



Forecast growth in labour costs: update of March 2010 report

20 September 2010

Report by Access Economics Pty Limited for the
Australian Energy Regulator

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Executive Summary

The Australian Energy Regulator (AER) commissioned Access Economics to provide forecasts for labour costs growth for the Electricity, Gas, Water and Waste services¹ (utilities) industry to 2017-18 for New South Wales, Victoria, Queensland, South Australia, the Australian Capital Territory and Australia.

Specifically, AER requested:

- a comparative analysis of forecast labour costs for the utilities industry across States;
- a comparative analysis of forecast labour costs for the utilities industry with other comparable industries (that is, mining, construction and manufacturing);
- a comparison of the forecasts of general labour cost growth across States; and
- a discussion of how market conditions are expected to affect the labour forecasts.

An initial report was delivered on 16 September 2009 and an update on 16 March 2010.

This report forms a further update to the March 2010 report, taking into account newly available information.

The broader macro outlook

Recent months have seen a gradual improvement in global economic performance, despite some periods of increasing market anxiety over issues of global debt.

Access Economics doesn't foresee a global double dip recession, but **we do expect global growth to disappoint** somewhat, with gains levelling off as stimulus starts to run out in the rich world and emerging economies slow to more sustainable rates. This phase of steadier growth was always likely. After all, the world's banks are under-capitalised and under-confident, families are cautious, while stimulus withdrawal is starting to bite (especially in Europe) with concerns over debts and deficits driving policymakers to shift from generosity to austerity.

That weak growth is increasingly frustrating businesses, families and governments, who had hoped the global recovery would strengthen further and faster – particularly on the employment front. The outlook is for recovery to continue, but to remain patchy – stronger in Asia, weaker in the rich world.

The short term outlook for Australia has improved more rapidly and **we expect there will be continued good news for the domestic economy** through the months ahead. In part that is because of the relative strength seen in both China and India which means that the problems of much of the rest of the world are less important to us.

¹ This industry is part of the new Australian and New Zealand Standard Industry Classification 2006 (ANZSIC06), and differs in composition slightly to the old ANZSIC93 industry which was electricity, gas and water services. Much of the addition to this industry comes from the ANZSIC93 industry of Personal and Other Services.

Yet there are rising domestic risks ahead too, with Australian consumers not yet driving growth in the retail sector in the way they have shown in times past, and the recovery in housing construction dragging its feet badly. Government stimulus spending is soon to recede as a growth driver, which makes the upswing in business investment spending now set to start vital to a broadening in Australia's recovery.

Profits are back at record highs, dropping the effective cost of employing people to record lows, and pushing the unemployment rate back close to 5%. Continuing recovery will combine with that to generate further job gains, although not at the pace seen of late. Yet while demand will continue, supply will falter. Changed rules for foreign students plus a populist election (which saw the consensus shift to a 'smaller Australia') mean that migration is falling fast. Not even a lift in participation will stop the next few years being marked by the rising risk of skills shortages.

Underlying inflation is still falling, reacting to Australia's downturn, as well as weak wage gains and falls in import prices. But each of these inflation drivers is set to change course – demand and wage pressures will build from here, and the \$A may have done its dash for this cycle.

Access Economics therefore sees both price and wage inflation building through 2011 and 2012. It is worth noting that while pressures will build, and medium term wage growth rates have been revised upwards, the short term outlook is more benign than the 16 March 2010 update for the next eighteen months.

Recent wage gains are most evident in mining and in utilities, where cyclical prospects have improved sharply. Offsetting these gains has been sliding wage growth in manufacturing as well as retail and accommodation.

Recent wage forecasting performance

At the time of the last (16 March 2010) update report prepared for AER, the December 2009 quarter Labour Price Index (LPI) data (ABS Cat. No. 6345.0) were the latest available. The March and June quarter 2010 data LPI data have subsequently been released.

The numbers of particular interest are those for overall wage growth in Australia, those in the utilities, construction, mining and manufacturing sectors, as well as those in each of the States and Territories.

In terms of growth across the first half of 2010 (March and June quarters), actual total Australian LPI for the six month period grew by 1.66%, some 0.07 percentage points faster than our forecast of 1.59% across this period, which was included in the 16 March 2010 report.²

The matching difference for the mining sector was actual growth of 2.63%, which was 1.01 percentage points above our earlier forecast. For the construction sector, actual growth was 1.65%, 0.16 percentage points less than our forecast. The gap was a little greater in the manufacturing sector, where growth over the first half of 2010 is currently estimated at 1.37%, some 0.88 percentage points below our forecast for the six month period in last update.

² It should be noted that the official figures are rounded to one decimal place, and that could change the true rate of growth. Based on the possible range of values that the unrounded measure of wages could actually take, the true rate of growth across the period theoretically could range from 1.56% to 1.76%.

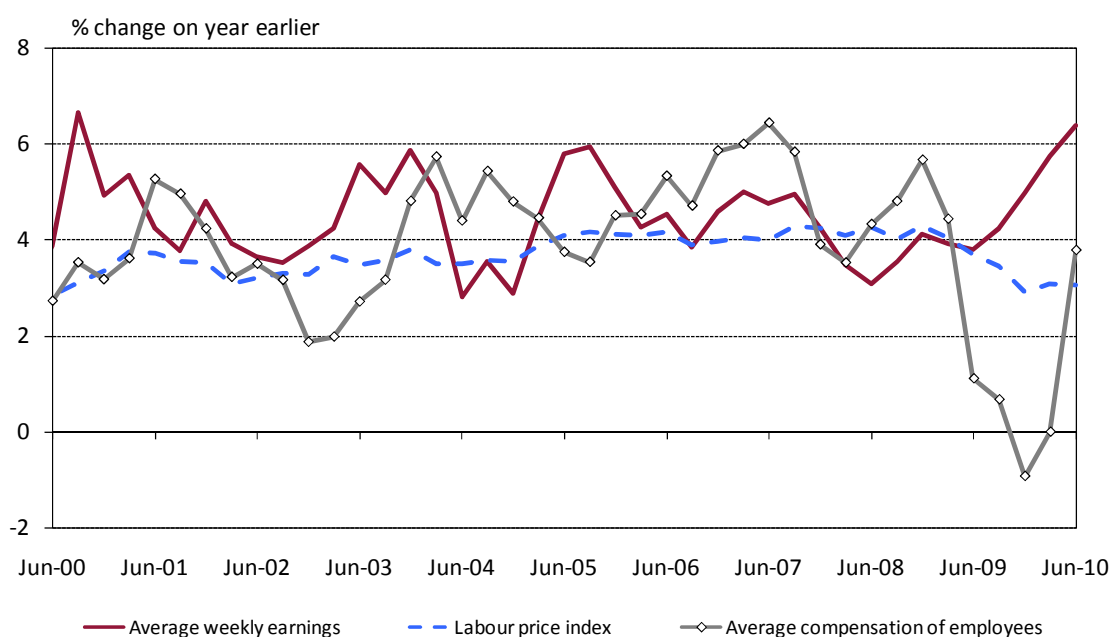
In the utilities sector itself half yearly growth is currently estimated at 2.22%, some 0.65 percentage points above our forecast in the initial report of 1.57% for the first half of 2009.

Overall, our forecasts for wages were very close to the actual result, but the results for the key industries in this report were more mixed. The mining and utilities sector saw wages grow relatively quickly – particularly in the March quarter – while manufacturing wages were weaker than expected. We were correct that December 2009 would mark the end of the easing phase in wage growth and that the first half of 2010 would see overall annual growth in the LPI stabilise at 3%.

That national difference was reflected in consistent differences at the State level between short term wage growth forecasts and actual performance. Growth in the March quarter was significantly above our forecasts (by 0.6 to 0.8 percentage points in the States covered in this report). Around half of that gap was erased in the June quarter, but all States saw wages grow faster than anticipated overall. Queensland saw wages rise by 2.41%, which was 0.50 percentage points above the forecast rate – with the gap due to the relative importance of mining to the State’s overall employment. Growth in the ACT was 1.81% over the six months, 0.36 percentage points higher than our forecast, and New South Wales recorded a rise of 2.45% (0.21 percentage points above our expectations). South Australia’s wage growth of 2.36% (0.16 percentage points above our expectations) and Victoria’s rise of 2.07% (just 0.07 percentage points higher than anticipated) reflected the surprisingly weak growth in the manufacturing sector across this period.

The variability in wage measures provided by the ABS continues to be evident. While the LPI has eased across the past year, average weekly earnings growth has surged while average compensation measures are recovering after a significant dip. Further measures examined later, such as growth in wages covered by enterprise bargaining agreements, are more in line with the LPI growth rate.

Chart i: Labour cost growth, various measures



Source: ABS

The updated outlook for labour costs

Developments in recent months have affected the wage outlook since the time of Access Economics' 16 March 2010 update for the AER. Our wage forecasts in the short term are now a little lower than they were back in March. That gap is modest at the national level, and is not consistent across sectors or States:

- In particular, the slowdown in overall wage growth in response to the downturn scare that Australia experienced has lasted longer than Access Economics projected at the time of our 16 March 2010 update. Other things equal, wage pressures are lower in the short term than envisaged six months ago.
- That said, the sector-by-sector impacts of changing developments have been rather more marked and, for some of the sectors of particular interest here, have headed in the opposite direction to the national picture. Most notably, the month of April 2010 marked news of very substantial contract price increases won by big miners for Australia's key coal and iron ore exports. Although news in much of the rest of Australia's economy remains relatively weak, the economic outlook has brightened since March 2010 for the mining sector.
- In turn, the better news for mining has generally positive implications for the demand for and output of Australia's construction sector. An additional factor affecting the latter is that public sector stimulus has had a slower pace of passthrough than Access Economics was forecasting in March 2010. That means there is more stimulus-related work ahead than we had factored into our March 2010 calculations.
- Finally, there are also flow-on impacts for the utilities sector. That said, the impacts here are more on the supply side than on the demand side. It is true that increased strength in mining and in construction is of assistance to the utilities sector, boosting the demand levels it can expect to see. Perhaps more importantly however, and has regularly been noted by Access Economics in its reports for the AER, the utilities sector has faced a degree of competition for some of the same workers that it employs from both mining and construction.

The upshot is that, whereas overall expectations for wage growth at the national level are relatively little changed, there have been more marked changes for each of mining, construction and the utilities.

As that implies, the changes are not very large. Overall, the final 2009-10 outcome for LPI growth was 3.1% – just 0.1 percentage points lower than the 3.2% forecast in the 16 March 2010 update. Access Economics has also revised down slightly its forecasts of the LPI across the forecast period.

While short term LPI growth is lower than previously projected (cumulative growth through the year to the June quarter 2011 is now 0.7 percentage points lower than previously projected in our 16 March 2010 report), Access Economics still sees a rebound in the pace of increase in the cost of labour over thereafter as the conditions which led to the fall off in labour costs are reversed – although the effects are contained to a small number of sectors initially and take longer to have an impact on the broader LPI.

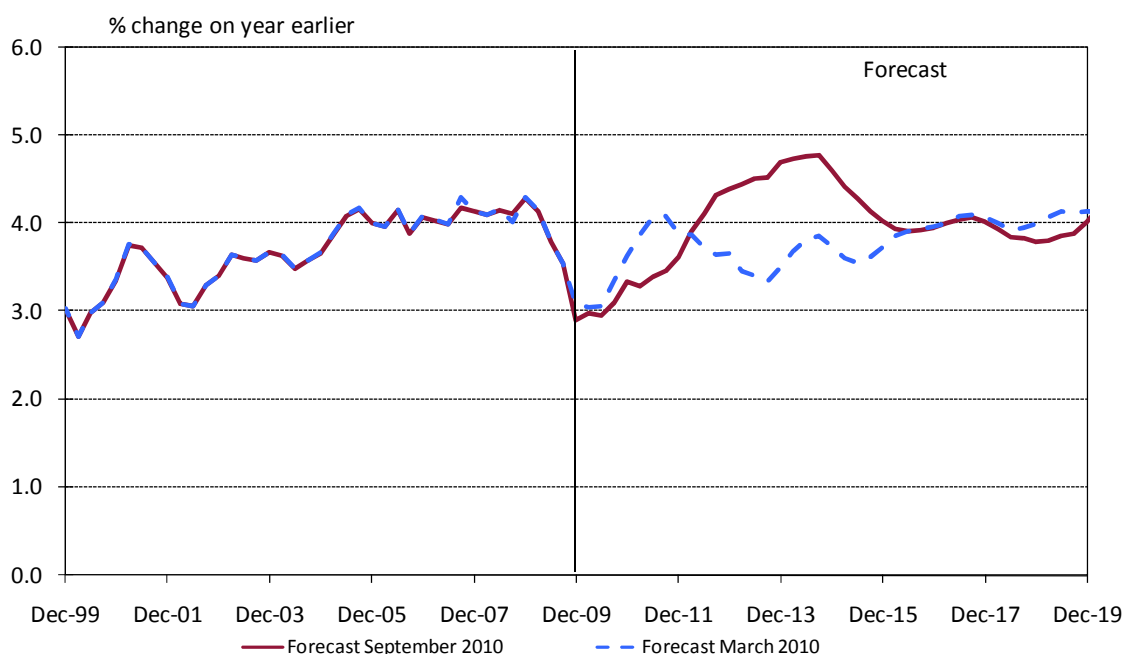
Accordingly, cumulative growth through the year to the June quarter 2012 is now 0.4 percentage points higher than that previously projected – partially unwinding the effect over

the year to June 2011 – followed by growth in the year to the June quarter 2013 which is now 1.1 percentage points above that previously projected.

Chart ii shows our previous and current forecasts for growth in the national Labour Price Index.

The forecasts now include actual LPI data to June 2010 as well as information from the June quarter 2010 national accounts, which provide estimates of output nationally, by industry and by State³.

Chart ii: Changes to the forecast LPI (all industries)



Source: Access Economics macroeconomic model

Access Economics' 16 March 2010 report was correct that December 2009 would mark the end of the easing phase in wage growth and that the first half of 2010 would see overall year-to growth rates in the LPI stabilise at 3%.

While the forecast for total national wage gains was very close to the actual result, results for the key industries in this report were more mixed. The mining and utilities sector saw wages grow relatively quickly – particularly in the March quarter – while manufacturing wages were weaker than expected.

As noted above, the short term outlook is now for a slightly slower rebound in LPI growth through 2010 and 2011 before the longer term strength of the economy, plus rising risks of skills shortages, drives strong wages growth from 2012 to 2014. Beyond that the outlook returns to growth rates of 4% per annum, in line with the rates seen from 2004 to 2008.

³ For States, the ABS only produces quarterly estimates of State Final Demand (SFD) and international merchandise trade. Some additional components of output, net international service trade, interstate trade and changes in stocks at the State level, are estimated by Access Economics to create a full State quarterly output measure. Note that Access Economics' full forecast round in the wake of the release of the March quarter 2010 national accounts has not been finalised. The timing of this update has only allowed us to include some new forecasts for the Australian, State and sectoral economies, rather than fully updated forecasts.

Conditions in the utilities sector

As emerging economies have been stronger than projected at the time of the 16 March 2010 update report, there are some positive demand impacts for the utilities sector given the importance of both mining and construction as its customers.

That said, there are some negatives here too, including relative weakness in manufacturing, as well as the shift from 'big Australia' to a (smaller) 'sustainable Australia' and the continuing uncertainty over carbon pricing and associated regulation.

In other words, the good news from China and India is at least partly offset by bad news elsewhere for the utilities sector.

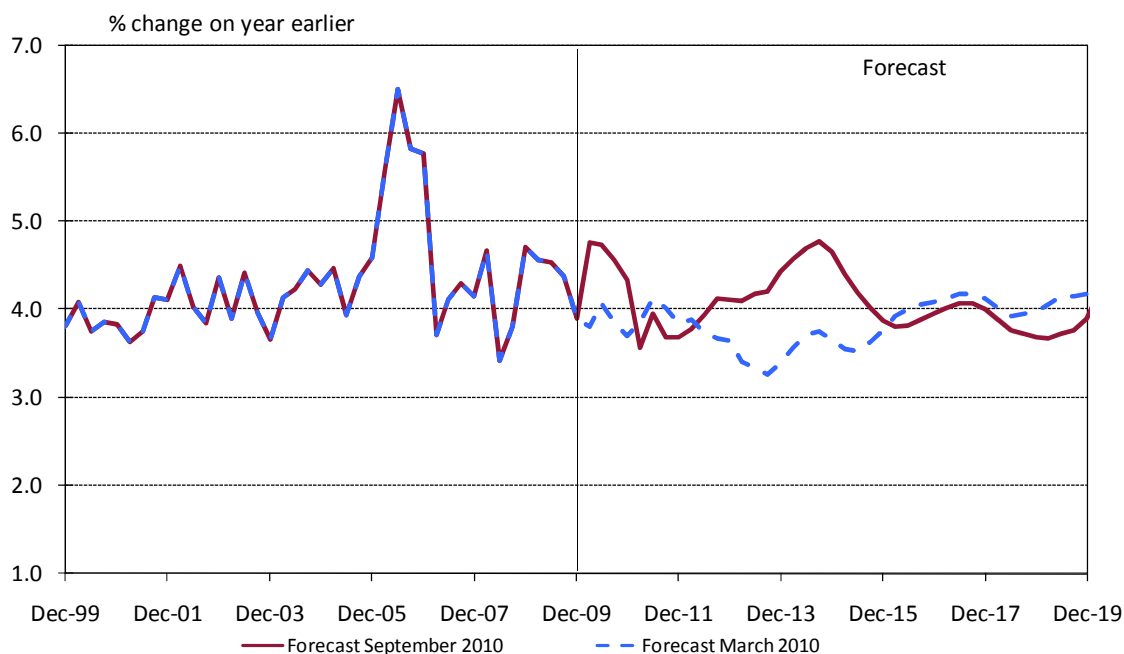
However, although demand for the utilities sector is unlikely to be much ahead of the expectations of six months ago (at the time that the 16 March 2010 report was prepared for the AER), the sector will now have to compete for its workforce in an environment in which the earlier (and larger) return to resource boom conditions raises the bar of competitor wages in competitor sectors.

Not surprisingly, therefore, wage relativities in the utilities sector are also lifting relative to the national LPI compared with the 16 March 2010 update report.

Utilities wage growth

Chart iii shows current and previous projections for growth in the utilities sector LPI.

Chart iii: Changes to the forecast utilities sector LPI



Source: Access Economics macroeconomic model

Changes to the overall rate of wage growth in the utilities sector have been affected by a number of different factors, including:

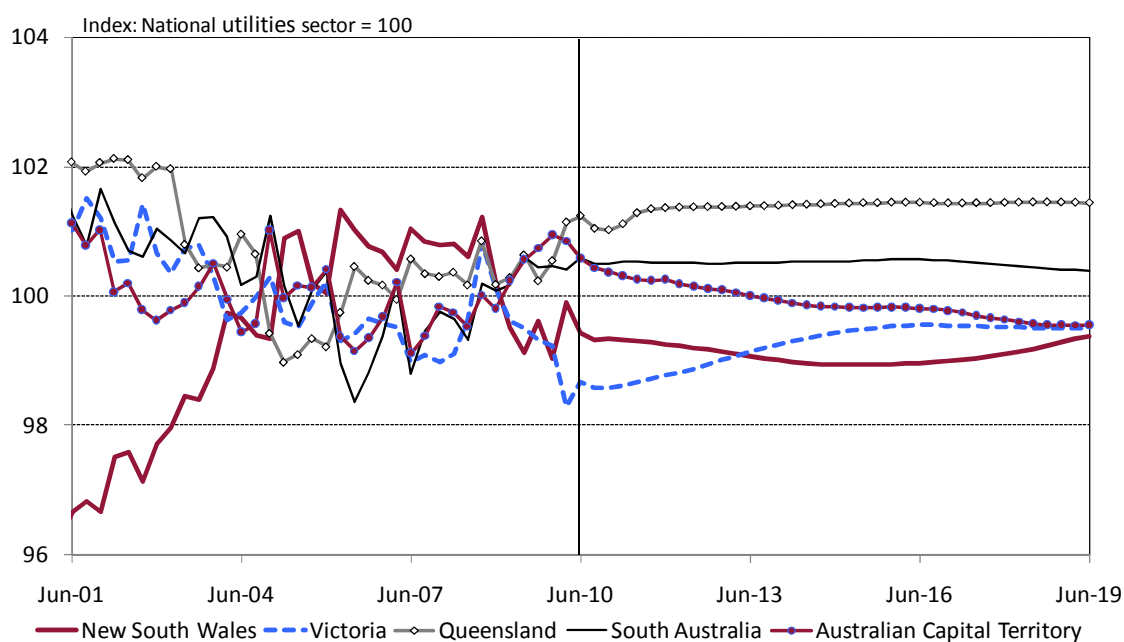
- The publication of actual LPI figures for the first half of 2010. Growth in the March quarter of 2010 was the strongest for four years – and while the June quarter’s growth was more in line with earlier forecasts, growth rates over the twelve months to June 2010 are well above those shown in the 16 March 2010 update.
- A modest upgrading in the outlook for utilities, but a strong rebound in mining, which is now placing more pressure than expected on wages growth in competitor industries.
- The general change in expected wage movements in Australia. These now foresee slightly weaker growth in 2010 and 2011, but much stronger results in the medium term.

Utilities wage growth at the State level

Chart iv shows the relative utilities LPI movements that are expected in the forecast period.

Compared with the previous report, the largest change is in the growth of the Queensland utilities sector wage – which appears to have lifted sharply in recent quarters. As a utilities sector LPI for Queensland is not published by the ABS, this is an estimated based on a combination of growth implies by the national growth in utilities LPI (which is faster than those seen in New South Wales or Victoria) and growth in AWE in the Queensland utilities sector.

Chart iv: Relative movements in utilities sector LPI by State



Source: ABS, Access Economics estimates, Access Economics labour cost model

Other changes are driven either by a reversion to normality – such as Victoria, where wages recently slipped relative to the national average (partly in response to weakness in manufacturing) – or by compositional effects – such as the Australian Capital Territory, where the industry is expected to see relatively stronger growth in the water component of the utilities sector which has lower wage levels than the sector as a whole.

In addition to the data shown here, wages in Western Australia are expected to rise in relative terms (similar to the forecast for Queensland) as competition for workers from the booming

mining sector pushes up wage rates. This too is likely to have a downward impact on the relative levels of utilities wages in New South Wales and other States.

Access Economics

20 September 2010

Table ii: Summary table of results

Calendar year changes in key Economic variables										
Annual % change (unless noted)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Consumption										
Private sector	1.6	3.0	3.0	2.4	2.6	2.9	2.8	2.9	3.1	2.9
Public sector	2.8	2.4	1.5	2.8	2.6	2.2	2.1	2.0	1.8	1.5
Private sector investment										
Non-business housing	-4.6	11.6	12.1	0.2	-2.9	6.9	10.2	-0.2	-5.7	9.3
Non-business real estate	5.1	12.4	12.0	0.4	-2.2	6.6	9.6	0.5	-4.6	8.8
Non-residential building	-13.1	-5.1	4.1	-0.1	0.7	3.1	4.0	5.9	4.3	3.6
Engineering construction	10.6	-2.5	13.5	6.5	3.9	1.7	1.0	2.8	1.3	0.6
Machinery and equipment	-3.4	4.1	9.9	3.5	2.5	2.3	2.3	4.2	2.6	1.9
IP and livestock	5.9	4.7	8.2	3.4	2.5	2.3	2.4	4.2	2.7	2.0
Public investment										
General Government	2.2	17.3	0.7	-7.0	-0.3	2.0	2.0	1.7	1.6	1.6
Public enterprises	17.9	21.2	15.9	5.0	1.9	2.1	2.1	3.4	1.6	0.9
Domestic final demand										
Private sector	0.6	3.5	5.2	2.5	2.0	3.2	3.4	2.9	2.1	3.2
Public sector	3.7	6.1	2.6	1.4	2.1	2.2	2.1	2.1	1.7	1.4
Gross national expenditure	0.7	5.1	4.8	2.0	1.8	2.9	3.1	2.6	1.9	2.8
International trade										
Exports	1.4	0.3	4.5	17.3	15.5	11.0	8.8	4.9	5.4	6.3
Imports	-7.8	16.9	12.3	7.4	6.8	8.6	6.6	2.7	2.5	5.5
Net (% additon to growth)	-0.3	-3.1	-0.5	2.1	0.8	0.3	0.5	0.4	0.7	0.0
Total output (GDP)	1.3	2.8	3.5	3.6	3.6	3.3	3.6	3.3	2.8	3.0
Non farm GDP	1.3	2.9	3.6	3.7	3.6	3.3	3.6	3.3	2.8	3.0
Employment	0.3	2.7	3.1	2.0	1.5	1.4	1.3	1.5	1.1	1.0
Unemployment rate (%)	5.6	5.1	4.8	5.0	5.2	5.3	5.3	5.1	5.1	5.3
Calendar year changes in national wage and prices variables										
Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Consumer price index (CPI)	1.8	3.0	3.1	3.0	2.7	2.4	2.5	2.7	2.5	2.2
Labour price index (LPI)										
Nominal	3.6	3.1	3.4	4.2	4.5	4.7	4.2	3.9	4.0	3.9
Real	1.7	0.1	0.3	1.1	1.8	2.3	1.7	1.2	1.5	1.6
Average weekly earnings (AWE)										
Nominal	4.2	5.4	3.1	3.8	4.2	4.4	4.0	3.3	2.9	2.9
Real	2.4	2.3	0.0	0.8	1.4	2.0	1.5	0.5	0.4	0.7
Average weekly ordinary time earnings (AWOTE)										
Nominal	5.7	4.9	3.1	4.0	4.4	4.6	4.5	3.8	3.5	3.6
Real	3.8	1.8	-0.1	0.9	1.7	2.1	1.9	1.0	0.9	1.4
Unit labour costs										
Nominal	0.5	0.8	2.3	2.0	2.9	3.4	2.9	3.2	2.7	2.0
Real	-1.3	-2.1	-0.8	-1.0	0.2	1.0	0.4	0.4	0.2	-0.2

Source: Access Economics

1 Background

The Australian Energy Regulator (AER) commissioned Access Economics to provide forecasts for labour costs growth for the Electricity, Gas, Water and Waste services⁴ (utilities) industry to 2017-18 for New South Wales, Victoria, Queensland, South Australia, the ACT and Australia in September 2009. The initial report was updated in March 2010. This report provides a further update to the forecasts, and also includes additional analysis of the administration services industry.

Access Economics' update report includes:

- **Changes to the national economic outlook**, covering the broad international economy and domestic developments, as well as changes in the outlook for commodity prices (see Chapter 2).
- **Developments in wages and prices**, covering the LPI itself, other measures of wages and the CPI (see Chapter 3).
- **Projections of State economies**, (see Chapter 4), covering changes since the previous report as well as wage movements for New South Wales, Victoria, Queensland, South Australia and the ACT.
- **The outlook for the utilities sector**, looking first at changes to the industry outlook, the changes to sectoral wage projections, and then an overview of the latest national industry projections (see Chapter 5).
- **The outlook for competitor and related sectors**, covering mining, construction, manufacturing and administration services. It examines changes the economic outlook for each, as well as the updated projections (see Chapter 6).
- The report then provides **updated detailed forecasts at the State level of wage growth in the utilities and competitor industries** (see Chapter 7).
- **The Appendices** cover regional wage and price variations, as well as an outline of the methodology used in the Access Economics macro model and the Access Economics wage model, a discussion of different wage measures, and a discussion of data sources and derivation. A table of changes to historical data is also included.

⁴ This industry is part of the new Australian and New Zealand Standard Industry Classification 2006 (ANZSIC06), and differs in composition slightly to the old ANZSIC93 industry which was electricity, gas and water services. Much of the addition to this industry comes from the ANZSIC93 industry of Personal and Other Services.

2 Changes to the economic outlook

2.1 The global outlook

Global recovery is continuing, but its pace is levelling off. In part that is because Europe's governments have shifted their policy stance from generosity to austerity, while broader concerns over debt and deficits have led to some governments in the developed world trying to wind back their stimulus sooner rather than later – and perhaps sooner than necessary.

Similarly, the many families who have spent too much for too long are proving cautious consumers into the recovery. Moreover, although China is still leading the charge and India is also travelling fast, emerging economy strength is levelling off too, and these forecasts point to global growth in 2011 dropping below the growth expected for 2010.

Europe's woes are notable, and point to several years of recession on its southern flank. Even so, those troubles should remain mostly confined to the Continent, and global recovery – while modest given the size of the recent recession – is still continuing.

