary and ordinary time wage rates by sector <i>June 2009 quarter</i>				
Sector	Percentage change from previous quarter		Percentage change from same quarter of previous year	
	Median increase*	Mean increase*	Median increase*	Mean increase*
Local government	3.4	5.5	4.3	5.5
Central government	4.0	3.9	4.0	4.9
Public sector	3.9	4.3	4.0	5.1
Private sector	3.5	3.8	4.0	5.2
All sectors	3.6	3.9	4.0	5.2
* 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 4.6 percent in the year to the June 2009 quarter. This is down from the 5.2 percent increase in the year to the March 2009 quarter. In the June 2009 quarter, unadjusted salary and ordinary time wage rates rose 0.6 percent. This is down from the 0.8 percent increase in the March 2009 quarter. The latest quarterly increase is the lowest since a 0.5 percent increase recorded in the December 1998 quarter.

Private sector unadjusted salary and ordinary time wage rates increased 4.4 percent in the year to the June 2009 quarter, following a 5.0 percent increase in the year to the March 2009 quarter. Unadjusted salary and ordinary time wage rates in the private sector rose 0.6 percent in the June 2009 quarter, down from a 0.8 percent rise in the March 2009 quarter. The latest quarterly increase is the lowest since a 0.5 percent increase in the December 1999 quarter.

Analytical unadjusted and adjusted salary and ordinary time wage rates <i>Private sector and all sectors combined</i> June 2009 quarter				
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	0.3	0.6	2.6	4.4
All sectors	0.3	0.6	2.9	4.6

Implementation of new classifications

The next LCI (salary and wage rates), for the September 2009 quarter, will be released using 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). The ANZSIC06-based industry series and the ANZSCO-based occupation series will start from the June 2009 quarter. The LCI will be re-expressed on a base of the June 2009 quarter (=1000). The LCI (salary and wage rates) series on the old classifications will continue to be published until the June 2010 quarter, providing a year-long overlap.

The following table shows the industries that will be published under ANZSIC06 for each sector of ownership. These are marked with a Y.

Published ANZSIC06 industries			
<i>By sector of ownership</i>			
Industry under ANZSIC06	Public sector	Private sector	All sectors
Agriculture		Y	Y
Forestry and logging		Y	Y
Fishing, aquaculture and agriculture, forestry and fishing support services		Y	Y
Agriculture, forestry and fishing		Y	Y
Mining		Y	Y
Food, beverage and tobacco product manufacturing		Y	Y
Textile, leather, clothing and footwear manufacturing		Y	Y
Wood and paper products manufacturing		Y	Y
Printing		Y	Y
Petroleum, chemical, polymer and rubber product manufacturing		Y	Y
Non-metallic mineral product manufacturing		Y	Y
Metal product manufacturing		Y	Y
Transport equipment, machinery and equipment manufacturing		Y	Y
Furniture and other manufacturing		Y	Y
Manufacturing		Y	Y
Electricity, gas, water and waste service	Y	Y	Y
Construction		Y	Y
Wholesale trade		Y	Y

Retail trade		Y	Y
Accommodation and food services		Y	Y
Retail trade and accommodation		Y	Y
Transport, postal and warehousing		Y	Y
Information media and telecommunications		Y	Y
Financial and insurance services		Y	Y
Rental, hiring and real estate services		Y	Y
Professional, scientific and technical services		Y	Y
Administrative and support services		Y	Y
Professional, scientific, technical, administrative and support services		Y	Y
Local government administration	Y		Y
Central government, defence and public safety	Y		Y
Public administration and safety	Y		Y

Industry under ANZSIC06	Public sector	Private sector	All sectors
Education and training	Y	Y	Y
Health care and social assistance	Y	Y	Y
Arts and recreation services		Y	Y
Other services		Y	Y
Arts, recreation and other services		Y	Y

The following list shows the categories at the major group level that will be released under ANZSCO:

- managers
- professionals
- technicians and trade workers
- community and personal service workers
- clerical and administrative workers
- sales workers
- machinery operators and drivers
- labourers.