Big recessions are typically followed by big recoveries. However, that simple rule of thumb is not holding in the **United States**. Although its growth has bettered the expectations of a year ago, those expectations were pretty modest. More than 8 million jobs were lost in the crisis, and so far only half a million have been recovered. Consumers are spending, but not strongly. Exports are making gains, but the fall in the euro means that exports alone won't be enough to power recovery in the US. Government stimulus spending is near its peak, and it too will weigh on the pace of recovery through 2011.

That leaves hopes for wider US recovery resting on spending by businesses as well as spending on housing construction. The good news is that both of those can be expected to recover strongly in the next few years. Business investment spending took a very large hit through the crisis, and US housing markets were central to the downturn.

However, it is less clear that housing construction and business spending will strengthen much during 2010, and although they will recover further in 2011, it may not be until 2012 that they recover more notably. That points to a continuing modest pace of recovery in the US in the next year or so. As a result, the Fed looks more likely to start raising US official interest rates in 2011 rather than this year.

Japan's economy continues to improve, with the nation's strong export sector making big sales on the back of burgeoning demand from developing Asia. Further export gains are expected despite weakness in Europe on the one hand and the strength of the yen on the other. The ability to sell cars into developing Asia is a particular strong point. However, Asia itself is close to peak growth rates for this global business cycle, while the underlying weaknesses in Japan's domestic economy – revealed by continuing and persistent deflation – remain a millstone for the longer term. Access Economics does not expect recent output growth rates to last for too much longer.

Most rich nations had a difficult 2009, but the nations of **the Eurozone** are having an even worse 2010. The reasons are well known – it is not just that interest rates were cut less and public spending increased less than in, say, the US, but that the southern fringe of Europe has been 'found out' by markets who now doubt its ability to stay in the Eurozone.

Many focus on Europe as a debt crisis, and it is true that the likes of Greece, Spain, Italy and Portugal have very large government debts (or will soon have them). However, the real problem is that each of those nations saw their costs jump ahead of those in Germany and France across the last 15 years. That has made them uncompetitive within the Eurozone and, given that exchange and interest rates are set for the Eurozone as a whole, and the latter is dominated by the economies of Germany and France, that has also left southern Europe uncompetitive against other nations as well.

Southern Europe must cut its costs to become competitive once more. But there is no easy way to do that, with Eurozone membership implying that recovery will be largely unaided by notably weaker exchange rates and lower interest rates.

Yet this is an essentially European problem. The creation of the Eurozone stitched together nations which were not well suited to be in a common currency zone. Now that there has finally been a crisis big enough to reveal that mistake, Europe itself has big problems. However, it is rather less clear that those problems should weigh on the rest of the world too much. Access Economics has revised down our longer term European outlook, but that is not having much impact on our longer term views of global growth as a whole.

China's growth has probably peaked for this cycle – but that's a good thing. The sheer size of its stimulus and the easy money policies which accompanied it had sent growth to unsustainable highs, generating some price and wage inflation as well as unsustainably fast increases in property prices in large cities. The Government is now addressing the latter, but we don't expect the crackdown on credit for property to slow China's economy too much – the impact will be felt mostly in just a handful of key cities, and the authorities haven't changed their target for overall credit growth, which remains close to 20% for 2010.

However, public spending is winding back, and credit growth is less excessive than it has been. That will gradually remove the rocket underneath construction spending. Moreover, credit will be tightened further over the next year or so as inflation heats up. That points to slower growth in 2011, but nothing that yet looks like a big problem.

That said, risks of a big problem are certainly on the rise – we think the authorities are still acting too slowly rather than too fast in addressing overheating concerns. That won't be a problem for growth in 2010 and almost certainly won't be a problem in 2011 either, but medium term risks are rising.

2.2 The Australian outlook

Australia's recovery is well advanced, and further growth gains lie ahead. And the chance that China will manage at least one more round of "stronger for longer" suggests Europe's woes should merely counsel caution rather than threaten renewed slowdown here at home. After all, Australia is still expected to lead the rich world charge for adding new productive capacity.

However, most of that good news is already known, and there are still important headwinds. Family finances remain stretched, and frugal is the new black for consumers. The recovery in housing construction is coming, but it is coming slowly, held back by the modest pace of land release and the recent lift in interest rates. And the return to strength in the pace of business spending is also happening slowly. That suggests the baton pass from infrastructure stimulus to private sector recovery remains vital to Australia's short term outlook.

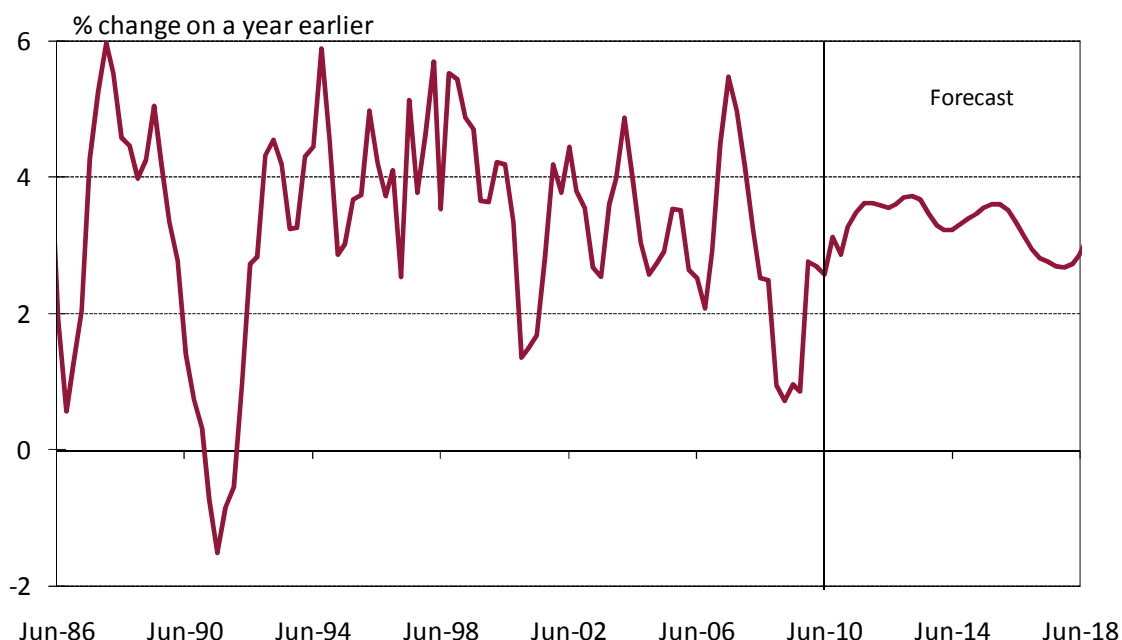
However, these concerns are more likely to constrain the current recovery than choke it off, with unemployment still expected to fall further and interest rates to rise further over the next year or so.

The key question for the Australia economy is whether the short term outlook will be dominated by old world debts and deficits weighing on both fears and the pace of economic growth in rich nation or by the continuing dynamic pace of growth in developing Asia – Australia’s burgeoning backyard.

Access Economics expects that the latter will prevail for now – and that, as Chart 2.1 shows, our nascent recovery will strengthen. In part that reflects our judgement that the impact on China of renewed questions over European growth and a crackdown on residential and commercial property lending in China itself are perhaps more likely to lower overheating risks than lead to notable falls in growth. Although the property crackdown was necessary, and is apparently being pursued with vigour, its effects will fall mostly in a handful of large cities, and the authorities have maintained their guidance on the overall pace of credit expansion for 2010. That suggests they want to see more loans going to factories and exporters and less to property speculation, rather than an overall slowing in the pace of credit growth.

Hence we think the best bet of Australian economic forecasting since 2003 – that China will be stronger for longer – has not yet run its course. That would be good news for Australia’s short term outlook. Even some recent negatives, including commodity price falls, have largely been matched by falls in the \$A and the likelihood the Reserve Bank will be more temperate in the speed with which it raises rates.

Chart 2.1: Australian real GDP growth



Source: ABS, Access Economics modelling

Yet that doesn’t mean that there aren’t some important negatives. The global recovery remains tentative outside of Asia, especially in Europe itself. And each of the OECD, the IMF and the G20 are now all urging fiscal consolidation and the start to interest rate increases in

most major economies. Although these steps will eventually be necessary, it is less clear that current conditions and likely global growth trajectories would point to the need for that tightening to begin soon.

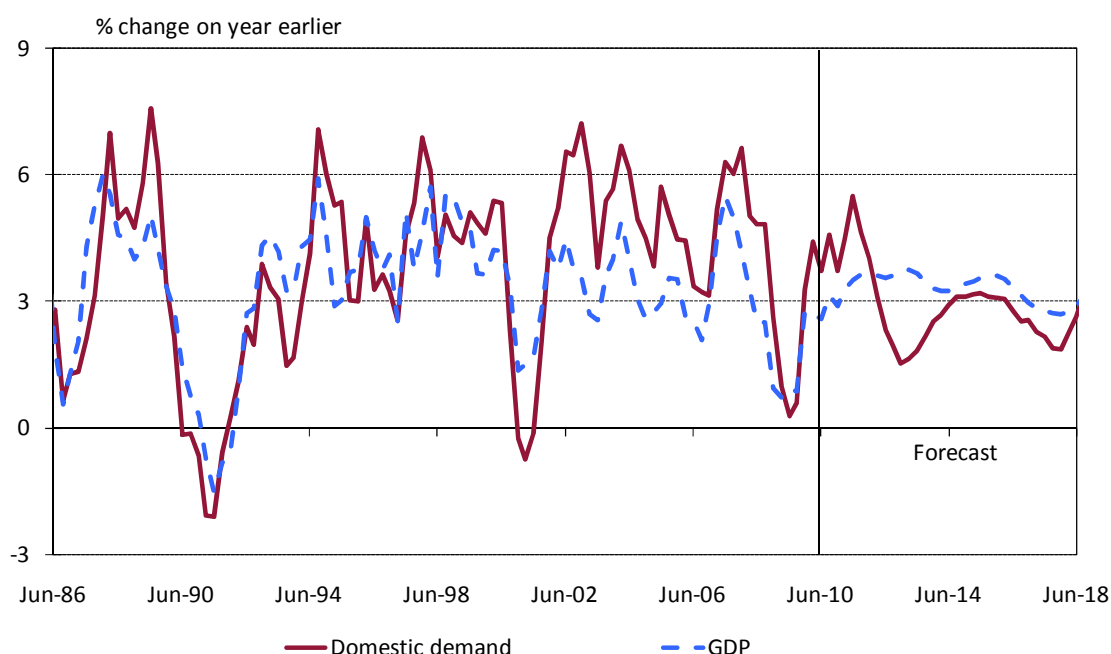
To the extent that it does, it will further add to the headwinds for growth already evident in the old world. Add in the caution being shown in family finances, and the rich world recovery is unlikely to fall over, but it is also unlikely to accelerate too fast either, leaving a recovery that will look modest relative to the size of the recession that preceded it.

Moreover, and as Access Economics has often stressed, we have concerns about the medium term outlook for China as well. Its short term growth should remain excellent, and the same is true for the longer term too. But this is a nation which remains overly geared to exports, where cheap money has led to speculative bubbles, and where trouble is likely to strike some time in the next few years.

In addition, there are problems closer to home. Although a recovery in the pace of housing construction is coming, it is proving slower and smaller than previously hoped. With consumers maintaining their caution, recent growth has still owed more to Canberra's chequebook than to private sector recovery.

However, these negatives still look more likely to keep the economy in check over the next year or two than to derail wider recovery. Chart 2.2 below shows we see both output (GDP) and domestic demand gathering pace between now and late 2011, as fading fiscal stimulus is replaced by gains in housing construction and business investment spending, with the latter supported by still strong global commodity prices.

Chart 2.2: Domestic demand (and supply – GDP)



Source: ABS, Access Economics modelling

The inflation inflection approaches. A weak economy took pressure off prices, but 2011 will see demand-driven price increases. Wage moderation also helped reduce pressures, but it will rebound too, and again 2011 looms as a year of change. Although import prices should help

keep inflation down, the assistance from a rising \$A may ease, with 2011 once more seen as a key turning point.

Europe's woes have pushed back official interest rate increases in the rich world, now likely in early 2011 rather than in 2010. But those increases will come, and chances are that they will stretch all the way through 2012 as well. Renewed growth jitters are also one of the reasons why the Reserve Bank has slowed after its initial rush of rate rises. But we see inflation risks as likely to lead to the RBA raising rates once more, though those further rate rises may not be seen this year.

The \$A may have peaked for this cycle, but it should still stay well supported for a while longer yet.

The earlier strength in coal and iron ore prices is still feeding through into export earnings. But the impact of that on the current account deficit is likely to be modest. A lift in imports to feed into resource and related infrastructure may combine with an expected easing in world commodity prices and a related fall in the \$A to drive the current account deficit back up once more by 2011-12.

Some 300,000 jobs have been created in the last year, and businesses are signalling further hiring ahead, with business services are showing particularly greater interest in hiring than they have in a while.

2.3 The outlook for commodity prices

Industrial commodity prices had a softer than expected downswing in 2008-09, and most commodity prices then came back to life thereafter, hitting impressive price peaks in early 2010. They did so for several reasons, revved up by striking stimulus spending in China, by broader emerging economy strength, by strong restocking among producers and by more speculative buying than commodities have ever before witnessed.

Yet the recovery in prices proved to be too much too soon to be sustained. Climbing levels of unsold inventories were an early sign that prices had hit unsustainable highs. Stockholdings of nickel and aluminium have particularly jumped. Moreover, China's construction boom – though it will continue – has now past its peak growth, and the world's miners are digging just as fast as the men in hard hats can manage. More broadly, if global growth is peaking, it is no surprise that industrial commodity prices have done the same. Certainly the speculators have been spooked.

Now that the inventory restocking surge has past and that global growth is nearing its peak, commodity prices may have done their dash for this cycle. But that doesn't mean that they will crash and burn. The world's miners are still struggling to get their product to market, and emerging economies are still growing strongly. The most likely scenario is that China engineers a safe and soft landing from recent rates of growth, and that – Europe aside – most rich nations will continue to carve out a modest but continuing recovery.

If that turns out to be the case, then industrial commodity prices level off for a time. However, we remain of the view that today's prices – even if they are off recent peaks – are not a permanent benchmark. Supply will eventually catch up with demand, leaving prices comfortably below where they are today.

Table 1.1 sets out Access Economics' forecasts to 2013-14.

Table 2.1: Budget forecasts and forecasting assumptions

	Outcomes and estimates (a)		Forecasts		
	2009-10 Year Average	2010-11 Year Average	2011-12 Year Average	2012-13 Year Average	2013-14 Year Average
Panel A – Demand and Output (b)					
Private consumption	2.7%	3.2%	2.9%	3.0%	2.8%
Private investment					
Dwellings	1.7%	9.4%	12.1%	3.1%	-4.0%
Business investment	-3.1%	9.1%	11.8%	-0.2%	2.2%
Non-dwelling construction	-6.4%	12.3%	15.6%	3.1%	4.8%
Equipment	-3.9%	4.5%	7.9%	-3.9%	-0.9%
Private final demand	1.5%	4.8%	5.6%	2.3%	2.0%
Public final demand	9.5%	5.8%	2.2%	1.1%	1.5%
Total final demand	3.3%	4.8%	4.8%	2.0%	1.9%
Increase in stocks (c)					
Private non-farm	0.3%	1.6%	-1.0%	-0.2%	-0.1%
Farm and public authority	0.4%	-0.1%	0.0%	0.0%	0.0%
Gross national expenditure	3.9%	6.2%	3.8%	1.8%	1.8%
Exports of goods and services	1.8%	5.9%	7.0%	7.5%	7.2%
Imports of goods and services	5.4%	21.5%	8.9%	1.3%	2.2%
Net exports (c)	-0.8%	-3.5%	-0.8%	1.2%	1.0%
Real gross domestic product	2.3%	3.7%	3.6%	3.3%	2.9%
Non-farm product	2.4%	3.9%	3.7%	3.4%	2.9%
Farm product	1.1%	-2.5%	0.5%	1.7%	1.2%
Nominal gross domestic product	3.7%	8.7%	5.5%	5.3%	5.1%
Panel B – Expenditure Excl. Asset Sales					
Underlying business investment	-2.8%	7.5%	11.7%	-0.2%	2.2%
Underlying non-dwelling construction	-6.5%	10.1%	15.8%	3.2%	4.9%
Underlying equipment	-3.1%	3.2%	7.6%	-3.7%	-0.8%
Underlying private final demand	1.6%	4.5%	5.6%	2.3%	2.0%
Underlying public final demand	9.5%	5.8%	2.2%	1.1%	1.5%
Panel C – Other Economic Measures (d)					
Prices and wages					
Consumer price index	2.3%	3.1%	3.1%	2.9%	2.5%
‘Underlying’ measure	1.8%	2.7%	3.3%	3.1%	2.7%
Gross product deflator	1.3%	4.8%	1.9%	1.9%	2.1%
Average earnings (e)	0.8%	4.3%	3.9%	4.7%	5.1%
Average weekly earnings (f)	5.3%	3.9%	3.3%	4.2%	4.2%
Labour market					
Employment (labour force survey basis)	1.2%	3.3%	2.6%	1.6%	1.5%
Unemployment rate (per cent)	5.5%	4.9%	4.9%	5.2%	5.3%
Participation rate (per cent)	65.1%	65.5%	66.0%	66.2%	66.2%
External accounts					
Terms of trade	-3.0%	13.4%	-5.7%	-5.9%	-0.7%
Current account balance (\$billion)	62.0	69.8	79.7	73.3	69.3
Percentage of GDP	4.8%	5.0%	5.4%	4.7%	4.2%
Panel D – International Assumptions					
Major trading partners					
Real GDP	1.0%	4.1%	3.9%	3.8%	3.7%
Inflation	0.5%	1.9%	2.9%	2.2%	2.2%
Crude oil (Tapis \$US/barrel)	79.30	78.40	83.30	86.30	89.80
TWI index (Index points)	67.5	66.8	62.9	60.9	59.4

Source: Access Economics

(a) Calculated using seasonally adjusted data. (b) Chain-weighted volume measures. Unless otherwise indicated, figures are percentage change on previous year. (c) Percentage point contribution to change in GDP. (d) Percentage change on preceding year unless otherwise noted. (e) National accounts basis. (f) Survey basis.

3 The outlook for wages

3.1 Recent national wage growth

Wage growth recently moved more and faster than is typically the case.

In particular, the private sector trimmed its sails as employers, employees and unions responded to deteriorating global conditions. In the event, wages reacted to fear of a bigger downturn than actually occurred in Australia, though that wage moderation itself was a notable contributor to saving jobs through the crisis. (So was the willingness of employees to accept fewer hours of work for a time so as to help maintain their jobs through the period seen as most at risk.)

Private sector wage growth (as measured by the Labour Price Index) dropped down to around 2½% during 2009 as a result – a rapid fall by past standards and considerably below the longer term trend of 3¼%. Private sector wage gains have picked up some pace through 2010 to date, though they have still only risen to 2.8% over the year-to mid-2010.

Yet in contrast to the rapid response of private wages to concerns about a potential recession in Australia, public sector wages remained in the region of 4% – a rate they continued to register in the latest ABS and enterprise bargaining data (though the latest released information for the latter, given in the table below, refers to the December quarter 2009).

That gap is no great surprise – market realities pressure the private sector much more than they do the public sector. But the big downswing in private sector wage growth is temporary rather than permanent.

Adding those private and public outcomes, overall wage growth in the past year was 3.0%.

Other broad measures of wages have told a different story of late:

- The ABS' measure of growth in average weekly earnings (AWE) has continued the acceleration that began in the 2008-09 financial year. Growth in the AWE in the past twelve months of 6.4% is the largest since the surge driven by the Sydney Olympic Games in 2000 (and higher than rates generally seen since the early 1990s).
- Similarly, growth in average weekly ordinary time earnings (AWOTE), at 5.2% over the past year, is above its longer term average, but below the growth of near 6% seen through 2009.
- In contrast, average compensation of non-farm employees (included in the national accounts), declined marginally across 2009 while growth has returned, growth over the past year was 3.6%, below the rates generally seen since 2003. Partly the earlier decline in this measure (in fell by 0.8% through the course of 2009) reflected falls in average hours worked per employee – which, as the June quarter data showed, is now reversing.

Access Economics reaffirms its view that the LPI continues to provide a better indicator of wage trends than AWE, AWOTE or the average compensation of non-farm employees.

3.2 Recent wage growth versus projected wage growth

In terms of total national wage growth across the first half of 2010 (the March and June quarters – the LPI data released since Access Economics' 16 March 2010 report for the AER), actual total Australian LPI for the six month period grew by 1.66%.

That was some 0.07 percentage points faster than our forecast of 1.59% across this period, which was included in the 16 March 2010 report.

In essence, Access Economics' 16 March 2010 report was correct that December 2009 would mark the end of the easing phase in wage growth and that the first half of 2010 would see overall year-to growth rates in the LPI stabilise at 3%.

Hence our forecasts for total national wage gains were very close to the actual result, but the results for the key industries in this report were more mixed. The mining and utilities sector saw wages grow relatively quickly – particularly in the March quarter – while manufacturing wages were weaker than expected. These differences are discussed in greater detail below.

As noted above, six further months of LPI data has become available since our 16 March 2010 update for the AER, finalising 2009-10 outcomes.

Those outcomes can now be compared to the matching Access Economics forecasts for them from the earlier update report.

Table 3.1: 2009-10 LPI outcomes

% change in 2009-10	Forecast (March 2010)	Actual	Difference
All industries	3.2	3.1	-0.1
Utilities	4.0	4.5	0.4
Mining	3.2	3.6	0.4
Construction	3.4	3.2	-0.1
Manufacturing	2.7	2.3	-0.4
Administration services	2.3	2.2	-0.1
Utilities sector			
New South Wales	4.6	3.9	-0.6
Victoria	4.5	3.3	-1.3
Queensland	3.6	4.8	1.1
South Australia	4.5	4.7	0.2
Australian Capital Territory	4.5	5.1	0.6

Source: Australian Bureau of Statistics, Access Economics labour cost model (for Qld, SA, and ACT utilities data estimates).

In brief, wage moderation across Australia as a whole – all States and all sectors – was in line with what Access Economics had forecast in March, with the outcome for the year coming in at growth of 3.1% in 2009-10, just 0.1 percentage points below the forecast increase of 3.2% in our 16 March 2010 report for the AER.

That picture was more mixed at the (national) sectoral level, with wage growth:

- faster than forecast in the utilities (at 4.5% rather than the forecast 4.0%, a gap of 0.4 percentage points⁵) and mining (at 3.6% rather than 3.2%, again a gap of 0.4 percentage points), but

⁵ These figures may not appear to add up due to rounding.

- slower than forecast in manufacturing (at 2.3% rather than the forecast 2.7%).

The outcomes in construction and administration services were only marginally below the expectations contained in the earlier report.

As would be expected in what is a fairly small sector of the national economy, the State level divergences in the utilities were rather larger than those evident nationally:

- Wage growth in 2009-10 in the utilities in New South Wales and Victoria came in well below our earlier expectations – in New South Wales the ABS estimates the outcome at 3.9%, 0.7 percentage points below the Access Economics forecast of 4.6%, while in Victoria the ABS estimates it at 3.3%, 1.3 percentage points below our earlier forecasts.
- The ABS does not publish results for wage growth in the utilities for Queensland, South Australia and the Australian Capital Territory, so Access Economics has used the information which is available to estimate these outcomes (that is, a combination of overall LPI data at the State and Territory level with, where it is available, Average Weekly Earnings (AWE) for State level sectoral outcomes. As our overall forecast for utilities sector LPI was too low and those for Victoria and New South Wales too high, that would suggest growth in other States was faster than earlier expected – a trend also suggested by data from the AWE series.⁶

3.3 Short term wage forecasts

Developments in recent months have affected the wage outlook since the time of Access Economics' 16 March 2010 update for the AER.

Access Economics wage forecasts in the short term are now a little lower than they were back in March. That gap is modest at the national level, and is not consistent across sectors or States:

- In particular, the slowdown in overall wage growth in response to the downturn scare that Australia experienced has lasted longer than Access Economics projected at the time of our 16 March 2010 update. Other things equal, wage pressures are lower in the short term than envisaged six months ago.
- That said, the sector-by-sector impacts of changing developments have been rather more marked and, for some of the sectors of particular interest here, have headed in the opposite direction to the national picture. Most notably, the month of April 2010 marked news of very substantial contract price increases won by big miners for Australia's key coal and iron ore exports. Although news in much of the rest of Australia's economy remains relatively weak, the economic outlook has brightened since March 2010 for the mining sector.
- In turn, the better news for mining has generally positive implications for the demand for and output of Australia's construction sector. An additional factor affecting the latter is that public sector stimulus has had a slower pace of passthrough than Access Economics was forecasting in March 2010. That means there is more stimulus-related work ahead than we had factored into our March 2010 calculations.

⁶ See discussion in Appendix E:

- Finally, there are also flow-on impacts for the utilities sector. That said, the impacts here are more on the supply side than on the demand side. It is true that increased strength in mining and in construction is of assistance to the utilities sector, boosting the demand levels it can expect to see. Perhaps more importantly however, and has regularly been noted by Access Economics in its reports for the AER, the utilities sector has faced a degree of competition for some of the same workers that it employs from both mining and construction.

The upshot is that, whereas overall expectations for wage growth at the national level are relatively little changed, there have been more marked changes for each of mining, construction and the utilities.

As that implies, the changes are not very large. Overall, the final 2009-10 outcome for LPI growth was 3.1% – just 0.1 percentage points lower than the 3.2% forecast in the 16 March 2010 update. Access Economics has also revised down slightly its forecasts of the LPI across the forecast period.

While short term LPI growth is lower than previously projected (cumulative growth through the year to the June quarter 2011 is now 0.7 percentage points lower than previously projected in our 16 March 2010 report), Access Economics still sees a rebound in the pace of increase in the cost of labour over thereafter as the conditions which led to the fall off in labour costs are reversed – although the effects are contained to a small number of sectors initially and take longer to have an impact on the broader LPI.

Accordingly, cumulative growth through the year to the June quarter 2012 is now 0.4 percentage points higher than that previously projected – partially unwinding the effect over the year to June 2011 – followed by growth in the year to the June quarter 2013 which is now 1.1 percentage points above that previously projected.

3.4 The outlook for the CPI

Underlying inflation is moderating, dropping to 2¼% over the past year. But will moderation last? After all, inflation rises when demand grows faster than supply within an economy. And it is that scenario which is worrying the Reserve Bank: *“Over the period ahead, strong growth in resource exports and a gradual pick-up in business investment is expected to offset the scaling back in public demand as stimulus-related projects are completed. In this central scenario, the economy is likely to be pushing up against supply-side constraints over time”*.⁷

Wage-related price pressures are also still being affected by downturn driven developments. Wage growth fell fast as businesses and employees battered down for a deep downturn that never arrived. That cut unit labour cost growth sharply, ensuring labour costs are not a driver of current inflation pressures.

Yet wage growth won't stay somnolent. It is expected to lift from its current lows, returning to more usual levels in 2011 and 2012. Again, however, it will take time for these pressures to build. A steady turnaround from the recent falls back to more normal labour cost gains (both with and without productivity) is expected.

⁷ Reserve Bank of Australia, Statement of Monetary Policy, August 2010, at page 3.

Upstream price pressures are starting to build again, being most evident in home building prices. Steel and energy costs are rising, and the \$A's earlier surge has already lost its dampening impact on import prices. Moreover, although the data don't yet show it, the moderation in food prices seen of late looks like melting in the recent European summer, with higher food costs evident globally of late. That suggests slowly building price pressures are in the pipeline. With a return to health in construction activity and continuing rapid price hikes among the utilities, upstream price pressures no longer point to much good news in the pipeline for retail pricing in Australia.

Underlying inflation in Australia is still falling, and that it looks set to fall further yet. But that is due to lags – the aftershocks from earlier weakness in Australia's economy (even if it was smaller than expected), the sharp fall in the pace of wage gains, and the one-off cut to import prices as the \$A surged back from its late 2008 lows.

In turn, each of those key drivers is starting to reverse course: **demand growth is strengthening, wage growth will lift (and will probably see an element of catch up to wage gains foregone through the downturn), and the \$A's benefits to import prices have mostly run their course.**

Access Economics projects that 2011 and 2012 will see renewed strength in underlying inflation – not a big leap, but a lift that is nonetheless still likely to require a little further by way of fancy footwork from the Reserve to keep it constrained. That said, the key contributor to the closing of the gap in inflation relativities is more likely to be a lift in inflation among our trading partners than developments closer to home.

While inflation rates moderated across 2009-10, the fall in recent months has been slightly less than earlier expected. The CPI grew by 2.3% in 2009-10 compared with the previous financial year, slightly more than anticipated in the 16 March 2010 report (a forecast of 2.1%) Stronger world prospects and renewed growth in commodity prices has pushed up the expectation for inflation in the forecast period, with the expected growth in 2010-11 now 3.1% (0.3 percentage points higher than the update report).

Table 3.2: Changes in major economic aggregate forecasts (calendar year basis)**Changes in economic forecasts (calendar year)**

Annual % change (unless noted)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
GDP										
Mar-10	1.3	2.0	3.5	3.3	3.7	3.7	2.7	2.4	3.1	3.6
Sep-10	1.3	2.8	3.5	3.6	3.6	3.3	3.6	3.3	2.8	3.0
Difference	0.0	0.9	0.0	0.3	-0.1	-0.4	0.9	0.9	-0.3	-0.6
Consumer Price Index (CPI)										
Mar-10	1.8	2.6	3.1	2.8	2.3	1.9	2.3	2.7	2.7	2.5
Sep-10	1.8	3.0	3.1	3.0	2.7	2.4	2.5	2.7	2.5	2.2
Difference	0.0	0.4	0.0	0.2	0.4	0.5	0.2	0.0	-0.2	-0.3
Labour Price Index (LPI)										
Mar-10	3.6	3.3	4.0	3.7	3.4	3.8	3.6	3.9	4.1	4.0
Sep-10	3.6	3.1	3.4	4.2	4.5	4.7	4.2	3.9	4.0	3.9
Difference	0.0	-0.2	-0.5	0.5	1.1	1.0	0.6	0.0	0.0	-0.1
Average weekly earnings (AWE)										
Mar-10	3.9	3.7	4.3	4.3	3.7	3.8	3.5	3.5	3.6	3.6
Sep-10	4.2	5.4	3.1	3.8	4.2	4.4	4.0	3.3	2.9	2.9
Difference	0.3	1.6	-1.2	-0.5	0.4	0.6	0.6	-0.2	-0.7	-0.6
Average weekly ordinary time earnings (AWOTE)										
Mar-10	5.3	3.3	4.3	4.7	4.5	4.2	3.9	4.1	4.2	4.0
Sep-10	5.7	4.9	3.1	4.0	4.4	4.6	4.5	3.8	3.5	3.6
Difference	0.4	1.6	-1.3	-0.7	-0.1	0.4	0.6	-0.3	-0.7	-0.4
Unit Labour Costs										
Mar-10	0.6	3.1	3.2	2.7	1.6	1.8	1.4	2.0	1.6	1.5
Sep-10	0.5	0.8	2.3	2.0	2.9	3.4	2.9	3.2	2.7	2.0
Difference	0.0	-2.3	-0.9	-0.7	1.3	1.6	1.5	1.2	1.1	0.5
Employment										
Mar-10	0.3	2.5	2.1	2.0	1.7	2.0	1.7	1.3	1.5	2.1
Sep-10	0.3	2.7	3.1	2.0	1.5	1.4	1.3	1.5	1.1	1.0
Difference	0.0	0.2	1.0	0.0	-0.2	-0.6	-0.3	0.2	-0.3	-1.1
Unemployment rate (%)										
Mar-10	5.6	5.3	5.4	5.3	5.3	5.1	4.8	4.8	4.7	4.5
Sep-10	5.6	5.1	4.8	5.0	5.2	5.3	5.3	5.1	5.1	5.3
Difference	0.0	-0.2	-0.5	-0.3	0.0	0.3	0.4	0.3	0.4	0.8

Source: Access Economics

4 State economic outlooks and wage projections

4.1 Technical notes

The revisions to our forecasts over the past six months are, in the main, driven by the changing economic climate. However, State economic results are also affected by a number of technical points that should be borne in mind:

- Unlike the national economic accounts, State accounts do not produce a full output figure on a quarterly basis, only in annual terms. The components that are not released each quarter, notably estimates of interstate trade, are often revised significantly each year. This can change historic growth rates, particularly for the smaller States and Territories. Access Economics uses its own in-house forecasting methodology to create quarterly historical estimates of State output, which use (in part) historical employment levels by industry. Recent revisions to labour force numbers means that the historical quarterly pattern of State output has been revised – however annual totals are almost unchanged (reflecting only minor revisions), this explains the changes to historical growth rates and shares in State output over time.
- Population results since 2006 have also been revised, changing historical State shares of population over this period.

In general, these impacts are not particularly significant – and the State economic growth charts included below show that the key changes will be in the last few years of the forecast period.

4.2 New South Wales

4.2.1 Changes to the outlook

New South Wales' lost decade has cost it dearly, with the State shrinking sharply as a share of Australia across most economic and demographic indicators. Yet for the first time in a while NSW is now growing as fast as Australia, and its record on job creation is improving fast.

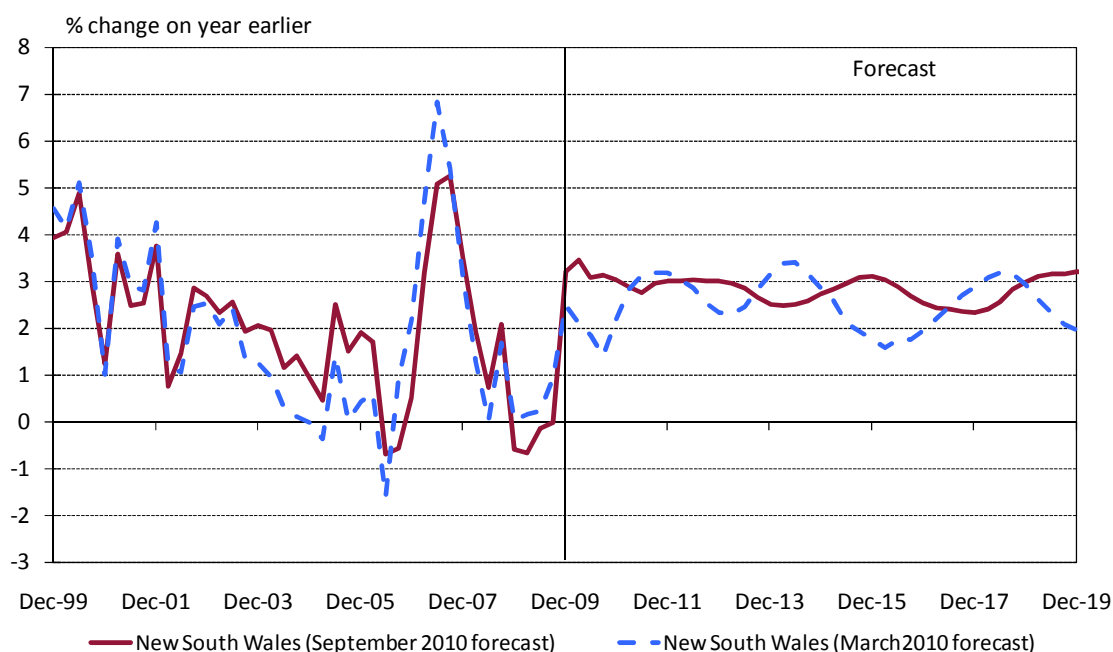
That upswing began back in 2009 as families responded to the then lower interest rates, showing a willingness to spend again on big ticket discretionary items. Then businesses responded to tax incentives for buying new equipment, while approvals for new housing finally took off. That was followed by other good news, with skilled vacancies lifting, job growth improving, thermal coal prices rising a healthy 40%, families and businesses becoming more confident about the future, and good rainfall across New South Wales' farm belt.

Chart 4.1 shows that output growth in the New South Wales economy has not only maintained the momentum it had begun to exhibit late in 2009, but has exceeded earlier expectations with annual growth rates forecast to remain at around 3% for the foreseeable future. The longer term outlook remains broadly similar (only the timing of the forecast economic cycle has varied significantly) – averaging slightly more than forecast in our 16 March 2010 report.

The State's share of the national economy is still expected to decline, though the forecast is slightly higher over the next five years than was previously expected. This tendency reflects the gradual (and overdue) recovery in New South Wales' relative prospects over the past

twelve months. While the State will still lag behind the leading States of Queensland and Western Australia, the gap is closing and NSW is projected to be growing a little more in line with Victoria and other States than previously forecast.

Chart 4.1: New South Wales output forecast change



Source: ABS, Access Economics' macroeconomic model

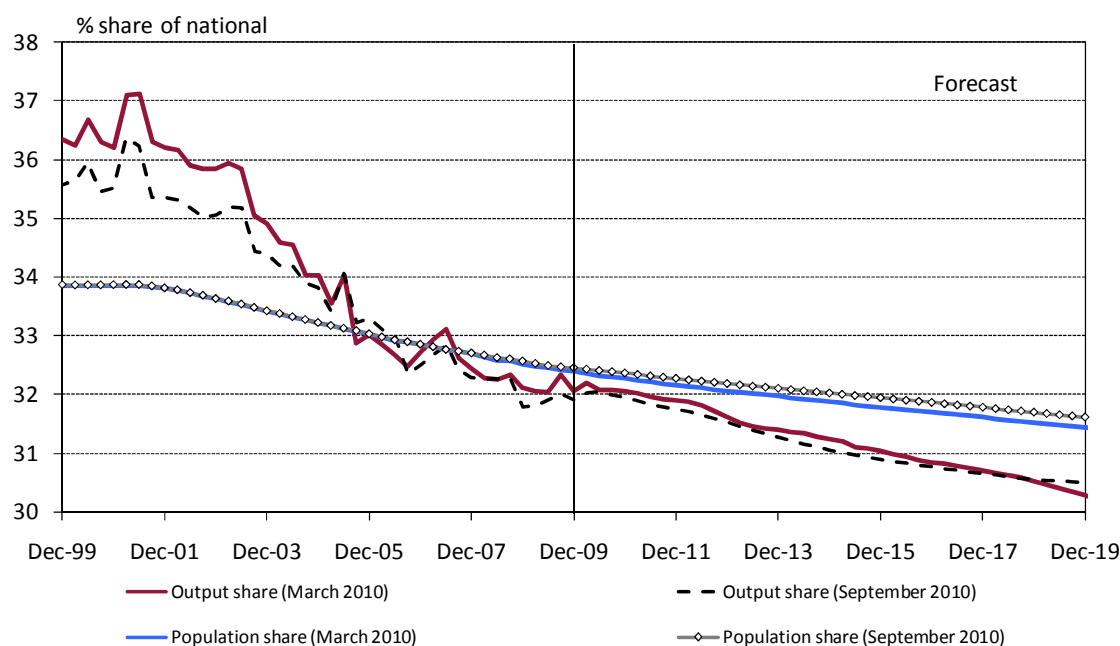
While New South Wales' share of the national population began to dip sharply after 2000, the decline in the State's share of economic output has been far more significant. As Chart 4.2 shows, Access Economics expects both shares to continue to fall away going forward.⁸ That forecast reflects a number of factors that have been true for some time, including relatively better job prospects in other States – especially the more resource rich States – and relatively higher house prices in New South Wales.

However Chart 4.2 also shows that, particularly on the population side, the relative outlook for New South Wales has improved in recent months. Population outflows from New South Wales to other States have been decreasing for some time now, and some of the advantages that Queensland enjoyed across the past ten years have been easing recently – particularly the differentials on house prices. Some locals have been trying to slow inward migration to parts of Queensland. Queensland has also suffered significant drops in housing finance and construction levels, further limiting the movement of people to that State, helping shore up population outlooks for New South Wales.

These latest forecasts still show New South Wales' share of the Australian population falling below 32% around 2013. The State's contribution to national output, which has slipped from 37% to 32% of the national total in a decade – and which is now lower than its population share for the first time since States records are available – is also likely to slide further in the future.

⁸ That chart also shows the impact of ABS revisions to history.

Chart 4.2: New South Wales output and population forecast change



Source: ABS, Access Economics' macroeconomic model

4.2.2 Current LPI projections

As detailed above, New South Wales has experienced a painful decade in terms of relative economic performance. As a result, labour cost (LPI) growth in the State has generally lagged the national average since 2003.

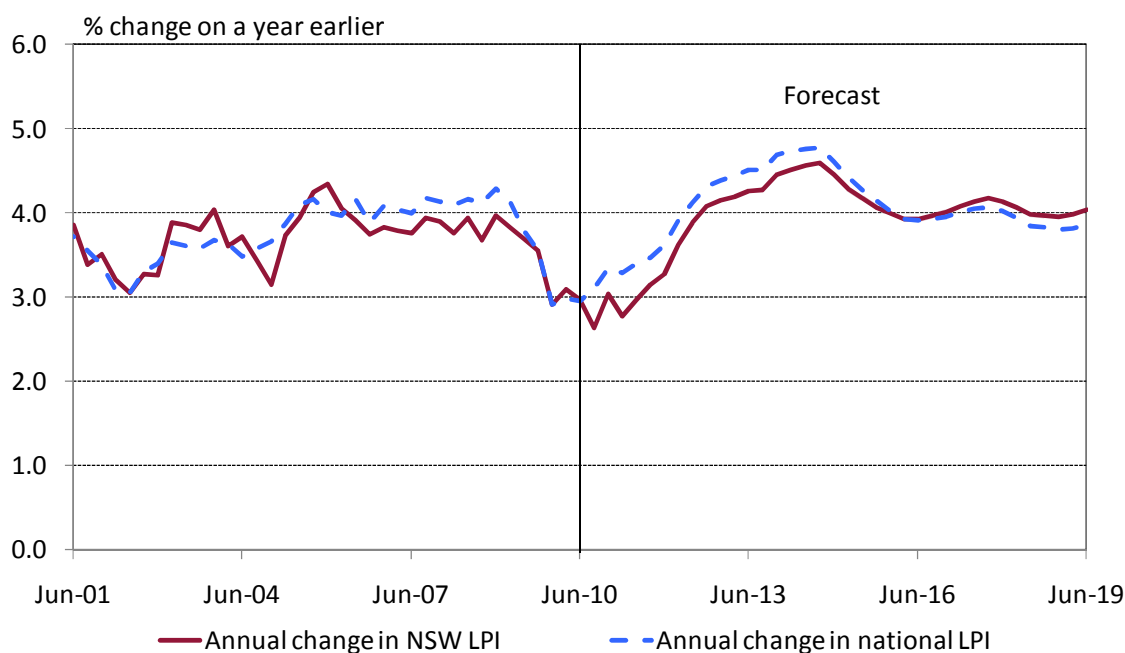
Year-to growth rates in the labour price index are projected to peak at close to 4.5% in New South Wales in 2014; at the same time as the national peak. Growth until that point is projected to generally lag the national average, but Access Economics expects New South Wales labour costs to grow broadly in line with the national average from 2015 onwards.

That slower rate of growth reflects two related longer term developments – the relatively slow economic growth that is expected (implied by Chart 4.2) and the relatively strong growth in wages in sectors that are less well represented in New South Wales. The second point has implications not just for the rate of growth, but for the timing of the upswing in growth.

Chart 4.3 shows that Access Economics is projecting general labour cost growth in New South Wales to lift notably, with the strongest acceleration apparent through late 2011 and early 2012. With the increases already developing in mining (and to a lesser extent construction) as well as downward pressure still apparent in sectors such as manufacturing and retail, the upswing may be slightly behind the national pace (the gap is, however, relatively less at the State level than the industry level).

In the later years of the forecast, a degree a 'catch-up' may ensue once the New South Wales economy reasserts itself as a key contributor to national economic growth.

Chart 4.3: New South Wales general labour cost growth



Source: ABS, Access Economics' macroeconomic model

4.3 Victoria

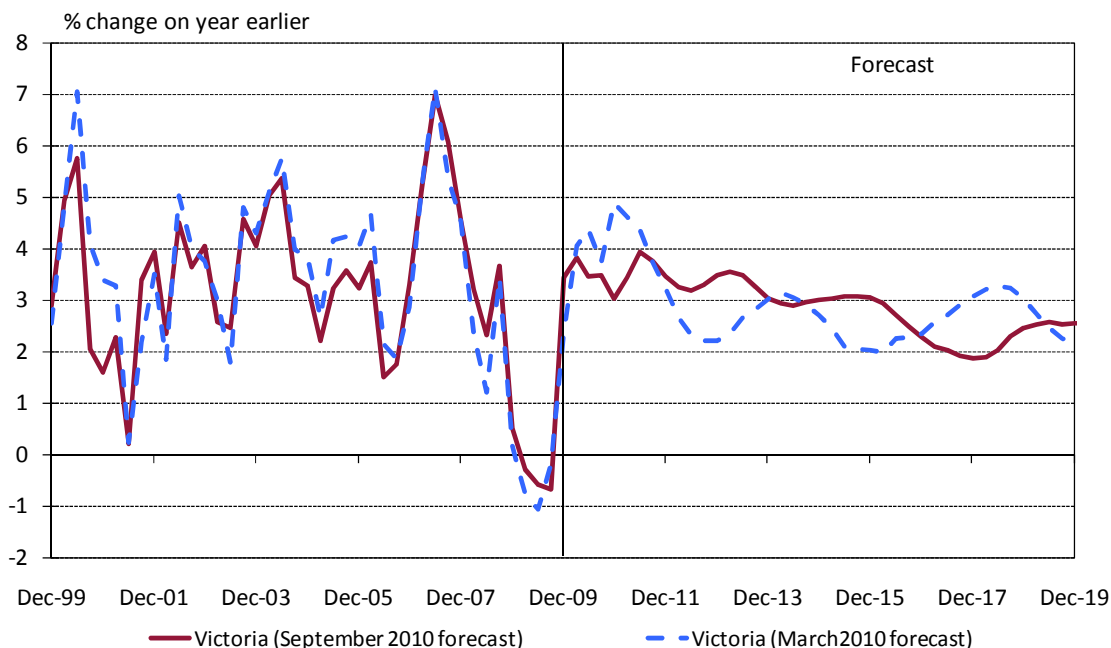
4.3.1 Changes to the outlook

Chart 4.4 shows that, like New South Wales, the Victorian economy rebounded impressively across the second half of 2009 with growth returning to 3½% through the course of 2009.

However, unlike New South Wales, the short term outlook is now slightly less impressive than at the time of the 16 March 2010 update, with the State's output growth rates remaining fairly stable rather than lifting during 2010 and 2011, and the standout gains evident in job growth now easing back once more.

One of the challenges for Victoria is its very success. Having outperformed for some time, it now becomes harder to do so. Housing is probably the key example. Although Victoria will keep doing very well for now, beyond 2010-11 the smaller pent up demand evident in Victoria suggests that other States have bigger upsides – indeed if national population growth begins to slip there will be little by way of a backlog of jobs for builders to fall back on. And housing price gains of recent times – up 18% in the past year alone – may start to weigh on the State's population growth even ignoring wider migration levels. Although population growth is still ahead of Australia's, it peaked in late 2009, and it will fall away further from here. Moreover, the magnificent momentum seen in Victoria's job growth ran ahead of itself, outstripping job vacancies.

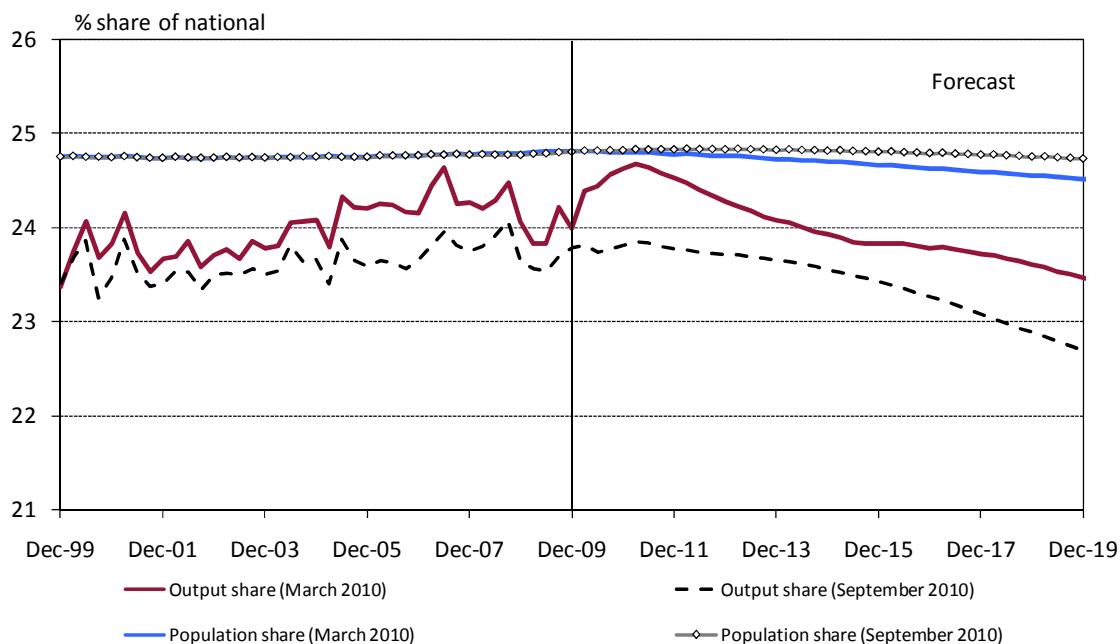
Chart 4.4: Victorian output forecast change



Source: ABS, Access Economics' macroeconomic model

But Victoria's key problem is the woes of manufacturers, bedevilled by the strength of the \$A. The States has managed many similar challenges very well in recent years. As Chart 4.5 shows, that has led to Victoria winning back some market share on the population front, and an even more impressive gain on the output front. Yet as that chart also forecasts, the future looks more likely to see some of those gains ebb away. Given the natural advantages of the resource States, that is a more than acceptable outcome.

Chart 4.5: Victorian output and population forecast change



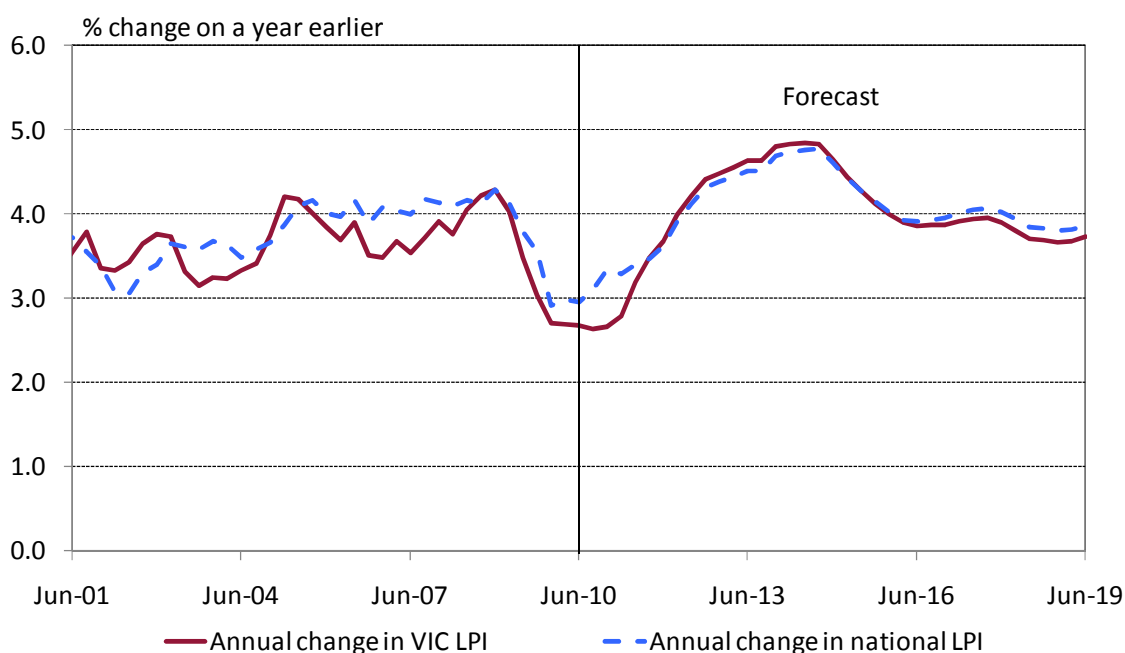
Source: ABS, Access Economics' macroeconomic model

4.3.2 Current LPI projections

The initial phase of the GFC saw most industry LPI measures decelerate at roughly similar rates – so State-by-State movements in the LPI were fairly consistent as well (as Chart 4.6 suggests).

However, the rebounds and upswings of some industries are not being enjoyed by others, so the current phase of LPI acceleration shows rather more variance at the State level. In the case of Victoria current weakness in manufacturing is the key factor holding down LPI growth in the State as a whole at present. That trend is likely to continue through the remainder of 2010 and into 2011 as well, particularly as Victoria has little or no offsetting influences from the mining sector's LPI growth.

Chart 4.6: Victoria general labour cost growth



Source: ABS, Access Economics' macroeconomic model

Unlike New South Wales, however, the current phase of relatively slow growth in Victoria's LPI is not expected to linger once manufacturing stabilises from mid-2011. Once those short term troubles have passed (a development admittedly partly dependent on developments in the \$A), the general strength of the Victorian economy will see little difference in overall LPI growth rates from the national average.

That recovery in labour cost growth corresponds with a projected recovery profile in State output – as Chart 4.4 shows that is slightly weak in the short term but otherwise generally solid. General labour cost growth is projected move back above 4% by early 2012 and remain there for some time – partly making up for current weakness.

Further ahead, Victoria's solid outlook should see its LPI remain growing in line with the national average.

4.4 Queensland

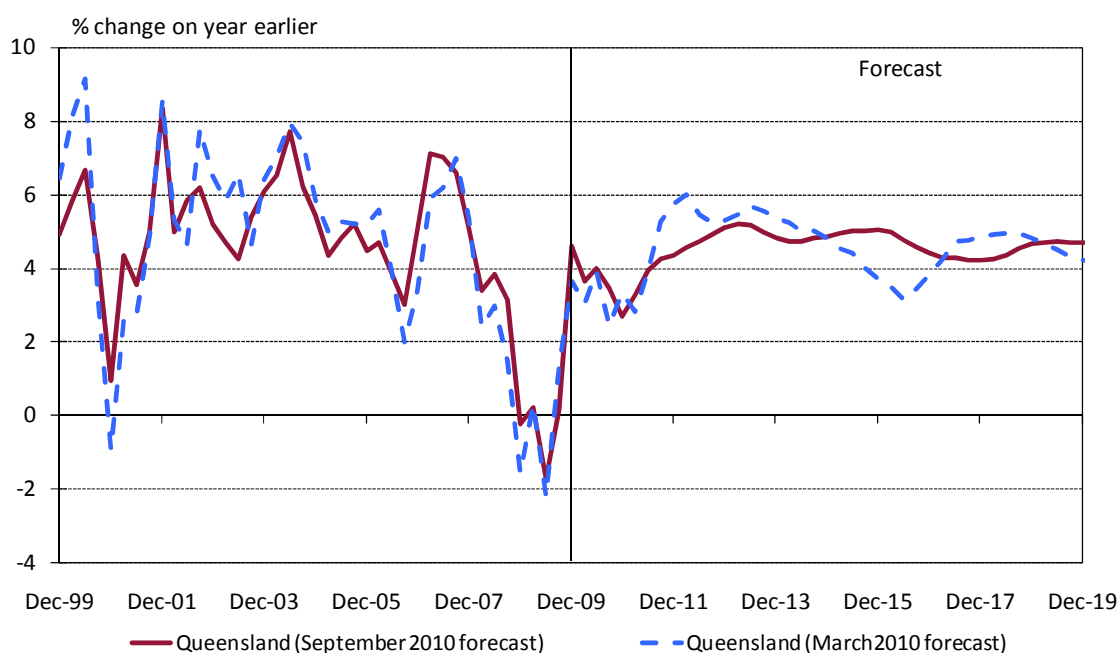
4.4.1 Changes to the outlook

Queensland's economy has been in the slow lane for a while – which given the State's long running mantle as the key driver of Australian economy growth has come as something of a jolt.

Part of the problem is that the drying up of credit seen in the GFC was more marked (and more significant) in Queensland than elsewhere.

While Access Economics doesn't expect it to last, for now the State is at the back of the pack – a position it is not used to. During the past decade the State went from a housing boom to a mining boom via seemingly effortless gear changes. However, the past year and a half saw bad news in activity levels on both those fronts. Land release failed to keep pace with population growth, and then the emergence of the global financial crisis led to bigger problems in financing expansion in Queensland than elsewhere. And that same crisis led to job losses in the coal rich Bowen Basin and the temporary shelving of some plans to further develop the State's resource riches.