In the LCI, occupation groups will be published for the above categories. Selected occupation groups will be published at a sub-group level.

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. See the *Introducing ANZSIC 2006* and *Classification of occupation* webpages for more information, including links to the structures and details of the new classifications.

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Next release ...

Labour Cost Index (Salary and Wage Rates): September 2009 quarter will be released on 3 November 2009.

Technical notes

What the index measures

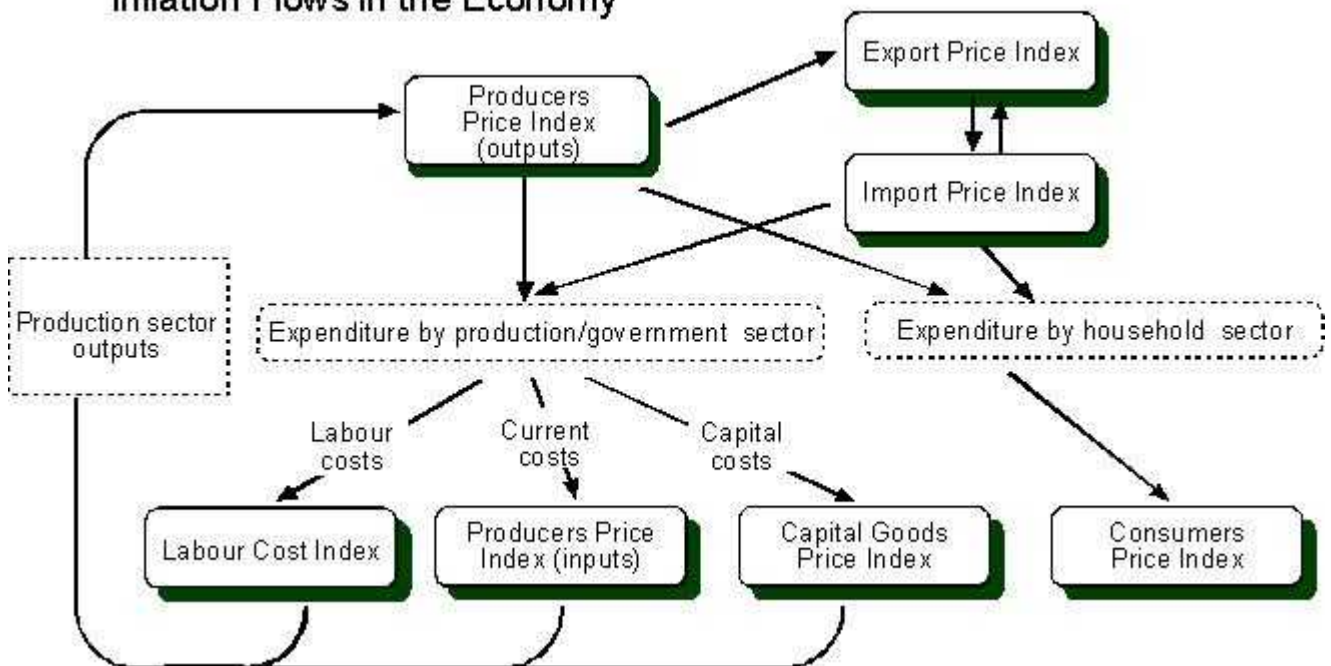
The salary and wage rates component of the labour cost index (LCI) measures movements in base salary and ordinary time wage rates and overtime wage rates. The non-wage component measures changes in the following costs:

- 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

Inflation Flows in the Economy



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	20.1
Professionals	20.9
Technicians and associate professionals	12.8
Managers, professionals and technicians	53.8
Clerks	10.5
Service and sales workers	9.7
Clerks, service and sales workers	20.2
Agriculture and fishery workers	4.0
Trades workers	8.3
Plant and machine operators and assemblers	8.6
Elementary occupations	5.1
Other occupations	26.0
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 (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	\$60,000
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
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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

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, base expenditure weights by sector, cost and occupation
- 9.2 Labour cost index, base expenditure weights by industry

Supplementary 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