Chart 4.7: Queensland output forecast change



Source: ABS, Access Economics' macroeconomic model

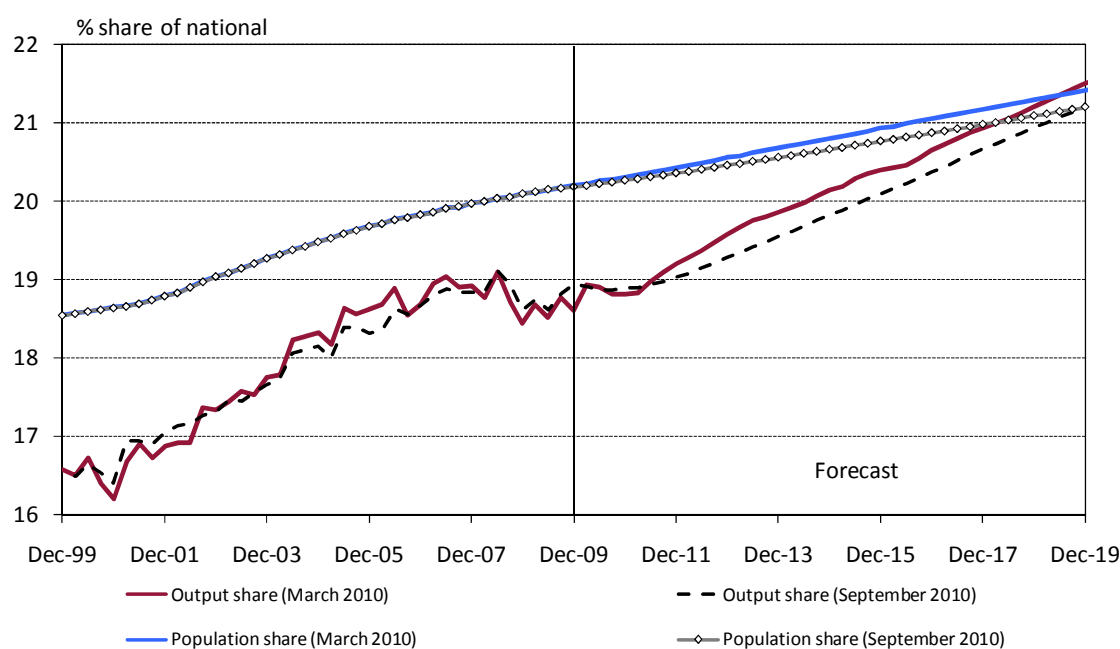
Retail sales are a good example. The stalling in retail over much of the past year was a marked turnaround for a State which has seen big spending gains across a long time. Although retail growth is weak Australia-wide, the gains in Queensland have been weaker still, partly as the pace of housing construction had dropped off so much. Indeed, approvals of high rise apartments are still well down on their average of the past decade, with a lack of housing finance remaining an important problem. At least there are some signs of recovery in the demand for private free standing homes.

Queensland’s current growth has two key supports – the high level of Federal and State public sector stimulus, and the remarkable surge in sales of coal to China. However, that public sector stimulus has already past its peak. Moreover, given that there is still bad news in retail, housing construction and commercial construction, there are risks around the State’s short term outlook.

There are good reasons to hope that recovery will be driven by a sharp upswing in housing construction and engineering work (with the latter eventually boosting exports). Yet there is a risk that the baton pass from growth driven by stimulus and China to that driven by housing and engineering work is fumbled. Population growth has already dropped back to rates last seen in 2006, with the big housing price increases of recent years starting to weigh more heavily on interstate migration now that housing is less affordable, Australians are moving to Queensland at a rather slower rate – showing up in that weakening population outlook seen in Chart 4.8.

That downward revision is also evident in the State’s output share forecast. Yet while the relative outlook isn’t as positive as the 16 March 2010 report, it is still strong in absolute terms.

Chart 4.8: Queensland output and population forecast change



Source: ABS, Access Economics’ macroeconomic model

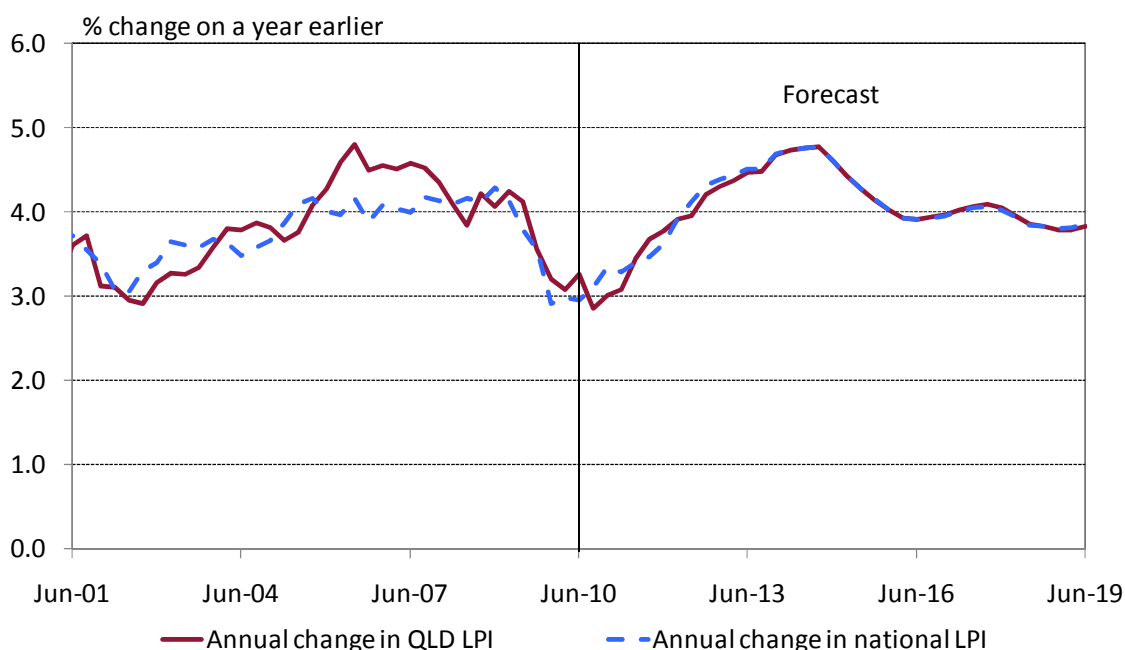
The outlook remains very good; Queensland is on the right side of a global industrial revolution that has seen demand for its coal surge, boosting export strength. Although it will take a year or so to reassert itself as a trend, Queensland is expected to once again carve out a growing share of Australia’s economy and population over the longer term

4.4.2 Current LPI projections

Although the expected path of output growth is slightly slower than previously forecast, the Queensland economy will still be an increasingly important part of the national economy in the longer term. As a result, labour cost growth in the State will tend to remain at or above the rate expected nationally.

However, not all sectors are strong at the moment. While mining wages are growing rapidly again, other sectors – notably the moribund accommodation sector – are recording wage growth rates at near historic lows. As Chart 4.9 suggests, overall growth will tend to accelerate from here, but the mix of results in the next few quarters may limit the growth in Queensland – strong labour cost growth in the relatively small mining sector may be offset by less impressive results in the rather larger tourism and retail sectors.

Chart 4.9: Queensland general labour cost growth



Source: ABS, Access Economics estimates, Access Economics labour cost model

The longer term outlook is for Queensland to return to consistent over average growth rates, even if those projections are not as rosy as they once were. In addition, a lot of the wage differential between Queensland and other States has been wound back in recent years (whereas average weekly earnings in Queensland in 2000 were more than 10% below those in New South Wales and 5% below the national rate, now they are equal or higher than these measures).

That will limit some of the upside potential for LPI growth (which is measured in index, rather than dollar, terms).

Overall – and as Chart 4.9 shows – the forecast profile of Queensland’s LPI growth is almost the same as the national rate – a mixed short term performance giving way to sustained growth in line with the national average. Indeed, part of the similarity in the State and national rates will be driven by the fact the Queensland will more and more be the leader on wages and other economic measures, rather than the follower.

4.5 South Australia

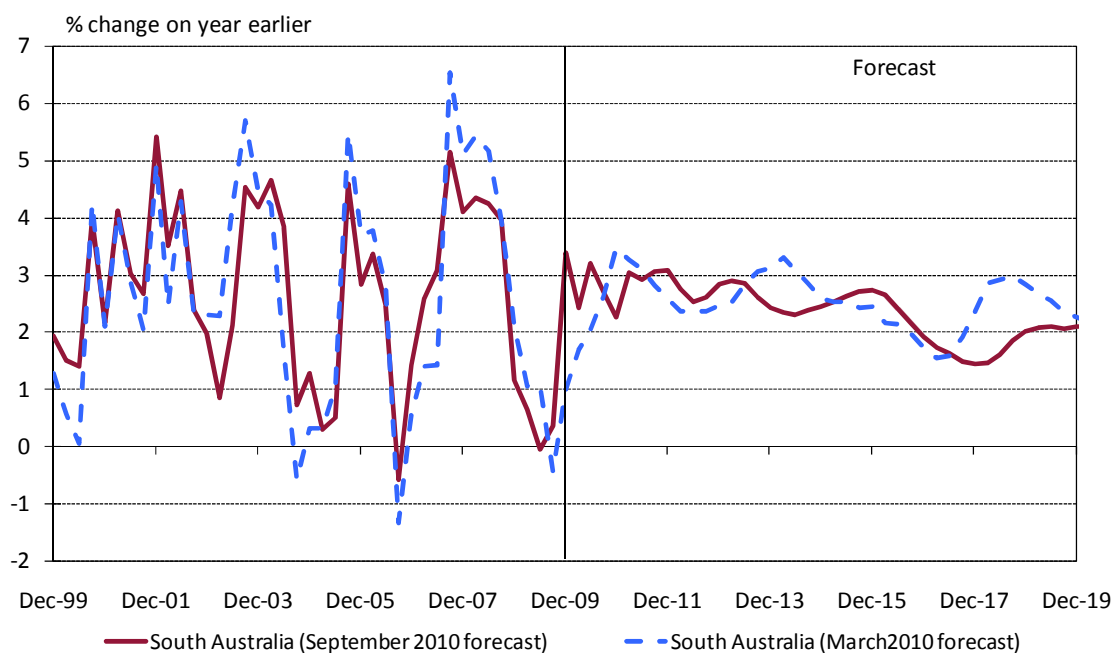
4.5.1 Changes to the outlook

South Australia has done very well in recent years, arresting much of the long decline which had dogged the State since it lost a bunch of jobs to eastern States in the 1990s. And there are many positives. National population growth may have peaked, but SA's is the best since 1975 – and it is still rising. Moreover, the State's resource potential is notable, pointing to the opportunity for SA to ride on the coattails of emerging economy strength in coming decades.

Yet although population growth is still rising, Access Economics doubts that it can keep doing so for much longer. This State may be one of the more notable victims of changes to migration policy that will cut student numbers in the next year or two. Those policy changes were much needed, but they will hit home hard in SA, a State which is more dependent than most on continuing population positives. And some of the gains of recent times are starting to look less good. Job growth is solid, but it has failed to keep pace with that seen nationally, leaving unemployment edging up. And although SA's resource potential is indeed notable, it remains 'potential' rather than actual. The expansion of Olympic Dam would make it the biggest mine in the world. Yet despite the exclusion of Olympic Dam from the new mining tax, there is still no certainty that expansion will go ahead. Even if it does, its benefits are likely to be seen rather further down the track, rather than in the next few years.

Although the State has rebounded more rapidly than we expected six months ago – as seen in Chart 4.10 – it is still more dependent on Federal and State public sector spending for that growth than any other jurisdiction. As the stimulus spend continues to be wound back over the next year or two, those bigger-than-average positives are likely to become bigger-than-average negatives for SA's growth.

Chart 4.10: SA output forecast change

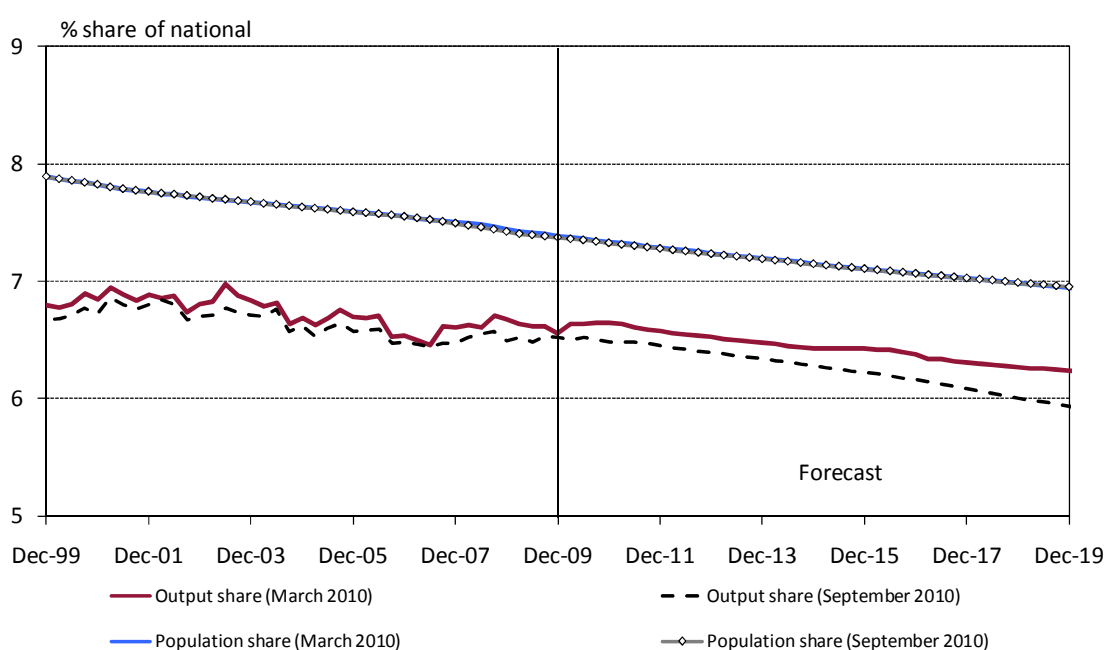


Source: ABS, Access Economics' macroeconomic model

That said, Access Economics has marginally decreased the relative share of growth going to South Australia across the forecast period – Chart 4.11 shows a slower than previously expected decline in the State’s share of national output across the forecast period – implying that while growth will still tend to lag behind the national average, and that relatively slow population growth will be a key reason for that, the expected gap is slightly more than that seen in the 16 March 2010 report.

This is largely driven by upward revisions to our expectations for the \$A (hurting South Australia’s manufacturing and farming sectors), as well as ABS revisions to household consumption expenditures by State – which lowered historical output levels in South Australia and the relative importance of this component of output to future growth.

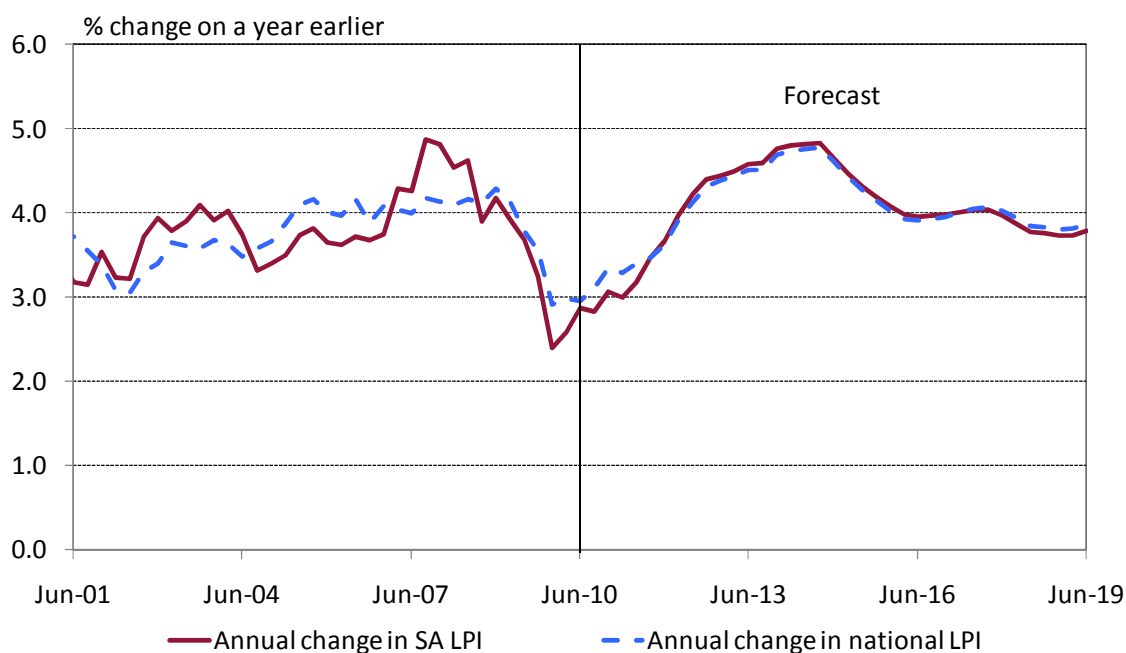
Chart 4.11: South Australian output and population forecast change



Source: ABS, Access Economics’ macroeconomic model

4.5.2 Current LPI projections

South Australia’s LPI growth has typically been more closely linked to that seen in manufacturing than other States – not only is the sector relatively more important to the South Australian economy, but it is also a sector where wage growth has been particularly volatile.

Chart 4.12: South Australia general labour cost growth

Source: ABS, Access Economics' macroeconomic model

While that is a downside at present, the expected relatively strong growth in manufacturing wages in the latter years of the forecast (with the sector force to 'catch up' to the growth of competitor sectors) will lift the growth rate in South Australia back close to the national average.

Absent this effect, the local rate of LPI growth might be expected to lag the national growth rate slightly more than it does in Chart 4.12. In the short term the slow growth currently seen in the manufacturing sector will keep the State's LPI growth below the national equivalent.

As is true nationally, labour cost growth in South Australia is projected accelerate over the next four years – with the peak growth higher (and later) than previously forecast, but short term growth slightly weaker.

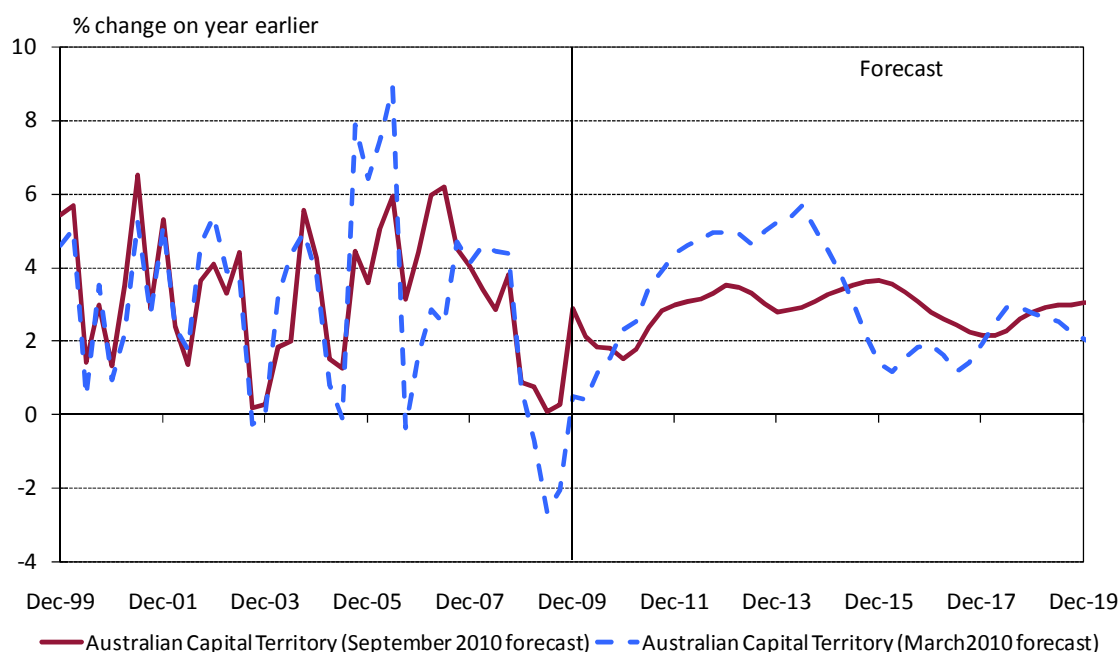
4.6 Australian Capital Territory

4.6.1 Changes to the outlook

A weakening ACT construction sector was the key local negative in the past two years, but that was more than offset by the impact of Federal stimulus on the public service. The latter increased public service numbers and, just as importantly, there was solid public sector wage growth as well. As it usually does in downturns that therefore meant that the ACT's public sector played a handy stabilising role for Canberra's economy.

How fast will pressure be placed on the public sector now the election has been run and (effectively) won? And how well placed is the ACT's construction sector to pick up any slack coming from any Federal cutbacks in coming years?

Chart 4.13: ACT output forecast change



Source: ABS, Access Economics' macroeconomic model

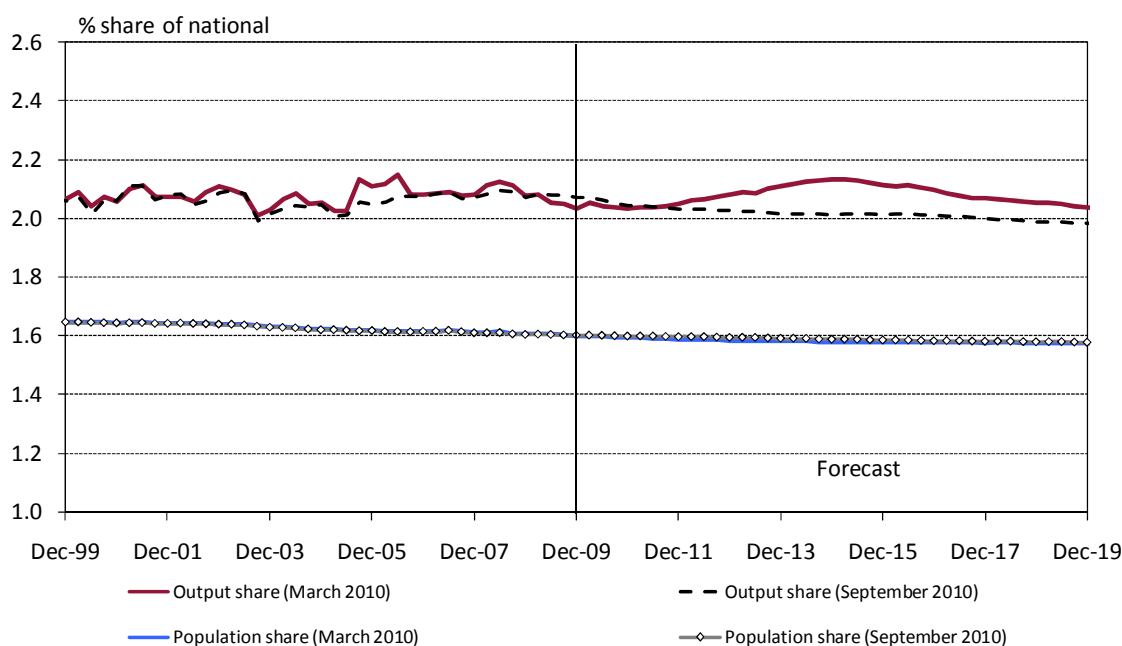
The good news is that the ACT administration is on the job with the pace of land release for housing, and that will help the construction outlook. Population growth is still holding its own – and that is better than can be said for Australia as a whole – while recent data points to good job gains. That combination of factors has helped building approvals lift of late.

Moreover, rental accommodation vacancies are very low, providing another pointer to gains in housing activity. However, because the historical growth in the ACT has been revised up since the 16 March 2010 report (see Chart 4.13), some of the expected growth in the medium term has been drawn forward, while some more of that medium term strength is now likely to fall victim to lower Federal Government expenditure in the medium term.

The ACT's recovery is projected to be modest compared with those seen elsewhere. There may be a debate about whether Federal cost restraint begins before or after the next election. Yet there isn't a debate about the eventual need for restraint in the nation's fiscal finances. Hence it is hard to expect anything other than that – sometime in the first half of this decade – the pace of growth in Canberra will be affected by that period of restraint.

That explains Access Economics' caution on the medium term outlook for the ACT population seen in Chart 4.14, which has been revised lower as a share of the national population growth since the report in September.

Chart 4.14: Australian Capital Territory output and population forecast change



Source: ABS, Access Economics' macroeconomic model

4.6.2 Current LPI projections

The ACT's economy benefited from strong growth in Federal Government spending in recent years. In particular, the past three years saw a notable increase in office construction, adding some 30% to the available office space in Canberra. Federal stimulus money was also vital in maintaining employment levels.

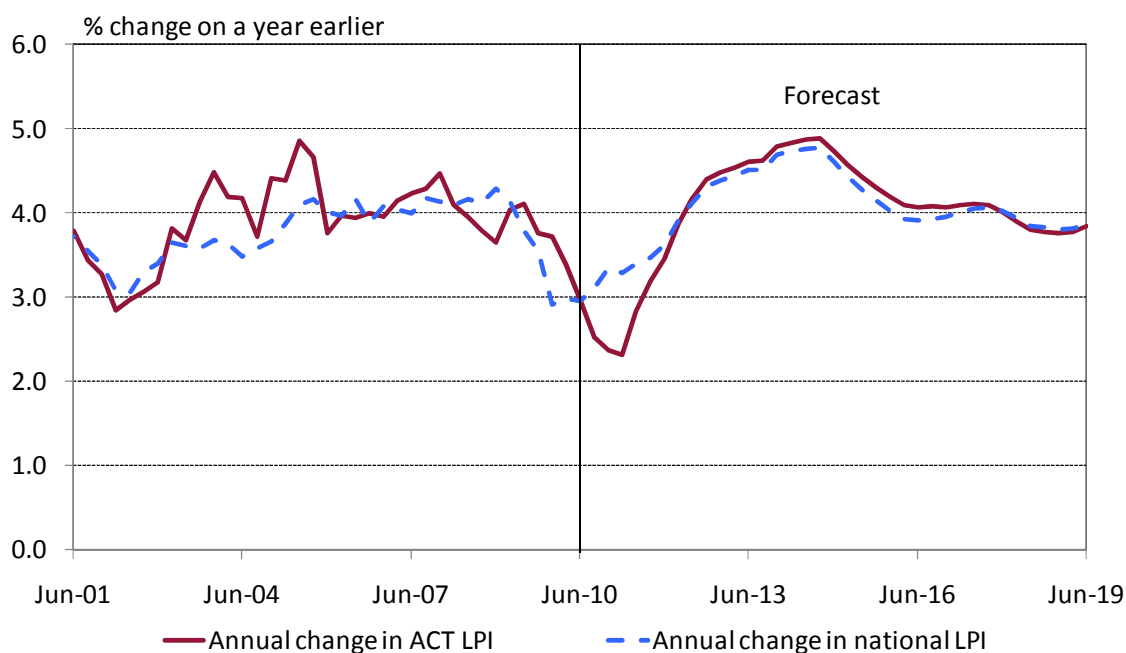
As is typical in the public sector, wage movements tend to respond slightly slower to broader economic developments. That is apparent in the recent trends and current forecasts of the Australian Capital Territory's LPI shown in Chart 4.15. While the national rate slipped back a gear almost immediately in late 2008 and has now begun to recover, the ACT saw a slower deceleration which is forecast to continue through to the middle of 2011.

That fall is predicated on some belt tightening in public sector expenditure – which we expect to show up more in terms of medium term wage restraint (which, for the public sector LPI means growth at national rates, rather than slightly above) rather than job cuts.

With the retail, accommodation, private sector administration and communication sector wages all growing less rapidly than the overall average and likely to lag into the upswing, the short term outlook for the ACT LPI is weak both in relative and absolute terms.

Chart 4.15 shows that Access Economics expects general labour cost growth in the ACT to fall below the national average in the short term, but to be back in line with the national average – and even slightly ahead of it – but late 2012.

Labour cost growth may fall to as low as 2.5% in the ACT during 2010-11 before a sustained rebound begins.

Chart 4.15: Australian Capital Territory general labour cost growth


Source: ABS, Access Economics' macroeconomic model

4.7 General labour cost growth across States

Table 4.1 provides a summary of calendar year State LPI forecasts to 2018 in real and nominal terms. Results to 2009 are actual results, 2010 results are a combination of actual results and forecasts and 2001 and beyond are forecasts only.

Table 4.1: State LPI forecasts
Calendar year changes in nominal State LPI forecasts

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
New South Wales	3.5	3.0	3.1	3.9	4.3	4.5	4.1	3.9	4.1	4.0
Victoria	3.3	2.8	3.4	4.3	4.7	4.8	4.2	3.9	3.9	3.7
Queensland	3.8	3.2	3.6	4.1	4.5	4.7	4.2	3.9	4.1	3.9
South Australia	3.3	2.9	3.4	4.2	4.6	4.8	4.3	4.0	4.0	3.8
Australian Capital Territory	3.9	2.9	3.0	4.2	4.6	4.8	4.4	4.1	4.1	3.8

Calendar year changes in real State LPI forecasts

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
New South Wales	1.6	0.3	0.1	1.2	2.0	2.6	1.8	1.2	1.4	1.4
Victoria	1.8	-0.4	0.8	2.0	2.5	3.2	2.1	1.3	1.2	1.1
Queensland	1.3	0.6	0.3	1.1	2.1	2.7	1.8	1.2	1.4	1.3
South Australia	1.4	0.5	0.1	1.3	2.2	2.7	1.8	1.3	1.4	1.3
Australian Capital Territory	1.7	0.3	-0.1	1.4	2.3	2.9	2.0	1.4	1.4	1.3

Source: Access Economics macroeconomic model

5 The utilities sector

5.1 Utilities sector projections

5.1.1 Changes to the outlook

As emerging economies have been stronger than projected at the time of the 16 March 2010 update report, there are some positive demand impacts for the utilities sector given the importance of both mining and construction as its customers.

That said, there are some negatives here too, including relative weakness in manufacturing, as well as the shift from 'big Australia' to 'sustainable Australia' (a development which, other things being equal, will reduce net inward migration by around 100,000 people cumulatively over the next four years) and the continuing uncertainty over carbon pricing and associated regulation.

In other words, the good news from China and India is at least partly offset by bad news elsewhere for the utilities sector.

However, although demand for the utilities sector is unlikely to be much ahead of the expectations of six months ago (at the time that the 16 March 2010 report was prepared for the AER), the sector will now have to compete for its workforce in an environment in which the earlier (and larger) return to resource boom conditions raises the bar of competitor wages in competitor sectors.

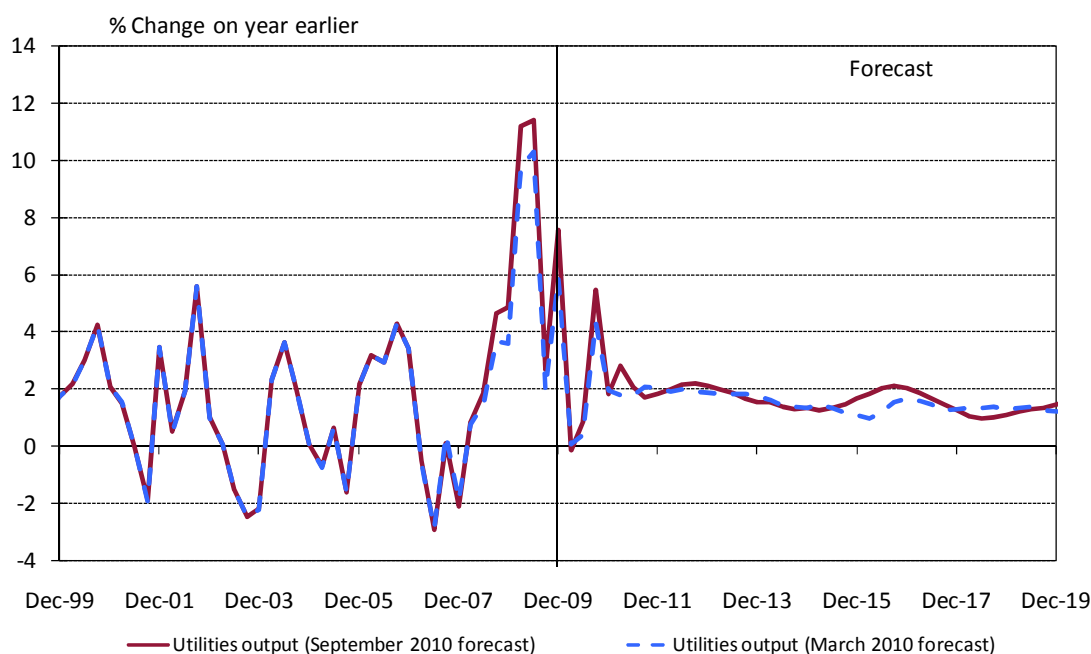
Not surprisingly, therefore, wage relativities in the utilities sector are also lifting relative to the national LPI compared with the 16 March 2010 update report.

The continuing lack of certainty in the utilities sector has led to a long running lack of investment in new plants. The good news is that more recent State Government investment in new capacity has lifted constraints on the output of the utilities sector of late. The subsidies given to renewable and alternative energy have also boosted its output.

However, the States are being careful in their spending and there is no national framework for carbon charging. Nor does one look likely in the short term. That means the earlier willingness to invest in renewable and alternative energy is fading (for example, independent wind power operations are finding it hard to lock in long term supply contracts), while the increasingly vital need for base load capacity is developing into a considerable concern.

That latter concern is of course particularly evident in electricity. How can industry invest billions up front without knowing the rules of the game thereafter?

Chart 5.1 shows that there have been only been minor revisions to the utilities output forecast since the 16 March 2010 report. Access Economics still sees a short term dip from the recent very strong growth. A recovery should emerge soon thereafter, with growth close to 2% expected over much of the forecast period.

Chart 5.1: Utilities output forecast change

Source: ABS, Access Economics' macroeconomic model

5.1.2 Current LPI projections

After easing through the course of 2009, growth in the utilities sector LPI jumped sharply in the first few months of 2010 – rising by 1.7% in the March quarter, the largest single quarterly increase since March 2006.

While quarterly growth in the latest data released by the ABS (for the June quarter 2010) was far more moderate (at just 0.5%), there is still evidence that wage pressures in the sector have increased relatively rapidly.

Yet, as Chart 5.2 shows, the ABS estimates for utilities LPI growth have often moved around in this sort of range, and our short term outlook remains is for utilities sector wage growth to sit at around 4% over the next two years. This is an upward revision (previously growth began to ease back in 2012) and is followed by a sustained period of relative strong growth at between 4½% and 5% per annum until around 2015, when growth is expected to fall back into line with the national average.

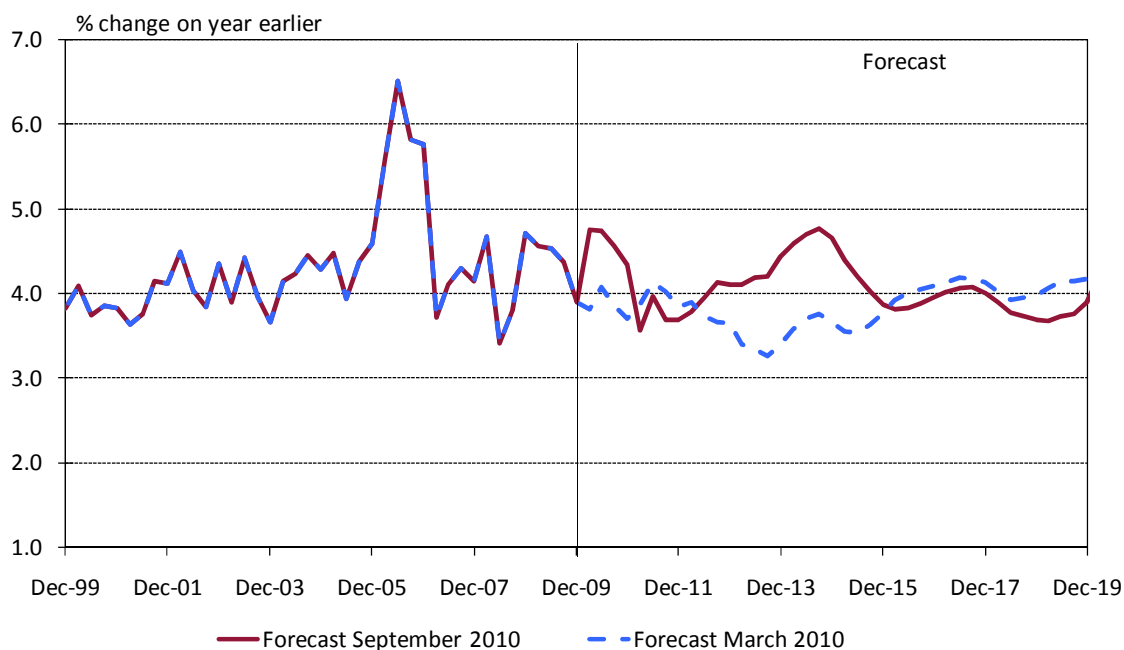
This represents a further upgrading of the medium term wage growth outlook for the utilities sector beyond that seen in the 16 March 2010 update, but one that is driven by the higher expected growth in wages generally and in competitor wages specifically (particularly mining) rather than by a significant improvement in the outlook for the utilities sector.

The key driver here is that the medium term is now projected to see stronger gains in mining investment, construction and mining output than expected at the time of the update.

Some of the factors that affected the longer term utilities sector wage outlook in the last update – a combination of declines in relative sectoral productivity and the eventually easing of the 'competitor' wage pressures (as growth in the mining sector LPI begins to move into line

with the national average) – should ensure that utilities sector LPI growth moves more in line with the overall national LPI rate in the longer run.

Chart 5.2: Changes in the forecast for utilities LPI growth



Source: ABS, Access Economics' labour cost model

Utilities wages in both the short and longer term will be pulled in different directions by different factors. In general, slightly slower rates of productivity growth constrain wages. Productivity levels in the utilities sector are much higher than most industries, but there are significant differences across the various sub sectors of the utilities sector – electricity output is particularly high (more than twice the level of output per employee seen in the gas sector, itself currently well above that in the water and sewerage sector). As a result, compositional effects within the industry can drive overall wage growth in differing directions.

Depending on the outcome of the debate over carbon pricing, and the eventual path of output from alternative energy sectors, this trend could be greater than allowed for here, which would place further downward pressure on sectoral wages.

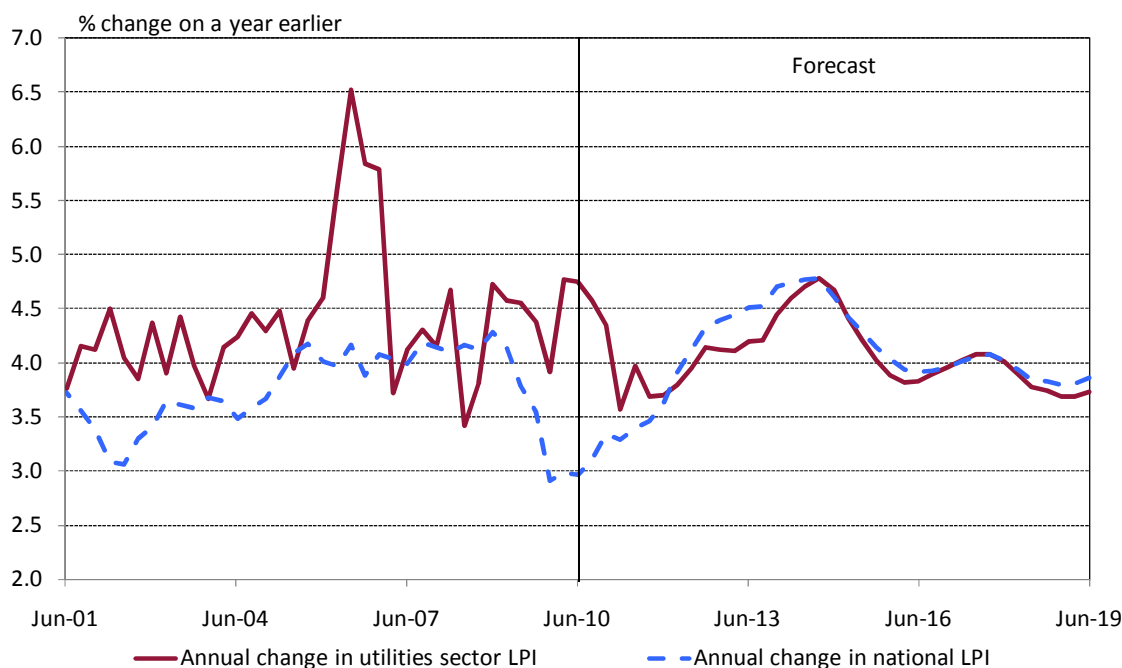
However, there is a limit to that effect. In the short term the momentum of growth in the sector is likely to place moderate but important pressure on wages due to skill shortages. Even the fear of further shortages can be sufficient to move wages higher – particularly as the effects of skills demand on wages during the pre-GFC period are still fresh in the minds of employers.

The impact of wages in competing sectors is also a significant driver of movements in the utilities sector – and now looms as an even bigger influence than expected at the time of the 16 March 2010 update.

At present the mining sector will be placing some upward pressure on utilities wages, but the manufacturing sector will be a constraining factor. Over the medium term we would judge the impacts from the manufacturing sector to be slightly more significant – which largely explains why utilities sector wages lag the national average in the medium term.

However, and as noted above, the medium term forecasts (particularly 2012-13 and 2013-14) now look stronger than they did six months ago, boosted by the strength in output (and hence in wage competition) now expected in mining and construction at that time.

Chart 5.3: Forecast wage growth nationally and in the utilities sector



Source: ABS, Access Economics estimates, Access Economics labour cost model

5.1.3 Comparison with EBA results

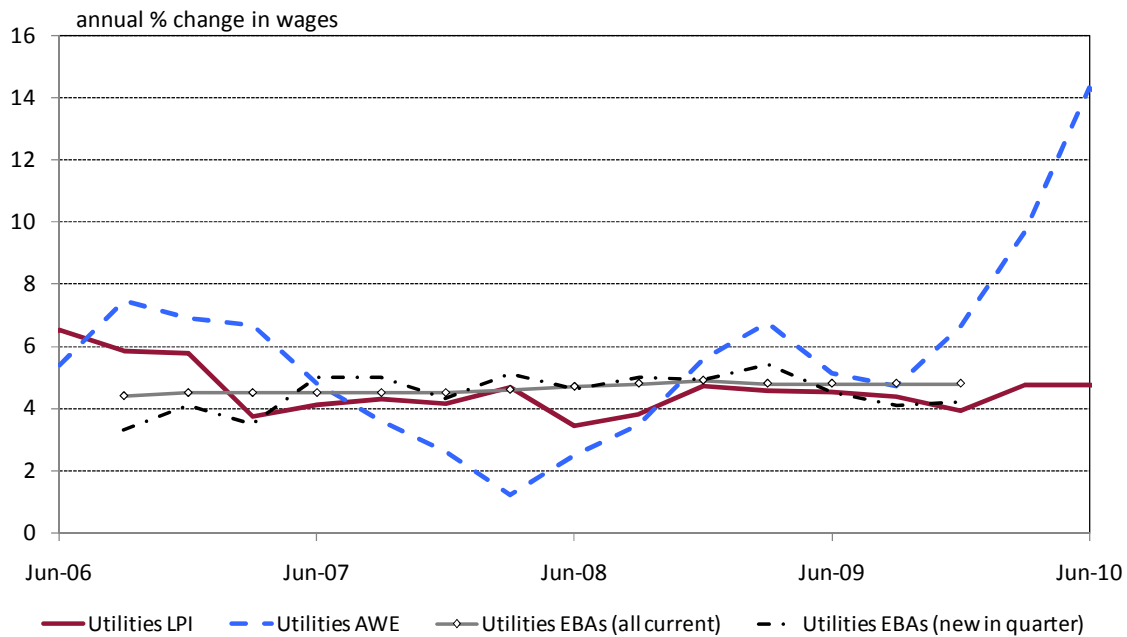
Chart 5.4 compares growth in the utilities sector LPI with a number of other wage growth measurements that are produced on a regular basis.

The first measure shown is the average weekly earnings result for the national utilities sector. As the chart amply illustrates, the growth in this wage series is particularly volatile, and, as noted elsewhere in this update, this volatility limits its use in forecasting.

The remaining two series come from the *Trends in Federal Enterprise Bargaining* publication produced by the Department of Education, Employment and Workplace Relations and cover growth in wages under enterprise bargaining agreements. Two series are shown:

- the first shows annual growth in wages under all agreements current during the quarter. We would expect movements in this measure to be broadly reflective of trends in the broader utilities sector – or in other words, when this series accelerates we would expect a similar acceleration in growth in the sectoral LPI;
- the second series shows annual growth that will occur under any agreements commencing in the quarter shown. This series is more indicative of future trends in the first EBA series – if there sustained decline in wage growth that will occur under new agreements we would expect the actual rates received to gradually fall in line with the rate as older (and more generous) agreements end.

Chart 5.4: Measures of utilities sector wage growth



Source: ABS, Department of Education, Employment and Workplace Relations

As the EBA data is only available to the end of 2009, it does not cover the period of measured acceleration in the utilities sector LPI. The latter half of 2009 did suggest a moderation in utilities sector wages pressures was underway – with new agreements seeing implied wage rises of just over 4%, rather than just under 5% as seen in all operating agreements and a peak of close to 5½% in wage rises in new agreements that was recorded early in 2009.

The current rate of growth (4.8% per annum for all agreements operating at the end of December 2009) will have a strong impact on growth over the medium term – only around 9% of agreements are re-negotiated in any given quarter, meaning a typical agreement lasts around three years.

6 Competitor industry economic outlooks

Although Australia's recovery from the recent slowdown is continuing and is expected to strengthen, the challenges to our outlook continue to rise. The global question marks are best known, with the rich world still stuck in a sub-par recovery, and little short term improvement on the horizon.

Yet it is not the global challenges to Australia's recovery which currently loom largest. That is because China – with all its faults and risks – continues to grow rapidly, and hence continues to underpin magnificent industrial commodity prices.

Rather, Access Economics' short term concerns revolve around the domestic drivers of growth. In a nutshell, consumers remain cautious, the housing construction recovery continues to be delayed, and so too does the recovery in the pace of spending by businesses. At the same time government stimulus is already winding down, even if delays in delivery mean that stimulus will keep lingering longer than originally planned.

Those factors are worth teasing out to assess whether they will leave Australia's recovery running on empty – a problem currently faced by many of our peers. First, and despite a surge of car-buying of late, consumer spending in Australia is limping into the recovery. Much of that weakness was expected given that, as we often pointed out, the stimulus (rate cuts and the cash splash) were clearly of particular benefit to retail, meaning that 2010 was always going to suffer from stimulus withdrawal. However, survey evidence and retailer contacts suggest consumer caution reflects not merely stimulus withdrawal, but also a deliberate attempt by families to boost their saving rates – a trend also evident among other rich nations.

Second, although Australia has too few homes for our population, the resultant boost to housing activity from demographic drivers has been undercut by a round of interest rate increases, by the withdrawal of top up government grants to first home owners, and by the chronic drag from inadequate land release and the level and structure of developer charges. That has left leading indicators looking worse rather than better, delaying and limiting what should have been a fillip to growth prospects from housing construction.

Third, the news is good on the expected recovery in spending by businesses in Australia, with the latter expected to once again scale impressive highs over the next few years. However, the coming recovery is lopsided (highly dependent on a handful of mega-projects, raising the risk that delays in specific projects could prove big enough to hurt Australia's recovery). In addition, the uncertainty generated by minority government will also weigh on the recovery in business investment. Access Economics has pushed back the expected timing of what will still be a very strong upswing.

Fourth, school halls and public housing are being built slower than hoped – meaning stimulus spending is lingering for longer. Even so, stimulus effects have already peaked, and will start to be a drag on growth.

Yet we still see Australia's economic recovery continuing to strengthen in the next year or so. Even allowing for all those negatives noted above, private demand is lifting, showing a willingness to take the baton of growth from public stimulus. That will keep Australia near the front of the pack among the rich nations. Globally, China remains the key for Australia's outlook. Although Access Economics continues to see that as being good news for us in the

short term, it needs to be stressed that Australia’s vulnerability to bad news out of China is already rather larger than our vulnerability to the United States ever was.

Turning to the sectoral outlook, whereas the outlook for the **utilities** sector may be improving, but the key strength in the Australian economy is **mining**. There, growth rates have not only rebounded, but are heading back towards the rates seen in the last boom.

The outlook for **construction** has also strengthened, although recent months have seen the outlook consolidated rather than continue to improve substantially.

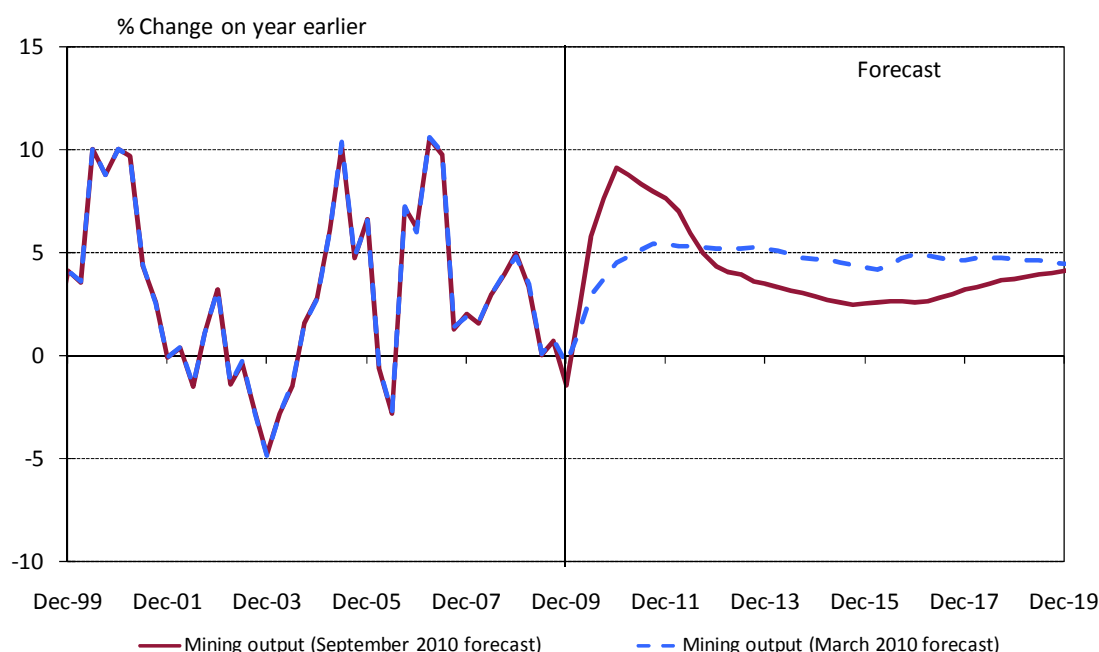
Administration services – particularly employment placement services and travel agents – have benefitted from increased demand for workers (and the increasing confidence of workers to change jobs) and the currency-driven shift towards international travel – less affected so far by the boom in internet bookings. However, currency movements that boost the ability to travel offshore do not help those trying to sell our products or compete with imports, and that has dimmed the outlook for manufacturing somewhat. Not that the sector is heading back towards the bleak outlook of 2008, but that the trends on the sector are not a one-way street, with positives and negatives acting on the sector’s prospects.

6.1 Mining sector projections

6.1.1 Changes to the outlook

Mining investment has surged since 2005 and it held relatively firm through the global downturn.

Chart 6.1: Mining output forecast change



Source: ABS, Access Economics’ macroeconomic model

Moreover, the outlook is very strong. Demand from emerging Asia is excellent, and prices for key commodities such as coal and iron ore remain elevated. One can argue the short term strength of Chinese industrial commodity demand, and Access Economics certainly has its

doubts on that score. Yet it cannot be argued that the longer term strength of developing country demand for industrial commodities is anything but strong.

Access Economics sees the volume of Australian exports rising by 50% in the five years to 2013-14, with mineral and energy exports accounting for more than half of that lift. This rise in exports underpins the rebound in growth (and the sharp recent improvement in the mining sector outlook since our report of 16 March 2010 for the AER) seen in Chart 6.1.

Growth is expected to push towards 10% per annum in the short term, before settling back at solid rates of 4% per annum in the longer term.

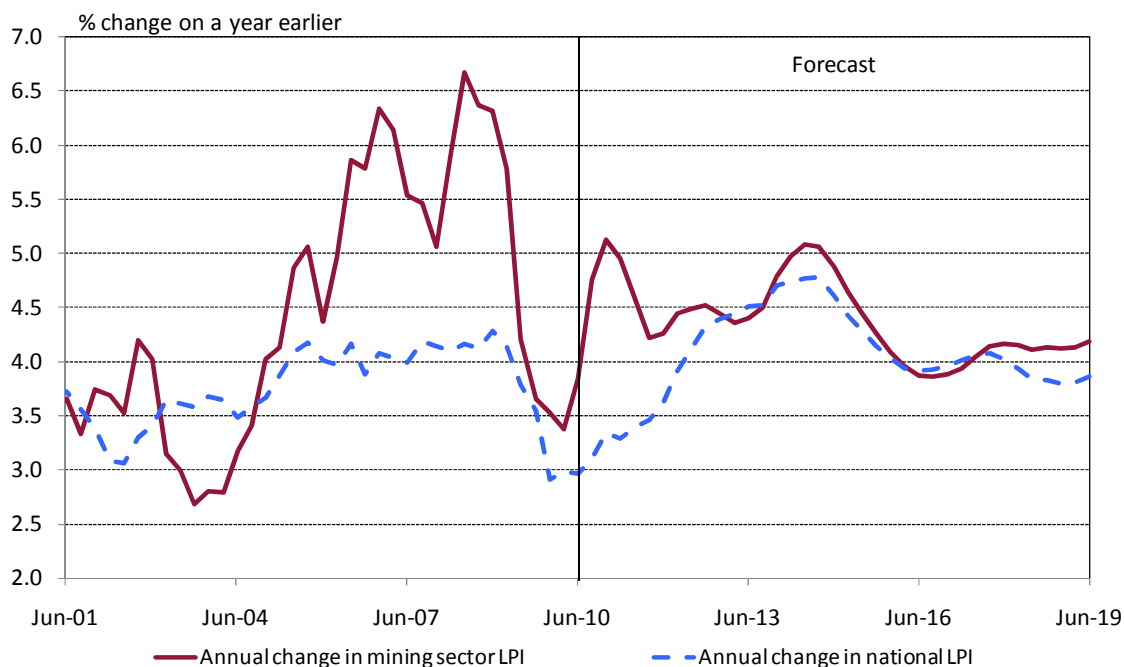
6.1.2 Current LPI projections

The mining sector is one of the key competitors for the utilities sector.

That is because some workers in the utilities sector are able to transfer their skills quite readily across these two sectors, so that when wages in one sector move higher relative to the other, then employees are able to move – or able to at least point to the potential for making that move when they conduct wage negotiations.

This was the case during the commodity price boom, which generated strong growth in both profits and employment (though not output) in the mining sector. The extent of the skill shortage saw mining wages grow at annual rates of around 6% for several years (see Chart 6.2).

Chart 6.2: Mining LPI growth forecast



Source: ABS, Access Economics estimates, Access Economics labour cost model

The boom in mining has returned earlier and more sharply than forecast in the 16 March 2010 report. Such has been the strength of China and other emerging economies relative to the global backdrop more generally that there has been a notable burst of good news – in relative terms – for the demand side of the mining sector.

That is already showing up in wage outcomes for that sector (despite the fact that it will take some time for miners to fully adjust to the new circumstances they face).

That said, miners have already lifted employment notably in recent months, and there has been a wage impact in the sector as well, as employers 'stock-up' on employees in anticipation of the strength of demand they can see ahead, and in light of the supply expansions they already have in train.

As a result, the mining sector LPI is back around the 4% growth rate already, and may average 4½% growth (measured over a 12-month period) consistently from here. As Chart 6.2 shows, mining LPI growth is likely to already be at the rates Access Economics projects general wages to reach once the economy is back a full speed in the medium term. While growth in the later years is at national average rates, that implies that the mining sector will maintain the gains it has made in relative terms (a feat which is typically difficult to maintain over the longer term unless it is backed up by a matching relative gain in productivity).

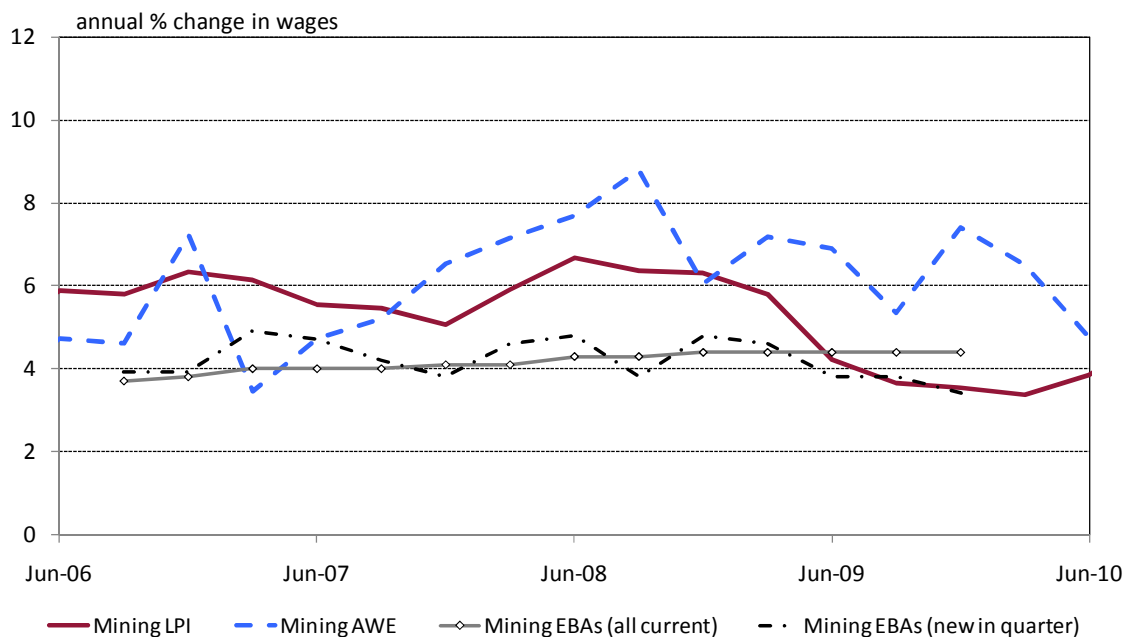
It should also be noted that, in dollar terms, a 4-5% rise in mining wages is rather larger than a 4-5% increase in general wage rates.

6.1.3 Comparison with EBA results

There has been a strong correlation between the movements in the LPI and the trends in new EBAs in the mining sector (see Chart 6.3), reflecting the widespread use of EBAs in the sector (around 23% of workers in the industry were covered by EBAs at the end of 2009).

There has also been a far closer relationship between the LPI and AWE series in this sector – suggesting slightly less compositional shifts such as changing average work hours.

Chart 6.3: Measures of mining sector wage growth



Source: ABS, Department of Education, Employment and Workplace Relations

As the figures here for EBAs are based on the period before the mining boom began again in earnest there would be a reasonably strong expectation of a fast rebound in EBA growth. Countering that is the timing of recent negotiations with a relatively large share of employees in the sector having renegotiated EBAs at the lower rates seen in 2009.

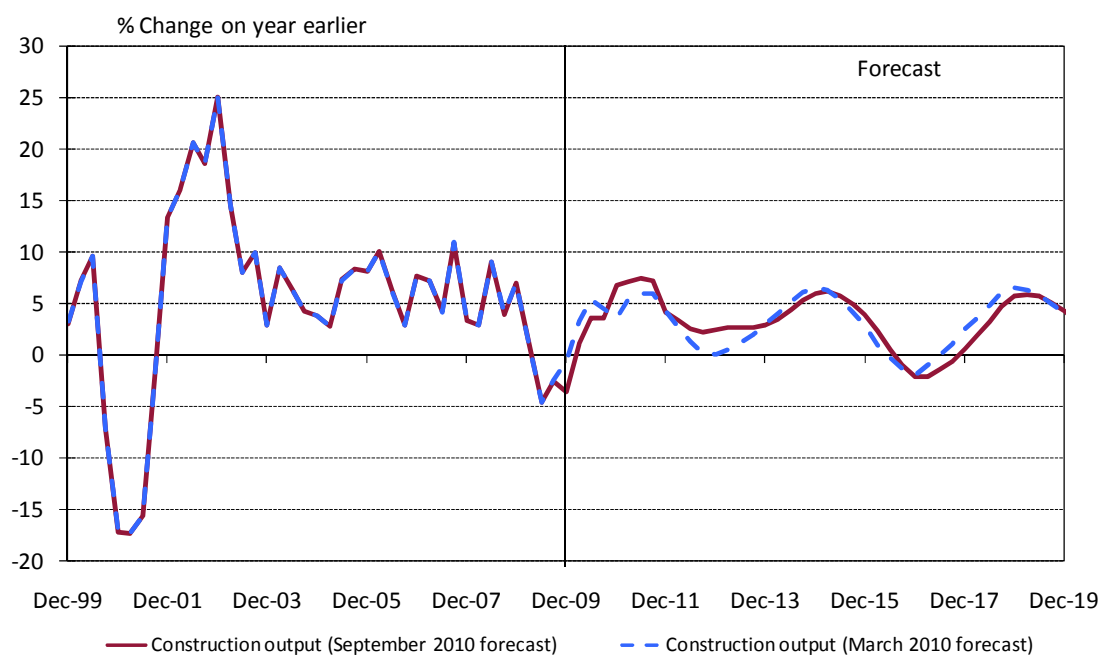
6.2 Construction sector projections

6.2.1 Changes to the outlook

After seeing output levels fall for the first time since the post-GST, post-Olympics period, output growth in the construction sector has returned to the black in the early part of 2010.

Indeed while output levels did decline, as Chart 6.4 shows, those falls were minor compared with some of the slumps in construction sectors in other parts of the developed world. Aided by the stimulus spend on schools and public housing, the recent contraction looks modest compared to that fall, as it does compared with the recession of the early 1990s.

Chart 6.4: Construction output forecast change



Source: ABS, Access Economics' macroeconomic model

That is not to say that commercial construction in Australia is not beset by difficulties. The onset of the global financial crisis saw many building sites become suddenly silent. Most have since seen a return to work, but tight credit conditions remain a notable constraint on the pace of commercial construction in Australia, and an overzealous attitude by APRA, Australia's financial regulator, isn't helping much either.

The link between mining and construction is particularly strong at present – and is enough to outweigh the weakness in some parts of construction. A look at the pipeline of projected mining developments shows that a big spend is coming.

Engineering construction in particular is gearing up in response to a number of major projects that may soon be underway. The evidence from both ABARE and those surveyed by the ABS as

well as Access Economics' *Investment Monitor* of large development projects is that a big boom in capital expenditure is soon set to start.

And while it is mining demand which continues to drive much of that lift, there is a lot of work for the construction sector to do before the exports can begin to flow. Work underway is impressive, led by a bunch of iron ore projects. BHP Billiton's \$6.7 billion Rapid Growth Project 5 is underway in WA and due to be completed in the second half of 2011, while Citic Pacific Mining \$5.2 billion Sino Iron Project is also in WA. Other projects include Hamersley Iron's \$1.6 billion Brockman Syncline development in the Pilbara and the \$1.5 billion Pardoo project under construction east of Port Hedland. Meanwhile, the \$1.7 billion third stage of Rio Tinto's Argyle diamond mine project is still underway near Kununurra, while Xstrata's \$1.1 billion on the Anvill Hill coal mine project near Muswellbrook is underway in NSW.

Possible projects include BHP Billiton's massive \$9.2 billion Olympic Dam uranium and copper mine expansion, Aquila Resources' \$4.8 billion West Pilbara iron ore project, the proposed sixth stage of BHP Billiton's Rapid Growth project, and the \$2 billion second stage of the Jack Hills iron ore project proposed by Murchison Metals.

As with the mining industry, there has also been a direct demand boost to the short term prospects for the construction sector relative to those seen at the time of the 16 March 2010 update report.

Unlike mining, this has not yet translated into much by way of employment or wage impacts – partly reflecting the different employment relationships (especially the role of subcontractors) in the construction sector.

6.2.2 Current LPI projections

As with the mining sector, the long run of economic growth seen in Australia was good news for the wages of workers in the construction industry. The broad surge in construction activity, including demand for new houses, home renovations and office construction saw the demand for construction workers rise, and hence labour costs rose – at times sharply (see Chart 6.5).

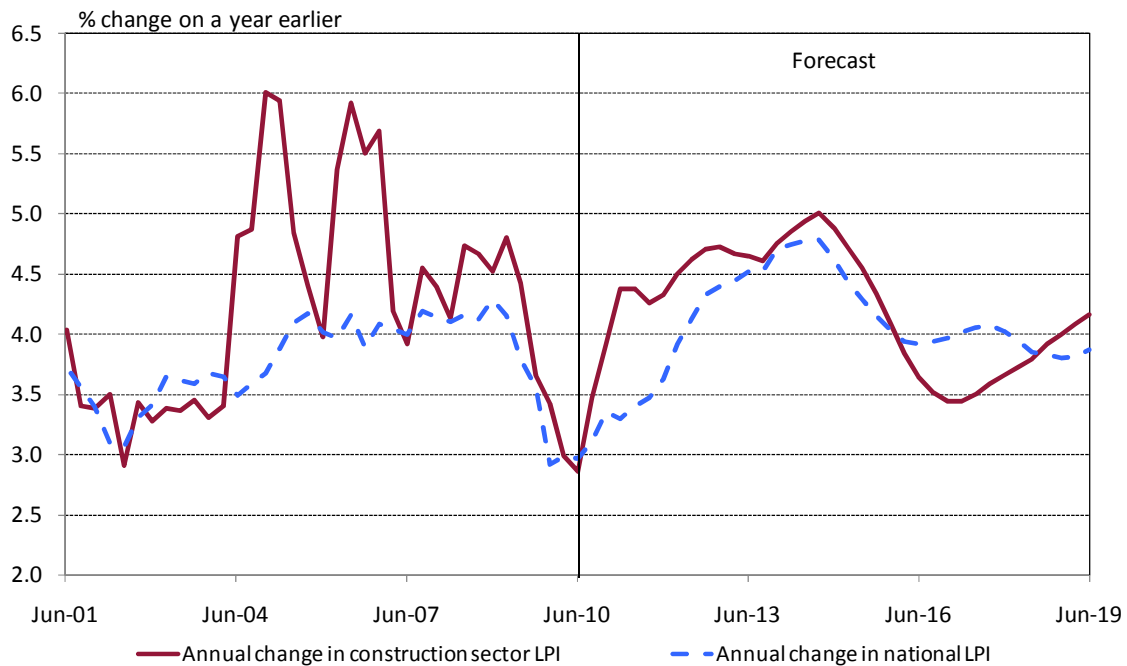
While the surges subsided with the GFC, growth remained above the national average, and we expect the upswing in wage performance to be led by the construction just as much as by mining.

The forecasts in this update report see greater relative strength in both mining and construction wages compared with the national LPI level in the next few years.

However, it is worth stressing that this relative boost to wages ultimately proves temporary – it brings forward the timing of demand in these two sectors, but has less of an impact on the relative size of those sectors by the end of the ten year forecast horizon we consider in this report.

In part that reflects the role of the supply side, as more workers leave occupations in other sectors, arrive from overseas, put off study, stay longer in the workforce, or return to the workforce.

Chart 6.5: Construction LPI growth forecast

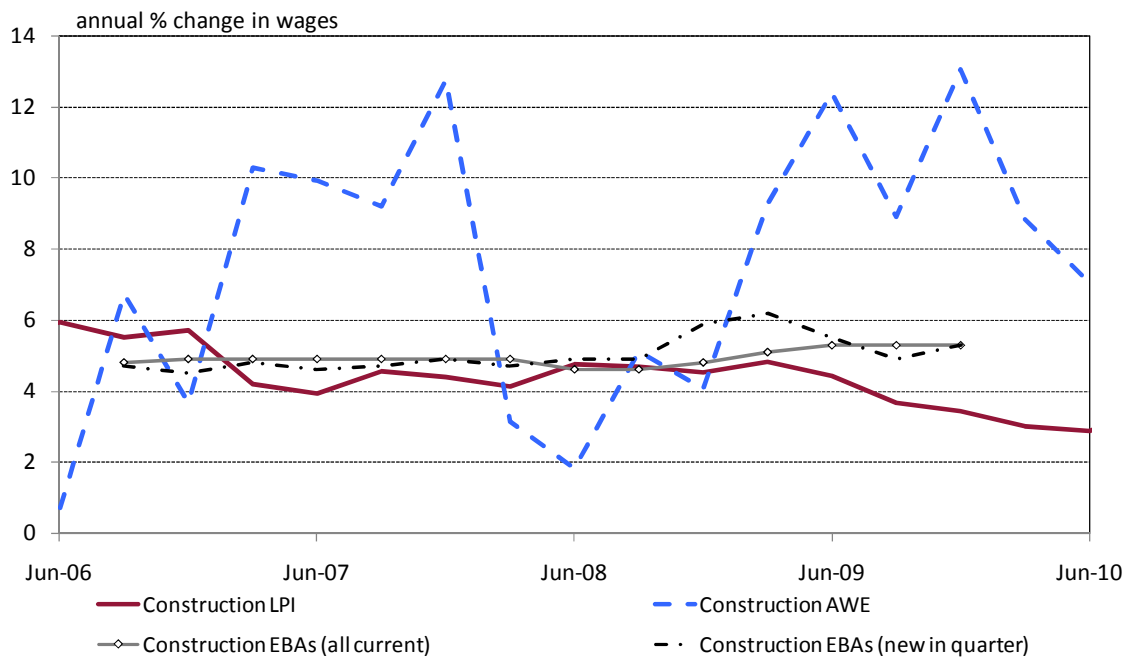


Source: ABS, Access Economics estimates, Access Economics labour cost model

Or, in other words, the earlier-than-expected demand boost to mining and construction provides a long lived impact on wage relativities, but not a permanent one.

6.2.3 Comparison with EBA results

Chart 6.6: Measures of construction sector wage growth



Source: ABS, Department of Education, Employment and Workplace Relations

Comparative wage results for the construction sector differ from the other sectors considered here, with EBA results moving upwards in 2009 (more in line with the AWE results, although nowhere near as dramatic) against the LPI's downward trend.

There was some minor moderation in the pace of wage rises included in newer agreements, although these remain around 2 percentage points per annum above the growth recorded by the ABS.

It is worth noting, however, that only around 15% of construction sector employees are covered by the EBAs included here – below the national average and the lowest proportion of the key sectors considered in the report.

While the measured LPI has continued to dip across the period since EBA data was available, the forecasts suggest a strong rise in the pace of construction LPI growth in the short term, lifting the LPI back much closer to the EBA data.

6.3 Manufacturing sector projections

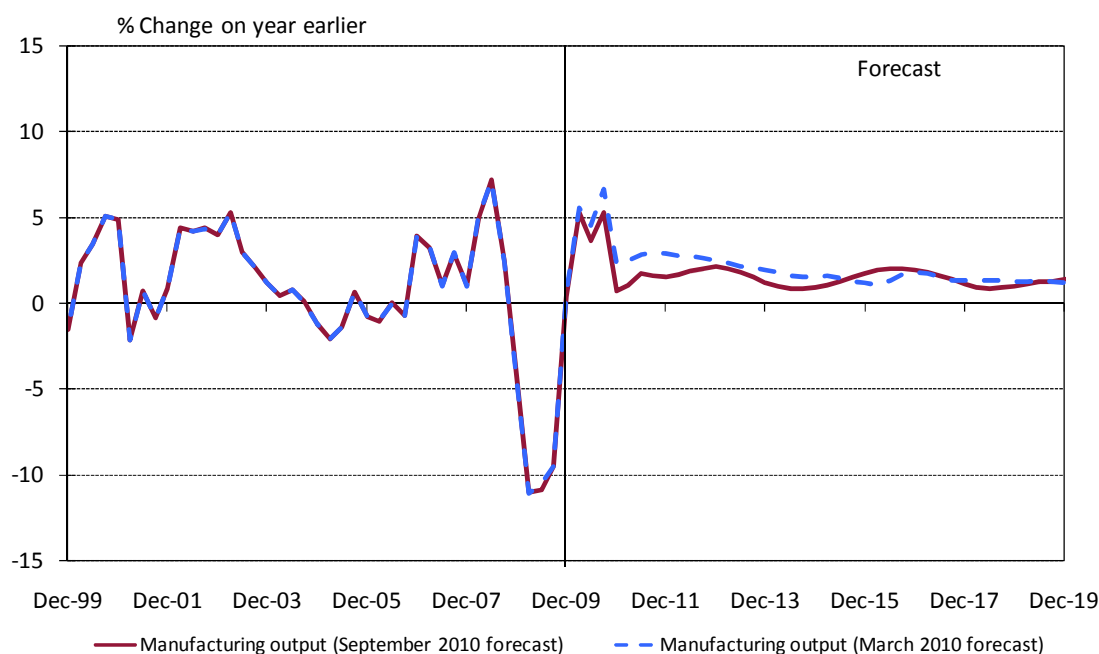
6.3.1 Changes to the outlook

It is hard to exaggerate how badly hit Australian manufacturers were by the downturn of 2008-09.

The combination of conditions seen through 2008-09 – beginning with high interest rates and a high \$A, compounded by a crash in confidence that then saw consumers defer discretionary purchases – resulted in a downturn which was more than double in size than that seen in either the late 1980s or the early 1990s (see Chart 6.7).

Even Australia's good news has passed manufacturing by. The nation may be enjoying a surge in resource exports and (for this year at least) farm exports as well, but manufacturing export sales continue to crawl, with the \$A a major challenge for most exporters.

Car exports are lifting once more and regional demand should help support sales momentum for Australian manufactures in New Zealand and around the Pacific. Yet manufacturing exports looks likely to remain subdued for a while longer yet.

Chart 6.7: Manufacturing output forecast change

Source: ABS, Access Economics' macroeconomic model

The longer term drivers of movements in the manufacturing sector remain true – suggesting the sector will continue to struggle as it has over the last decade. The sector still faces challenges due to relative high labour costs (particularly outside of the most technical manufacturing sectors), a relatively small market and a lack of economic of scale, the high \$A – particularly compared to the highly constrained Chinese currency – high interest rates and high inputs costs (such as oil and petrol costs).

In some ways, the worst may be over. Although interest rates are well above recent lows and the \$A continued to make many manufacturers uncompetitive, the return to confidence here and around the world is likely to lead to improved demand for a number of manufactures.

That is especially true for the parts of manufacturing that either sell into the resources sector (as is true for parts of machinery and equipment) or are themselves downstream beneficiaries of the resources sector (as it true of the 'export' wing of metals manufacturing).

Overall, we still expect a recovery in output for the manufacturing sector, as seen in Chart 6.7, but the continued buoyancy in the \$A has cut into the forecast rate of growth in the forecast period.

6.3.2 Current LPI projections

The recent combination of negatives resulted in a sharp decline in growth rates for labour costs in manufacturing across late 2008 and through all of 2009 (as shown in Chart 6.8).

The recent stabilisation of the sector has seen labour cost growth rates edge up, but they still lag the broader average rates evident nationally.

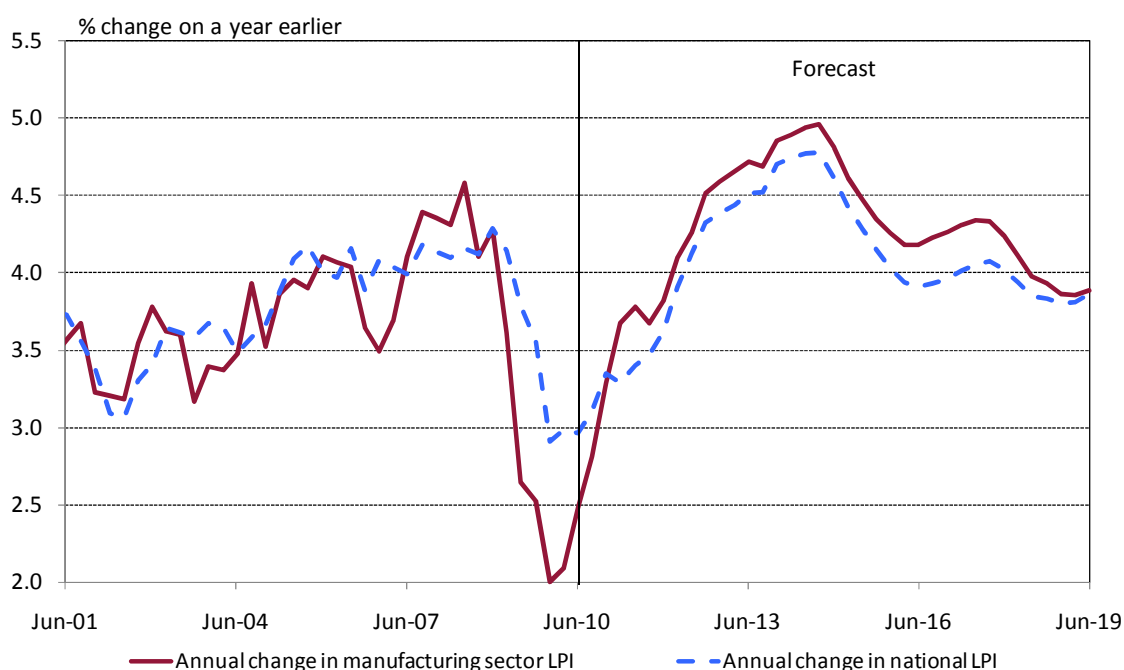
The implications of recent economic developments for the manufacturing sector are different to those for construction and mining. On the one hand, the competition for workers with

similar skill sets, who could work across a range of sectors, will add to wage demands in manufacturing in Australia.

On the other hand, the increase in the \$A and in industrial commodity input prices mean that ‘two speed economy’ pressures on manufacturing now loom larger (and earlier) than projected in our 16 March 2010 report for AER (which has assumed that the global financial crisis would provide more longer-lived protection on the \$A and on input price pressures).

With relative costs headed up, currency-related competition sharpening, and with competitor employers in other sectors bidding more strongly, manufacturing looks set to be a smaller sector of Australia’s economy than envisaged at the time of the 16 March 2010 report.

Chart 6.8: Manufacturing LPI growth forecast



Source: ABS, Access Economics estimates, Access Economics labour cost model

The current outlook would see some of that underperformance unwound in the short term (similar to the pattern seen with weakness in 2006 and a rebound in 2007). Beyond that, the relatively stable pattern of sectoral output growth (stronger relative to overall growth than typically seen in manufacturing) and positive trends in productivity should see the sector’s LPI marginally outpace the average.

Compositional shifts towards higher value/higher skilled/higher wage sectors within manufacturing should also assist in driving this trend.

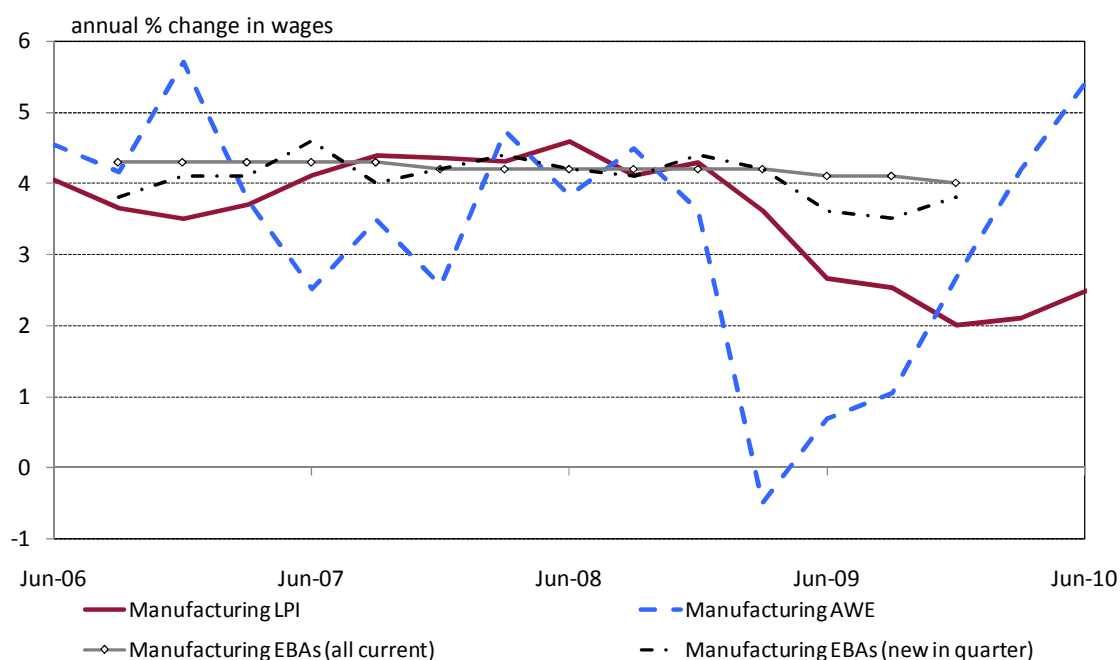
The impact of recent developments on wage relativities is less conclusive – although the projected economic backdrop is generally less friendly for manufacturing, the survivors in the sector will also be under greater pressure to compete with the salaries offered by other sectors.

The net impact of these effects sees the former outweigh the latter and, relative to national LPI, manufacturing wages are expected to settle a little lower than previously projected.

6.3.3 Comparison with EBA results

The effects of changing levels of overtime and other compositional factors are particularly obvious in the movements of average weekly earnings in the manufacturing sector. Given the sharp decline in the AWE in 2008 and early 2009, the in 2010 to date is no surprise.

Chart 6.9: Measures of manufacturing sector wage growth



Source: ABS, Department of Education, Employment and Workplace Relations

However the LPI has also slipped sharply, with wages from EBAs trending downward as well – although the last set of results (end of 2009) suggested conditions in the sector were improving, with slightly stronger growth built into new agreements.

6.4 Administrative services sector projections

6.4.1 Recent sectoral developments

This is a 'catch all' sector, containing disparate sectoral elements with a range of economic drivers.

Specifically, the administrative and support services sector of the Australian economy consists primarily of building cleaning, pest control and gardening services on the one hand and employment services (recruitment, placement) on the other.

Each accounts for about half the employment in the administrative and support services sector. The sector also has a presence in call centre employment, document preparation, and credit reporting.

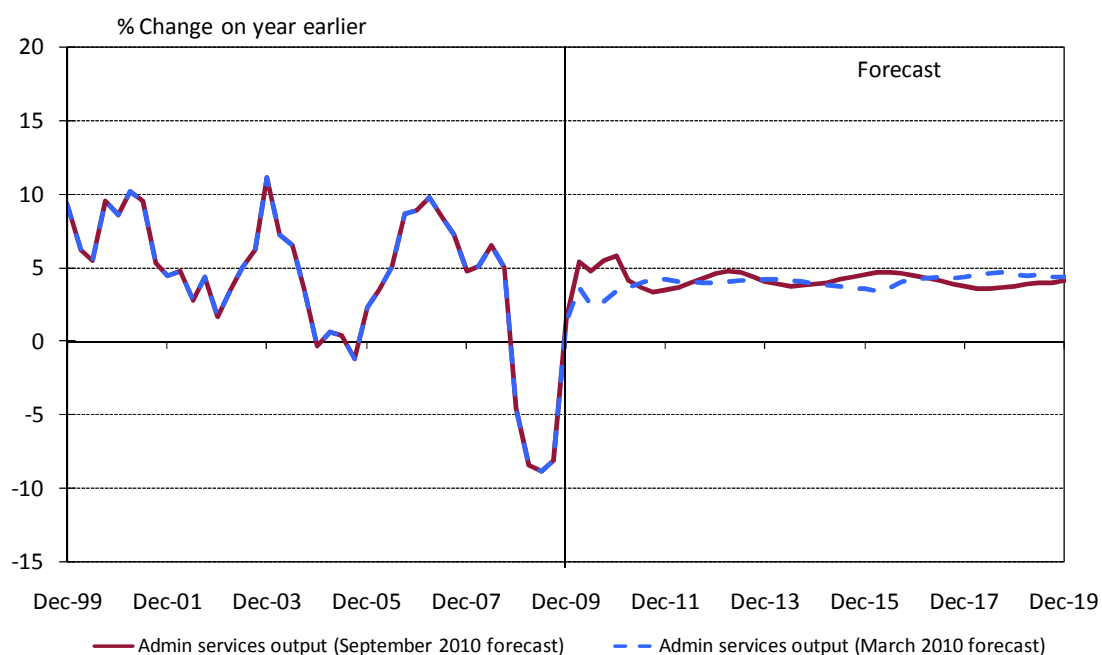
The decline in office demand and a slowdown in growth in the need for some maintenance services were a key area of weakness in the economic downturn, as was the fall in demand for employment services, which were squeezed both in demand terms (fewer jobs on offer, lower recruitment levels) and supply terms (relatively fewer workers who kept jobs were willing to look elsewhere for employment, preferring some level of certainty).

In addition, some gardening services went back ‘in-house’ through the crisis, as both corporates and families trimmed back their spending. That worsened structural weakness in the demand for these services, which has been affected by weaker than average rainfall along the east coast since 2002-03.

That said, the hardest hit part of this sector has been travel agencies. Although more Australians now holiday overseas than foreigners take holidays here, a development benefiting the sector, the sharp shift towards Internet-based pricing and booking has been a clear negative for the sector.

As Chart 6.10 therefore shows, the impacts on the sector’s output during 2008-09 in particular were therefore much larger than the average.

Chart 6.10: Administration services output forecast change



Source: ABS, Access Economics’ macroeconomic model

As the job market has improved, so have the fortunes of this sector – directly so, given the importance of recruitment and placement agencies within this sector as a whole.

That is, there was an unwinding of earlier effects, with the demand for employment services boosted both in demand terms (more jobs on offer, higher recruitment levels) and supply terms (relatively more workers willing to look elsewhere for employment).

Moreover, while the office market is yet to see CBD vacancy rates fall back below 10%, the office market has stabilised and is beginning to show signs of growth, thereby indicating an imminent turnaround in maintenance demands.

Similarly, some of the cutbacks instituted when fears of slowdown were greatest – including in gardening services – are now being unwound, with recent rains also likely to provide a boost to demand for these services.

Some other components have been boosted by recent developments. Travel agents have seen some better outcomes in recent months as demand for overseas travel by Australians continues to grow.

Chart 6.10 shows that the short term outlook has lifted – implying a slightly stronger rebound in growth in the short term than expected six months ago⁹.

That said, the continuing strength in the \$A is still pressuring employment levels in call centres.

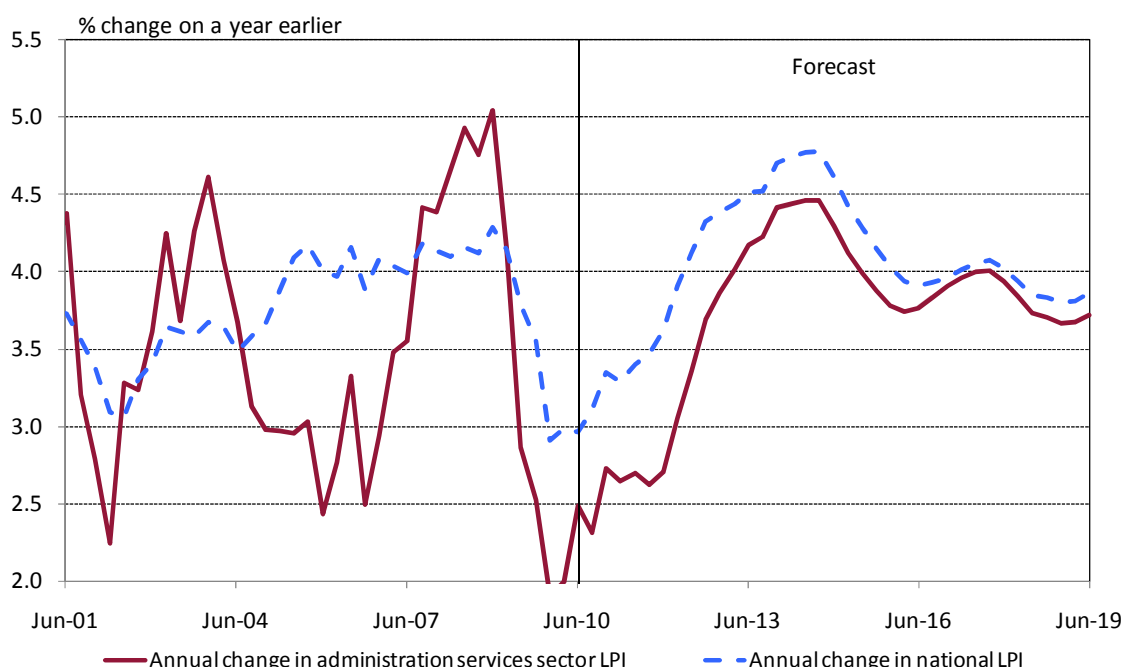
6.4.2 Current LPI projections

In terms of the LPI, the good news for wages of workers in those sectors directly boosted by the earlier return to strength in emerging economies (combined with the relative boost to wages in sectors which have to compete with those boosted sectors) will continue to weigh on the relative wages in the administrative services sector (a sector which does not directly benefit from the earlier return to strength in emerging economies).

As Chart 6.11 shows, growth in the LPI in this sector has been volatile in recent years, and currently stands at 2.5% in the year to June 2010. That is a lift from the historically low rates seen earlier, though they were at least in part driven by the very strong growth rates recorded in the run-up to the GFC, when the employment market was at its strongest.

That drove administration sector wages higher not only due to the general trends in the economy, but because key sub-sectors such as employment services (head hunters, placement agencies and the like) were in very high demand.

Chart 6.11: Administration services LPI growth forecast



Source: ABS, Access Economics estimates, Access Economics labour cost model

⁹ The administration services sector was not covered in the 16 March 2010 update – comparisons here are to what would have been shown had the sector been part of earlier reports.

Access Economics projects that the pace of growth in the sector's wages will struggle to keep up with the average in the medium term. As noted above, other sectors are more likely to see growth driven by skills shortages and (unlike utilities and to a lesser extent manufacturing) this sector is not a competitor with those sectors, limiting the likelihood of 'catch-up' wage demands.

Moreover, average skill levels are lower, whereas there is a longer term trend towards an increased skill differential in wages and salaries.

Growth in the sector may also swing towards lower skill components of the sector – such as building cleaning and pest control – driving a compositional wedge between this sector and the national average.

That will not last forever, and gradually wage growth in the sector is likely to move towards tracking the general rate of LPI increase.

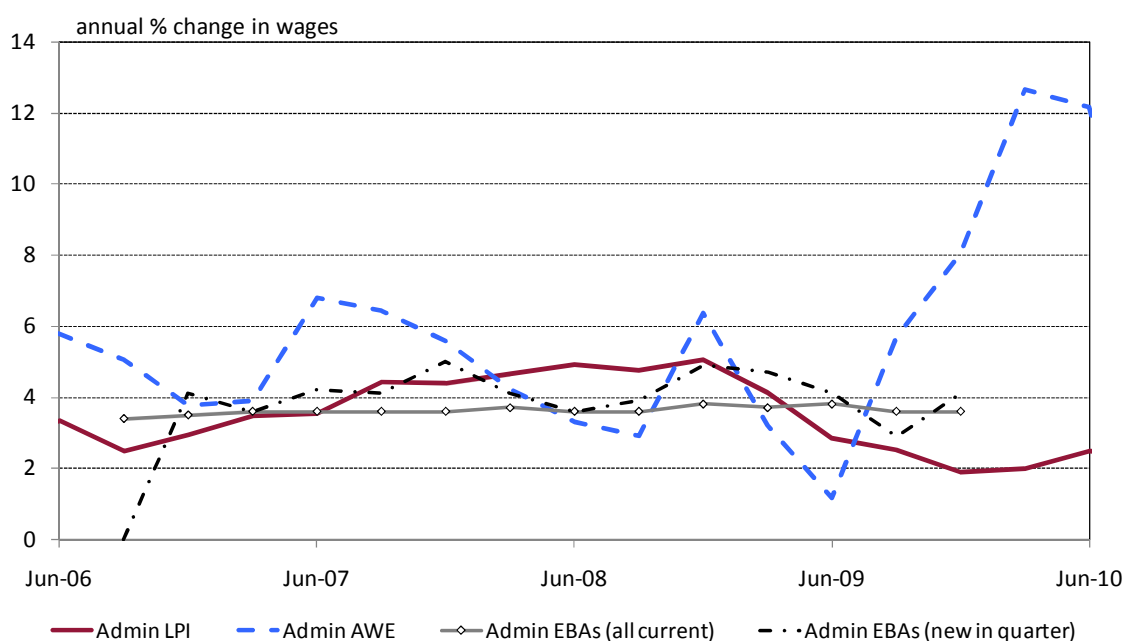
6.4.3 Comparison with EBA results

Growth in wages under EBAs in the administration services sector had been easing across 2009, in line with the measured performance of the LPI in the sector. Slightly fewer than average workers in this sector are covered by EBAs (around 18% – compared with 19% overall and close to 30% in the utilities sector).

As with most other sectors, AWE levels surged sharply from mid-2009.

Agreements in this sector have tended to run for a relatively long period (around a year longer on average in the last couple of years) suggesting it may take longer for the acceleration in general wages growth to flow through to this sector – constraining wages growth somewhat in the short term.

Chart 6.12: Measures of administration services sector wage growth



Source: ABS, Department of Education, Employment and Workplace Relations

6.5 Overall sectoral projections at the national level

The following tables outline our expectations of growth in national LPIs in the utilities sector, and in its key competitors.

Table 6.1: Industry LPI forecasts – nominal

Calendar year changes in nominal national industry sector LPI

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
National LPI	3.6	3.1	3.4	4.2	4.5	4.7	4.2	3.9	4.0	3.9
Utilities	4.3	4.6	3.7	4.0	4.2	4.7	4.1	3.9	4.0	3.8
Mining	4.3	4.3	4.5	4.5	4.5	5.0	4.4	3.9	4.1	4.1
Construction	4.1	3.3	4.3	4.6	4.7	4.9	4.4	3.6	3.5	3.9
Manufacturing	2.7	2.7	3.7	4.4	4.7	4.9	4.4	4.2	4.3	4.0
Administration services	2.8	2.4	2.7	3.5	4.2	4.4	3.9	3.8	4.0	3.7

Source: ABS, Access Economics estimates, Access Economics labour cost model

Table 6.2: Industry LPI forecasts – real

Calendar year changes in real national industry sector Labour Prices

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
National LPI	1.7	0.1	0.3	1.1	1.8	2.3	1.7	1.2	1.5	1.6
Utilities	2.5	1.5	0.6	1.0	1.5	2.3	1.6	1.1	1.5	1.5
Mining	2.4	1.2	1.3	1.4	1.8	2.6	1.8	1.1	1.5	1.9
Construction	2.2	0.3	1.2	1.6	1.9	2.5	1.9	0.9	1.0	1.6
Manufacturing	0.9	-0.3	0.6	1.3	2.0	2.5	1.9	1.5	1.7	1.7
Administration services	1.0	-0.6	-0.5	0.5	1.5	2.0	1.4	1.1	1.4	1.5

Source: ABS, Access Economics estimates, Access Economics labour cost model

7 Utilities and competitor sector wage growth by State

This chapter sets out the updated projections for LPI projections at the State level for the utilities sector and in the three key competitor industry sectors.

7.1 Technical changes since the last report

The key factors affecting industry history and projections (particularly the change in industry classifications) and the State history and forecasts have also affected our detailed results.

While there is some additional discussion of these matters in Appendix E, the key points to bear in mind are:

- The initial report used our own estimates of the impact of this change, including derived estimates for industry output, and industry LPIs for each State based on a concordance of industries published by the ABS and derived based on industry employment levels (the latter have been available on the new industry classification for around two years). At the State level, industry LPI data under the new structure is available from September 2008 only. In all cases, we have used the rebased estimate of historical LPI growth from the initial report for the period before September 2008.
- Not all industries have LPI published for all States (see Table E.1 for a detailed list). Some of those for which data is suppressed do have forecasts for average weekly earnings available. As noted later, the differential movements in overall AWE (compared with overall LPI) need to be accounted for if the AWE measure is used to inform an estimate of the detailed LPI measure. In addition, detailed AWE measures are only available from June 2009, meaning that in cases where this method is used for the most recent historical estimates, results for 2008-09 are the same as the last report.
- Where no State-specific industry LPI or AWE figures are available, the overall national growth rate for that sector is assumed for the past six months. Among the key sectors shown here, this only affects the mining sectors in the ACT and Victoria, which are particularly small¹⁰. (Note that ABS is reducing over time the range of sectoral level AWE data which it is willing to release.)

7.2 National trends

National trends by industry will tend to dominate at the State and Territory level – particularly in the larger States, while volatility (‘noise’ in the data) can lead to significant movements in the smaller jurisdictions.

Forecasts for national and sectoral wage growth are shown in Table 7.1. The forecast variables include real and nominal LPI, and real and nominal productivity adjusted LPI.

¹⁰ The ACT’s mining industry typically shows up as having no employment in the labour force survey estimates, while Victoria’s mining sector employs around 10,000 people in a total labour force of 2.7 million.

Table 7.1: National wage forecasts

Calendar year changes in nominal national industry sector LPI										
Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
National LPI	3.6	3.1	3.4	4.2	4.5	4.7	4.2	3.9	4.0	3.9
Utilities	4.3	4.6	3.7	4.0	4.2	4.7	4.1	3.9	4.0	3.8
Mining	4.3	4.3	4.5	4.5	4.5	5.0	4.4	3.9	4.1	4.1
Construction	4.1	3.3	4.3	4.6	4.7	4.9	4.4	3.6	3.5	3.9
Manufacturing	2.7	2.7	3.7	4.4	4.7	4.9	4.4	4.2	4.3	4.0
Administration services	2.8	2.4	2.7	3.5	4.2	4.4	3.9	3.8	4.0	3.7
Calendar year changes in real national industry sector Labour Prices										
Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
National LPI	1.7	0.1	0.3	1.1	1.8	2.3	1.7	1.2	1.5	1.6
Utilities	2.5	1.5	0.6	1.0	1.5	2.3	1.6	1.1	1.5	1.5
Mining	2.4	1.2	1.3	1.4	1.8	2.6	1.8	1.1	1.5	1.9
Construction	2.2	0.3	1.2	1.6	1.9	2.5	1.9	0.9	1.0	1.6
Manufacturing	0.9	-0.3	0.6	1.3	2.0	2.5	1.9	1.5	1.7	1.7
Administration services	1.0	-0.6	-0.5	0.5	1.5	2.0	1.4	1.1	1.4	1.5
Calendar year changes in nominal productivity adjusted Labour Price aggregates										
Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
National LPI	2.5	2.8	3.1	2.5	2.4	2.8	2.0	2.2	2.4	1.8
Utilities	3.3	4.5	3.4	2.3	2.2	2.8	1.9	2.1	2.4	1.8
Mining	3.2	4.7	4.1	2.9	2.5	3.2	2.3	2.3	2.5	2.2
Construction	3.3	3.3	4.1	3.2	2.8	3.0	2.1	2.1	2.2	1.8
Manufacturing	2.2	1.9	3.2	2.5	2.5	2.9	2.0	2.3	2.6	1.9
Administration services	3.1	2.5	2.2	1.8	2.1	2.5	1.7	2.0	2.3	1.7
Calendar year changes in real productivity adjusted Labour Price aggregates										
Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
National LPI	0.7	-0.2	0.0	-0.5	-0.2	0.4	-0.5	-0.5	-0.1	-0.4
Utilities	1.5	1.4	0.2	-0.6	-0.5	0.4	-0.6	-0.6	-0.1	-0.4
Mining	1.3	1.6	0.9	-0.1	-0.2	0.8	-0.2	-0.4	0.0	0.0
Construction	1.5	0.2	0.9	0.2	0.1	0.6	-0.4	-0.6	-0.3	-0.4
Manufacturing	0.3	-1.1	0.0	-0.5	-0.2	0.5	-0.5	-0.4	0.0	-0.3
Administration services	1.3	-0.5	-0.9	-1.1	-0.6	0.1	-0.8	-0.7	-0.2	-0.5

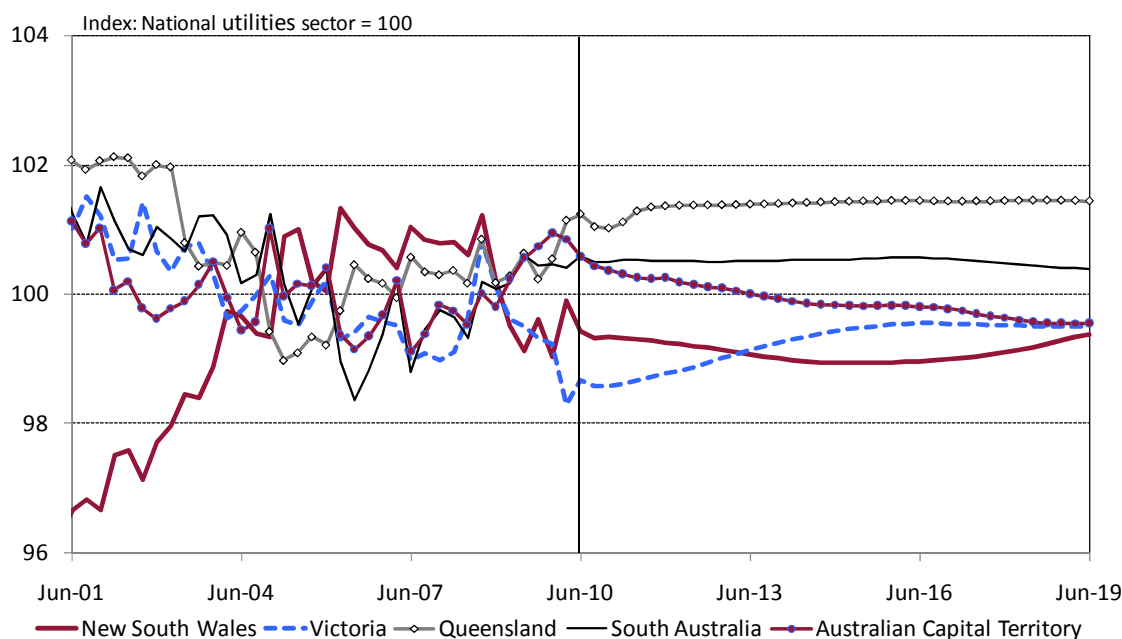
Source: ABS, Access Economics estimates, Access Economics labour cost model

In brief, and although the utilities sector has seen relatively faster wage growth nationally, much of that strength has been in New South Wales from 2000 to 2005 and in Western Australia subsequently (though the latter State is not otherwise analysed in this report).

Wage gains among the other four jurisdictions considered were more moderate than those in New South Wales through to 2005, with those relativities stabilising from 2005 to 2008.

That is why Chart 7.1 below – which shows State-level relativities in wages in the utilities sector as an index based on 2007-08 – shows NSW doing better than the other jurisdictions, though that relative outperformance slowed from 2005 onwards.

More recently Victorian wage growth has slowed relative to that in the other States (particularly in the utilities sector, but also in manufacturing), although there was a notable recorded lift in sectors such as construction in the middle of 2009 as WorkChoices industrial relations measures were wound back.

Chart 7.1: Relative movement in utilities sector LPI by State

Source: ABS, Access Economics estimates, Access Economics labour cost model

Over the longer term wages in the Victorian utilities sector have fallen relative to those in other States. In part that may be due to more market pressures (due to greater private sector representation in the Victorian utilities industry). In contrast, New South Wales saw relative increases in utilities wages through to the middle of last decade, with those differences at least in part reflecting industrial relations pressures rather than market effects. However, the relative deterioration in the NSW Budget position over time (and the potential for that to effect government-owned enterprises) may stiffen the resolve of wage negotiators in coming years.

Victoria's recent relative declines in utilities wages appear particularly strong, although they are consistent with weakness in competitor sectors such as manufacturing. (That is, manufacturers compete with the utilities for some types of workers, and the Victorian manufacturing sector is relatively large. The large falls in manufacturing employment and notable fall in manufacturing wage growth therefore weighed on the pace of wage growth in the utilities in Victoria.) These forecasts project that some of that relative loss will be unwound in the forecast period, although – reflecting longer term trends – Victorian utilities rates will still be lower relative to the national average in the lower term.¹¹

Queensland has undergone an extended period of recovery in relative wage rates in the utilities sector after seeing declines from 2000 to 2005. That trend accelerated in recent quarters as the mining sector rebounded (or recognised that it was about to rebound), dragging utilities wages in its wake (and unwinding the relative slip that occurred when the GFC saw the mining outlook at its weakest). Given the volatility in the data there may be some short term declines in relative terms, but the relative increase in wages compared with the

¹¹ Note that 'lower' is a reference to an index based to 2007-08 – it doesn't necessarily mean wage levels are lower. That depends on those relativities across States in 2007-08.

national average that Queensland has enjoyed over the past six years is expected to be maintained in the longer run.

South Australia saw utilities sector wages decline relative to the national average from 2000 to 2007, but that relative shift was driven primarily by New South Wales' strength over that period. As that latter trend has ended, South Australia's relative wage losses have as well, and they are expected to be broadly maintained relative to other jurisdictions across the forecast period.

In the Australian Capital Territory, the coming expansion of the water sector (through expansion of the Cotter Dam and other projects) will, other things equal, see relatively stronger employment growth in a sector of the utilities industry with relatively lower wages (at the national level, the latest ABS data shows national wage rates in the water supply are 31% lower than those in gas supply and 24% lower than those in the electricity sector), implying a minor compositional impact that will slow relative wage growth in the sector overall.

Yet the fact that relative wages in the utilities sector across States have diverged in recent years does not mean those moves are permanent. In general, the more significant short term relative movements will tend to unwind, with recent growth in Queensland (and Western Australia) maintained in the longer term due to the impact of those States' strong mining prospects on mining sector wages, and then on competitor sectors like utilities.

7.3 New South Wales projections

Table 7.2: New South Wales wage forecasts

Calendar year changes in New South Wales nominal Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
New South Wales	3.5	3.0	3.1	3.9	4.3	4.5	4.1	3.9	4.1	4.0
Utilities	2.9	4.8	3.5	3.9	4.1	4.6	4.1	3.9	4.1	3.9
Mining	4.2	4.4	4.3	4.3	4.3	4.8	4.3	3.9	4.1	4.2
Construction	2.8	3.3	4.3	4.6	4.6	4.8	4.4	3.7	3.7	4.0
Manufacturing	2.4	2.6	3.7	4.2	4.5	4.7	4.4	4.2	4.4	4.1
Administration services	2.5	2.5	2.4	3.3	4.0	4.2	3.9	3.8	4.0	3.9

Calendar year changes in New South Wales real Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
New South Wales	1.6	0.3	0.1	1.2	2.0	2.6	1.8	1.2	1.4	1.4
Utilities	1.1	2.1	0.4	1.1	1.8	2.7	1.8	1.2	1.4	1.4
Mining	2.3	1.7	1.2	1.5	2.0	2.9	1.9	1.2	1.4	1.7
Construction	1.0	0.6	1.2	1.8	2.3	2.9	2.1	1.0	0.9	1.5
Manufacturing	0.6	-0.1	0.6	1.4	2.2	2.8	2.0	1.5	1.7	1.5
Administration services	0.7	-0.2	-0.7	0.6	1.7	2.3	1.6	1.1	1.3	1.3

Calendar year changes in New South Wales nominal productivity adjusted Labour Price aggregates

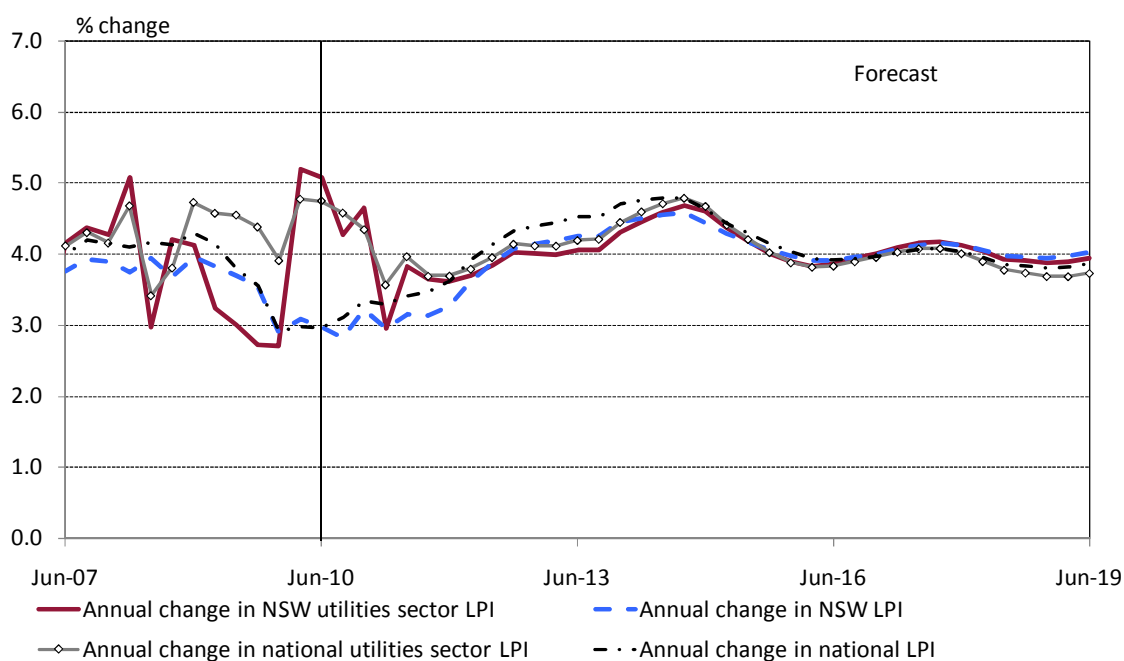
Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
New South Wales	2.5	1.7	2.2	2.6	2.7	3.1	2.1	2.4	2.6	2.0
Utilities	2.0	4.2	3.0	2.4	2.2	2.9	2.0	2.2	2.5	2.0
Mining	3.1	4.6	3.7	2.9	2.5	3.2	2.4	2.4	2.6	2.3
Construction	2.3	2.9	3.9	3.4	3.0	3.1	2.2	2.3	2.4	2.0
Manufacturing	2.1	1.3	2.9	2.5	2.4	2.9	2.1	2.4	2.6	2.1
Administration services	3.1	2.2	1.7	1.8	2.0	2.5	1.7	2.1	2.4	1.9

Calendar year changes in New South Wales real productivity adjusted Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
New South Wales	0.7	-0.9	-0.8	-0.1	0.4	1.2	-0.1	-0.2	-0.1	-0.6
Utilities	0.2	1.5	0.0	-0.3	0.0	1.0	-0.3	-0.4	-0.1	-0.5
Mining	1.3	1.9	0.7	0.2	0.2	1.3	0.1	-0.3	0.0	-0.2
Construction	0.4	0.2	0.8	0.7	0.7	1.2	-0.1	-0.4	-0.3	-0.5
Manufacturing	0.2	-1.3	-0.1	-0.2	0.1	1.0	-0.2	-0.3	0.0	-0.5
Administration services	1.3	-0.4	-1.3	-0.9	-0.2	0.6	-0.6	-0.6	-0.3	-0.6

Source: ABS, Access Economics estimates, Access Economics labour cost model

Chart 7.2: NSW utilities forecast comparison



Source: ABS, Access Economics estimates, Access Economics labour cost model

7.4 Victorian projections

Table 7.3: Victorian wage forecasts

Calendar year changes in Victorian nominal Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Victoria	3.3	2.8	3.4	4.3	4.7	4.8	4.2	3.9	3.9	3.7
Utilities	3.8	3.7	3.9	4.2	4.5	4.9	4.3	3.9	4.0	3.7
Mining	3.9	4.2	4.5	4.6	4.7	5.1	4.4	3.9	4.0	4.0
Construction	5.5	3.9	4.0	4.5	4.6	4.8	4.3	3.4	3.3	3.7
Manufacturing	2.6	2.4	3.6	4.5	4.9	5.0	4.5	4.2	4.2	3.9
Administration services	2.9	1.8	2.7	3.7	4.4	4.6	4.0	3.8	3.9	3.7

Calendar year changes in Victorian real Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Victoria	1.8	-0.4	0.8	2.0	2.5	3.2	2.1	1.3	1.2	1.1
Utilities	2.3	0.5	1.3	2.0	2.4	3.3	2.2	1.4	1.3	1.2
Mining	2.4	1.0	1.9	2.4	2.6	3.5	2.4	1.3	1.2	1.5
Construction	3.9	0.7	1.5	2.2	2.5	3.3	2.2	0.9	0.6	1.1
Manufacturing	1.1	-0.8	1.0	2.3	2.8	3.5	2.4	1.6	1.4	1.3
Administration services	1.4	-1.3	0.2	1.4	2.3	3.0	1.9	1.2	1.1	1.1

Calendar year changes in Victorian nominal productivity adjusted Labour Price aggregates

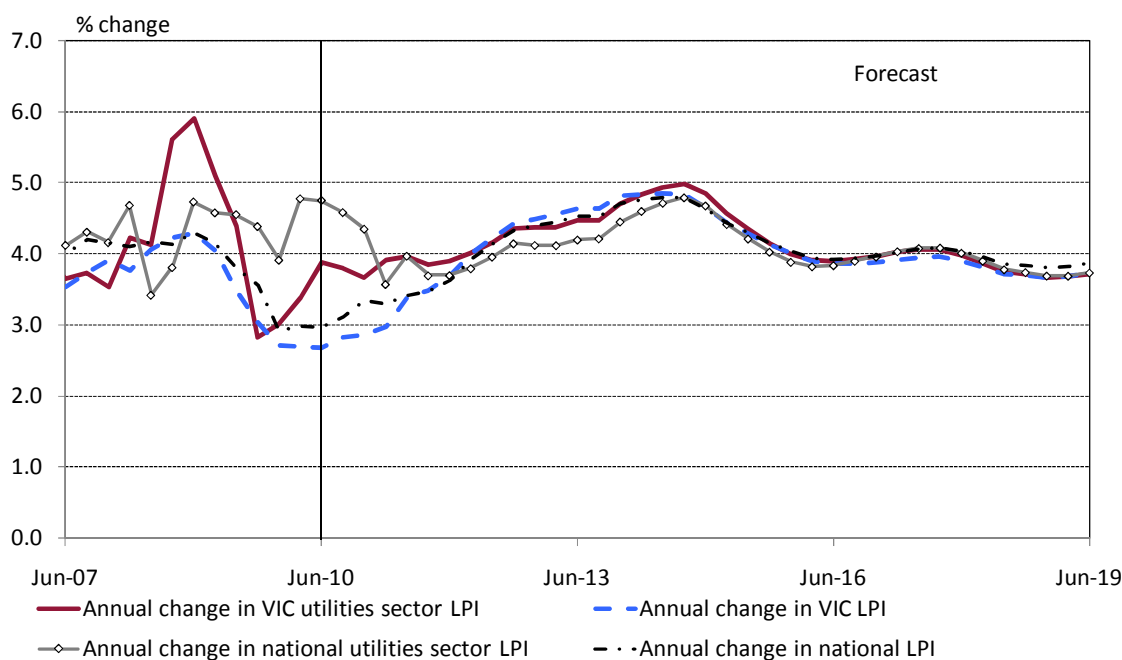
Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Victoria	3.5	3.1	3.0	2.3	2.4	2.9	2.2	2.6	3.0	2.4
Utilities	3.1	3.7	3.7	2.6	2.4	3.0	2.1	2.3	2.6	2.0
Mining	3.1	4.9	4.2	3.0	2.7	3.4	2.5	2.5	2.7	2.3
Construction	5.1	4.0	3.9	3.2	2.8	3.0	2.0	2.1	2.3	1.8
Manufacturing	2.5	1.6	3.0	2.6	2.6	3.0	2.1	2.3	2.6	2.0
Administration services	3.8	2.1	2.3	2.0	2.3	2.7	1.8	2.1	2.4	1.9

Calendar year changes in Victorian real productivity adjusted Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Victoria	2.0	0.0	0.5	0.1	0.4	1.4	0.2	0.1	0.3	-0.1
Utilities	1.6	0.5	1.1	0.4	0.4	1.5	0.1	-0.2	-0.1	-0.5
Mining	1.6	1.7	1.6	0.8	0.6	1.9	0.5	-0.1	0.0	-0.2
Construction	3.6	0.8	1.3	0.9	0.7	1.4	0.0	-0.4	-0.5	-0.7
Manufacturing	1.0	-1.5	0.5	0.4	0.5	1.5	0.1	-0.2	-0.1	-0.5
Administration services	2.3	-1.0	-0.2	-0.2	0.2	1.1	-0.2	-0.4	-0.4	-0.7

Source: ABS, Access Economics estimates, Access Economics labour cost model

Chart 7.3: Victoria utilities forecast comparison



Source: ABS, Access Economics estimates, Access Economics labour cost model

7.5 Queensland projections

Table 7.4: Queensland wage forecasts

Calendar year changes in Queensland nominal Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Queensland	3.8	3.2	3.6	4.1	4.5	4.7	4.2	3.9	4.1	3.9
Utilities	4.4	5.3	3.9	4.1	4.3	4.7	4.1	3.9	4.0	3.8
Mining	5.0	4.0	4.7	4.6	4.5	5.0	4.4	3.9	4.1	4.2
Construction	4.6	2.7	4.3	4.8	4.8	5.0	4.5	3.7	3.6	4.0
Manufacturing	3.0	2.7	3.8	4.5	4.8	5.0	4.5	4.2	4.3	4.0
Administration services	2.7	1.7	2.9	3.7	4.4	4.6	4.1	3.9	4.1	3.8

Calendar year changes in Queensland real Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Queensland	1.3	0.6	0.3	1.1	2.1	2.7	1.8	1.2	1.4	1.3
Utilities	1.9	2.7	0.6	1.1	1.9	2.7	1.7	1.2	1.4	1.3
Mining	2.5	1.4	1.3	1.6	2.1	3.0	2.0	1.2	1.4	1.7
Construction	2.1	0.1	1.0	1.8	2.4	3.0	2.1	1.0	1.0	1.4
Manufacturing	0.6	0.1	0.5	1.5	2.4	2.9	2.1	1.5	1.7	1.5
Administration services	0.3	-0.8	-0.4	0.8	2.0	2.5	1.7	1.2	1.4	1.3

Calendar year changes in Queensland nominal productivity adjusted Labour Price aggregates

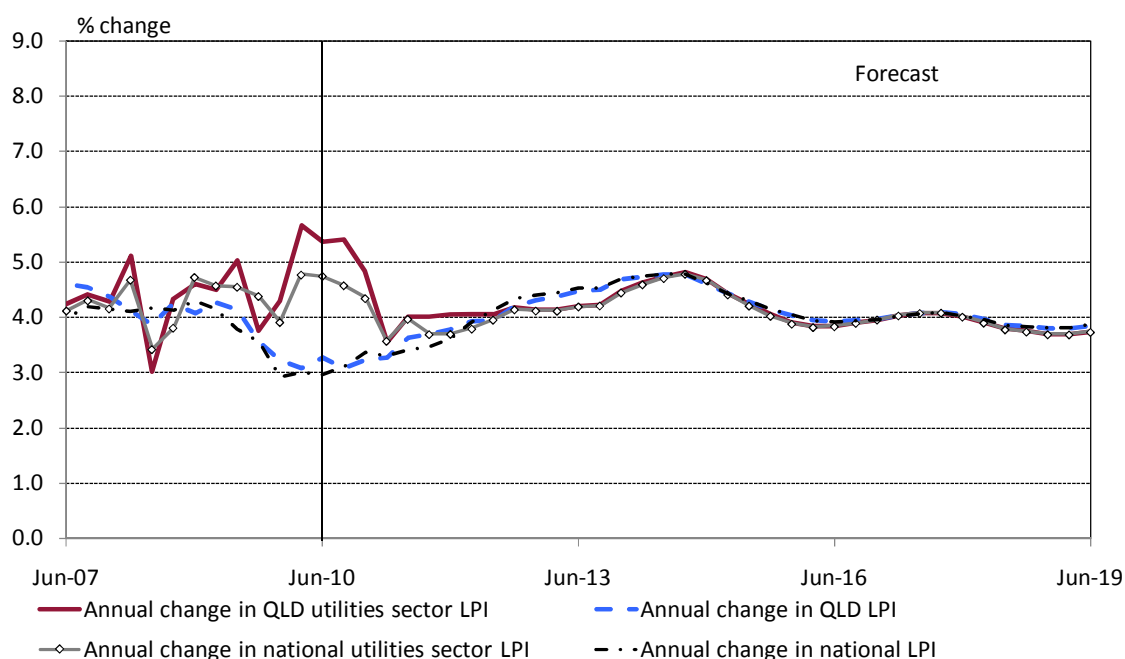
Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Queensland	3.4	3.1	3.3	2.1	1.5	1.8	0.9	1.2	1.4	0.8
Utilities	3.6	5.1	3.8	2.3	2.0	2.6	1.7	1.8	2.1	1.5
Mining	4.1	4.6	4.4	2.8	2.4	3.1	2.2	2.1	2.3	2.0
Construction	4.2	2.6	4.3	3.3	2.8	2.9	1.9	2.0	2.1	1.6
Manufacturing	2.9	1.7	3.4	2.4	2.2	2.7	1.8	2.0	2.3	1.7
Administration services	3.6	1.9	2.6	1.9	2.0	2.4	1.6	1.8	2.1	1.6

Calendar year changes in Queensland real productivity adjusted Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Queensland	0.9	0.5	-0.1	-0.8	-0.8	-0.2	-1.4	-1.5	-1.2	-1.7
Utilities	1.2	2.5	0.4	-0.7	-0.4	0.6	-0.7	-0.8	-0.5	-0.9
Mining	1.6	2.0	1.1	-0.1	0.0	1.0	-0.2	-0.6	-0.3	-0.5
Construction	1.7	0.0	1.0	0.4	0.4	0.9	-0.4	-0.7	-0.5	-0.8
Manufacturing	0.4	-0.8	0.0	-0.5	-0.1	0.7	-0.5	-0.6	-0.3	-0.8
Administration services	1.2	-0.7	-0.7	-1.0	-0.3	0.4	-0.8	-0.9	-0.5	-0.9

Source: ABS, Access Economics estimates, Access Economics labour cost model

Chart 7.4: Queensland utilities forecast comparison



Source: ABS, Access Economics estimates, Access Economics labour cost model

7.6 South Australian projections

Table 7.5: South Australian wage forecasts

Calendar year changes in South Australian nominal Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
South Australia	3.3	2.9	3.4	4.2	4.6	4.8	4.3	4.0	4.0	3.8
Utilities	5.0	4.7	3.8	4.0	4.2	4.7	4.1	3.9	4.0	3.7
Mining	4.1	4.4	4.7	4.6	4.6	5.1	4.5	4.0	4.1	4.1
Construction	3.0	3.8	4.5	4.8	4.8	5.0	4.5	3.7	3.5	3.8
Manufacturing	3.0	2.6	3.7	4.5	4.9	5.0	4.5	4.3	4.3	3.9
Administration services	2.5	3.9	3.2	3.5	4.2	4.4	3.9	3.8	3.9	3.6

Calendar year changes in South Australian real Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
South Australia	1.4	0.5	0.1	1.3	2.2	2.7	1.8	1.3	1.4	1.3
Utilities	3.1	2.2	0.4	1.0	1.9	2.6	1.7	1.2	1.4	1.2
Mining	2.3	1.9	1.3	1.6	2.2	3.0	2.0	1.3	1.4	1.6
Construction	1.1	1.4	1.1	1.8	2.4	3.0	2.1	1.0	0.9	1.3
Manufacturing	1.1	0.1	0.4	1.5	2.5	2.9	2.1	1.6	1.7	1.5
Administration services	0.6	1.4	-0.1	0.5	1.8	2.3	1.5	1.1	1.2	1.1

Calendar year changes in South Australian nominal productivity adjusted Labour Price aggregates

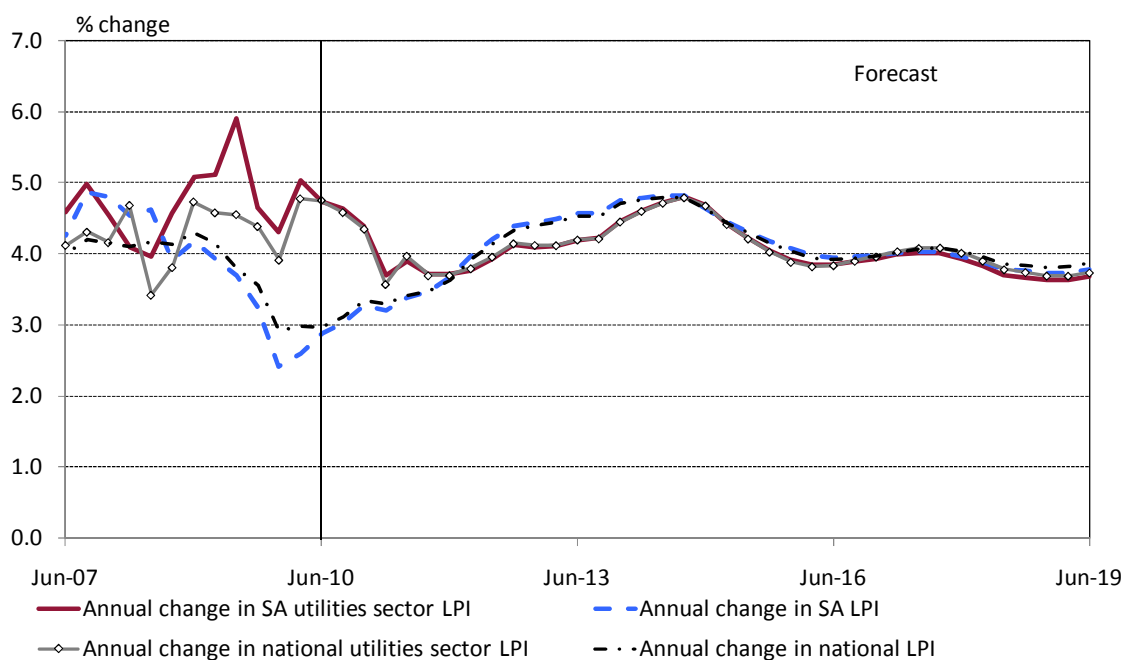
Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
South Australia	3.8	2.7	3.4	2.6	2.8	3.1	2.2	2.5	2.9	2.2
Utilities	4.0	4.5	3.5	2.4	2.3	2.9	2.0	2.2	2.4	1.8
Mining	3.0	5.1	4.3	3.1	2.8	3.5	2.6	2.5	2.7	2.3
Construction	2.5	3.8	4.4	3.6	3.1	3.2	2.2	2.3	2.4	1.8
Manufacturing	2.7	1.5	3.2	2.6	2.6	3.0	2.1	2.3	2.6	1.9
Administration services	3.4	4.1	2.8	1.9	2.1	2.5	1.7	1.9	2.2	1.7

Calendar year changes in South Australian real productivity adjusted Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
South Australia	1.9	0.2	0.0	-0.3	0.4	1.1	-0.1	-0.2	0.3	-0.2
Utilities	2.1	2.0	0.2	-0.6	-0.1	0.8	-0.4	-0.5	-0.2	-0.6
Mining	1.2	2.6	1.0	0.1	0.4	1.4	0.2	-0.2	0.1	-0.2
Construction	0.6	1.3	1.0	0.6	0.8	1.1	-0.2	-0.3	-0.2	-0.6
Manufacturing	0.9	-1.0	-0.2	-0.3	0.2	1.0	-0.2	-0.3	0.0	-0.5
Administration services	1.6	1.6	-0.6	-1.1	-0.2	0.5	-0.7	-0.7	-0.4	-0.8

Source: ABS, Access Economics estimates, Access Economics labour cost model

Chart 7.5: South Australian utilities forecast comparison



Source: ABS, Access Economics estimates, Access Economics labour cost model

7.7 Australian Capital Territory projections

Table 7.6: Australian Capital Territory wage forecasts

Calendar year changes in Australian Capital Territory nominal Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Australian Capital Territory	3.9	2.9	3.0	4.2	4.6	4.8	4.4	4.1	4.1	3.8
Utilities	5.2	4.5	3.4	3.9	4.1	4.5	4.1	3.9	3.9	3.6
Mining	4.5	4.3	4.1	4.4	4.5	5.0	4.4	3.9	4.0	4.0
Construction	4.0	2.9	3.6	4.6	4.7	4.9	4.5	3.7	3.5	3.8
Manufacturing	3.7	2.5	3.2	4.3	4.7	4.8	4.4	4.2	4.2	3.8
Administration services	4.7	2.4	2.1	3.3	4.1	4.3	3.9	3.8	3.8	3.6

Calendar year changes in Australian Capital Territory real Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Australian Capital Territory	1.7	0.3	-0.1	1.4	2.3	2.9	2.0	1.4	1.4	1.3
Utilities	3.0	1.8	0.3	1.1	1.8	2.6	1.8	1.2	1.3	1.2
Mining	2.3	1.6	0.9	1.6	2.2	3.0	2.1	1.2	1.3	1.5
Construction	1.8	0.2	0.5	1.8	2.4	3.0	2.2	1.0	0.9	1.3
Manufacturing	1.5	-0.1	0.0	1.5	2.3	2.9	2.1	1.5	1.5	1.3
Administration services	2.5	-0.2	-1.0	0.6	1.8	2.4	1.6	1.1	1.2	1.1

Calendar year changes in Australian Capital Territory nominal productivity adjusted Labour Price aggregates

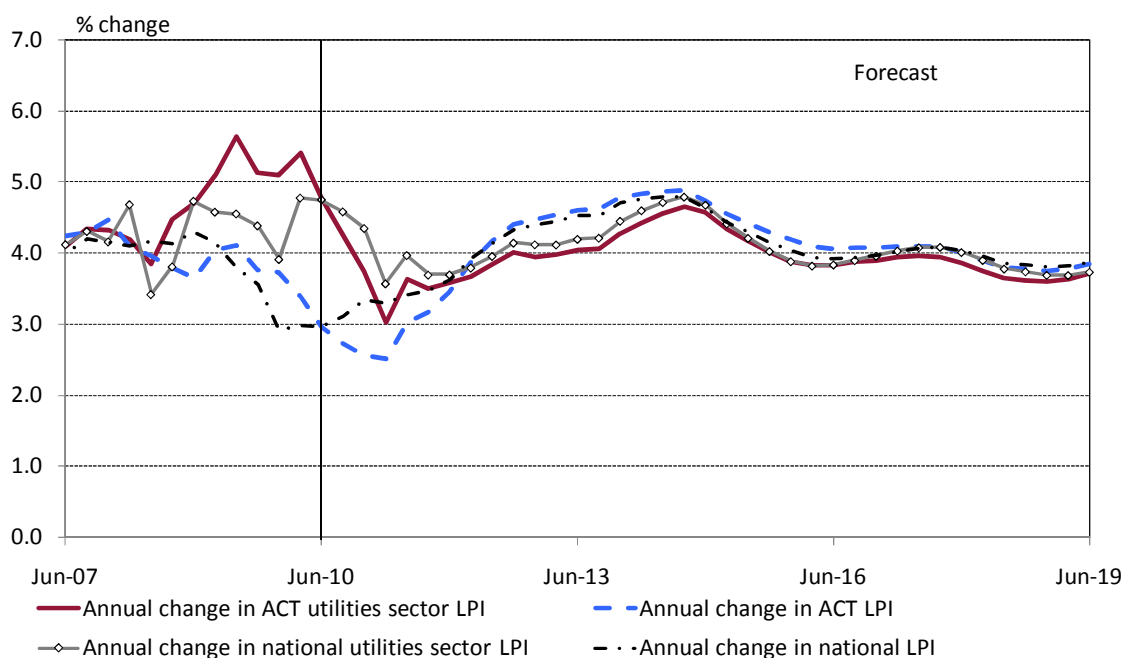
Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Australian Capital Territory	2.2	4.6	2.9	2.6	3.3	3.3	2.1	2.5	2.7	2.0
Utilities	4.2	4.6	3.2	2.2	2.1	2.7	1.9	2.1	2.3	1.7
Mining	3.3	5.2	3.7	2.9	2.6	3.3	2.5	2.4	2.5	2.1
Construction	3.5	3.0	3.5	3.4	3.1	3.1	2.1	2.3	2.3	1.7
Manufacturing	3.4	1.5	2.5	2.4	2.4	2.8	2.0	2.2	2.4	1.7
Administration services	5.7	2.8	1.5	1.7	2.0	2.4	1.6	1.9	2.1	1.5

Calendar year changes in Australian Capital Territory real productivity adjusted Labour Price aggregates

Annual % change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Australian Capital Territory	0.0	2.0	-0.2	-0.2	1.0	1.4	-0.2	-0.1	0.1	-0.5
Utilities	2.0	1.9	0.0	-0.5	-0.2	0.8	-0.4	-0.5	-0.3	-0.7
Mining	1.1	2.5	0.5	0.2	0.3	1.4	0.2	-0.2	-0.1	-0.4
Construction	1.3	0.4	0.3	0.6	0.8	1.1	-0.1	-0.3	-0.3	-0.7
Manufacturing	1.3	-1.1	-0.6	-0.4	0.1	0.9	-0.3	-0.4	-0.2	-0.7
Administration services	3.5	0.1	-1.5	-1.0	-0.2	0.5	-0.7	-0.7	-0.5	-0.9

Source: ABS, Access Economics estimates, Access Economics labour cost model

Chart 7.6: Australian Capital Territory utilities forecast comparison



Source: ABS, Access Economics estimates, Access Economics labour cost model

Appendix A: Some rules of thumb for wage forecasting

Inflation has three main drivers:

- wage gains (or, to be more exact, wages relative to productivity),
- import prices, and
- the degree of pressure on prices coming from the spare capacity (or the lack of it) in the economy.

The Reserve Bank tries to keep consumer price inflation (CPI) to an average of 2 to 3% a year across the business cycle. That is an average both across time and across categories. For example, retail prices for imports have grown relatively slowly across the past decade, while prices for services have tended to grow faster.

Aiming for average CPI of 2 to 3% also requires aiming for average inflation in labour costs of the same.

- That is exactly what does occur – growth in nominal unit labour costs is close to growth in the CPI over time.
- Many people in the corporate world find that strange at first blush. After all, they see their own wages and those of people around them growing at faster rates.
- However, there are two other steps to take account of in translating wage growth into labour cost growth.
 - **First**, the workforce sees entries and retirements each year, with those retiring on higher earnings than the juniors who are entering. To look at the wage growth of individuals as a proxy for wage growth more widely is to forget that the group of individuals gains a year in experience and seniority every year whereas, due to retirements, the workforce as a whole sees rather less of an increase in experience and seniority every year.
 - **Second**, whether considering a specific group of individuals or the workforce as a whole, you have to remember that we get better at working over time – for example, thanks to working with better equipment. This growth in labour productivity saves money. For example, the work that last year took an hour may this year take 58 or 59 minutes. In turn, that productivity growth reduces the impact of rising wages on labour costs.

The above therefore helps to identify some rules of thumb:

- Across a long enough period, growth in prices will tend to average somewhere in the Reserve Bank's target range of 2 to 3% a year – perhaps 2.5%.
- The same is true for labour costs for a unit of output (nominal unit labour costs) – also averaging somewhere close to 2.5%.
- However, wages for the 'average' worker will tend to grow faster – the sum of both prices and productivity. As the latter has averaged around 1.75% over the past three decades, that might suggest that wages for the 'average' worker will grow by perhaps 4.25% in a typical year.

- There will be a divergence between wage growth on the one hand and price and productivity growth on the other over the course of a business cycle. When demand is strong relative to the available supply of workers, wage growth will exceed this rule of thumb measure – and vice versa.
- Moreover, wages for the typical ‘specific’ worker will tend to grow faster still, as their seniority and experience increases each year. It is harder to identify a general rule of thumb here, as the reward for seniority and experience varies notably across sectors and occupations, as well as across the business cycle. That said, wages for the typical ‘specific’ worker will tend to grow by perhaps 5.25% in a typical year.

Appendix B: Regional wage variations in Australia

There are some natural limits to the extent or period to which wages and prices can be notably higher or lower in one State or region versus another.

For example:

- Workers can move between and within States (“we’ll leave Adelaide and try our luck in Perth”).
- Workers can move to Australia from other nations:
- Permanent and temporary (visa 457) migration may be bureaucratically slow to move, but has the potential to ease a transition period.
- As do shifts by permanent residents (Australians who decide to go to London next year rather than this, or to come back from working in Canada because prospects are now better here).
- Shifts by New Zealanders (who face fewer restrictions on migration than do those from other nations).
- Shifts in wages can and will see people substitute into growing areas related to their existing skills (“I’ll leave construction and try my luck in mining”).
- Ditto shifts in relative wages can delay retirements or exits (“We’ll have baby next year”), as well as encourage new entrants (“I’m going to study electrical engineering, because wages in that occupation are good”).
- Shifts in the use of labour due to changes in relative costs (“We’ll use more enrolled nurses and fewer registered nurses because wages for registered nurses have risen relative to those for enrolled nurses”).

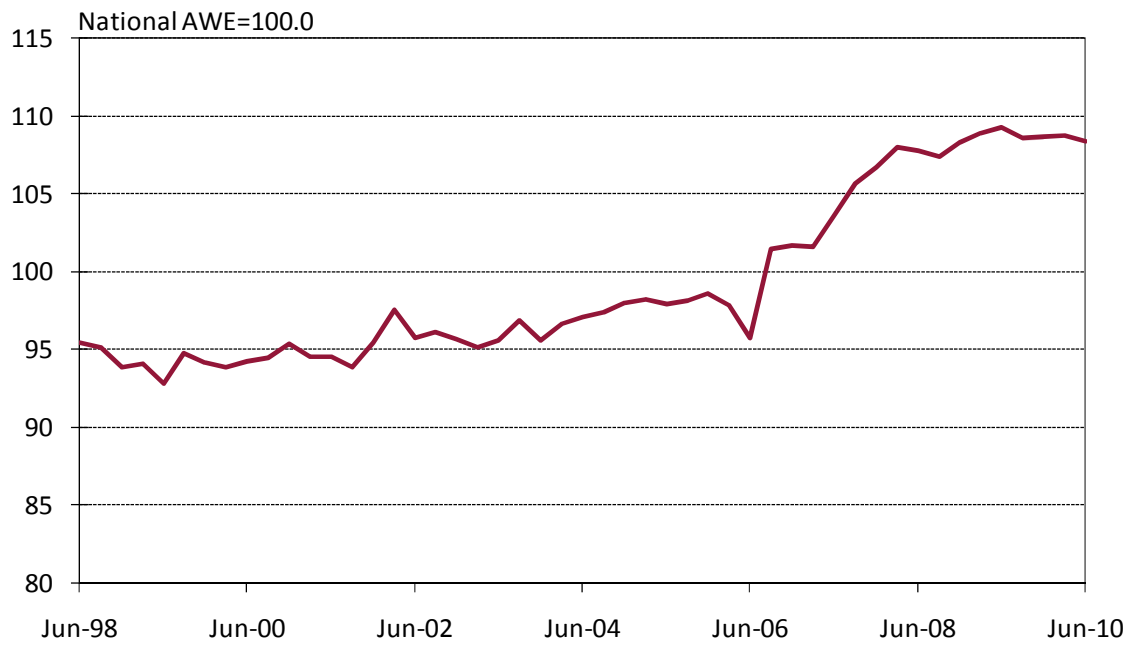
Many of these ‘equilibrating factors’ can be very slow to operate, meaning that divergences in wages across States (and, for that matter, across sectors and occupations within a State) can persist for long periods.

However, they will tend to narrow over time as these supply and demand factors in labour (and materials) markets gradually make their presence felt.

An example is Western Australian wages relative to national wages, as seen in the chart below.

That ratio rose during the boom, but is now starting to level off, and the next move in this ratio is likely to be downward.

Chart B.1: Western Australian wages relative to national wages



Source: ABS, Access Economics

Appendix C: Macro economic and wage forecasting methodology

Introduction

The model used by Access Economics to forecast the LPI by State and by industry has been created as a subsidiary component of our Access Economics Macro (AEM) model. Key aggregates, including overall wage and productivity movements, and projections for output and employment by State and for Australia are used to drive LPI measures at more detailed levels.

The macroeconomic forecasts presented in this report are based on preliminary estimates from the AEM model (March 2010). The reason these forecasts can only be regarded as preliminary is that while the key December quarter output variables (contained in the quarterly national accounts publication) have been released a number of other important variables are not yet available. Key among these are the December quarter dwelling commencements (housing starts) as well as February employment levels. Both variables will have a considerable impact on our view of the current state of the Australian economy, as well as the short term output. As such the forecasts underlying this model will differ to some degree from those that will appear in the March quarter Business Outlook publication, with the level of difference depending largely on these latter economic releases.

The following are **excerpts** from the full model documentation that cover the creation of the key driver of the detailed wage model. Full documentation for this component of the model can be provided to AER on request.

Macroeconomic forecasting

AEM is a macroeconometric model of the Australian economy. It is made up of numerous accounting identities and behavioural equations which describe the aggregate actions of households, businesses, government and foreigners. The formulation of these behavioural equations is based on mainstream theory. The resultant model is best described as a small open economy model in which all foreign (world) prices and interest rates are taken as given (that is, they are exogenous to the model).

The structure of AEM has evolved over time in response to various forecasting and policy simulation challenges. Significant changes to current and future Australian population characteristics have led to a number of changes in the structure of the AEM over the previous version (version 5).

In brief, the model now has a better spelled out supply side, with an endogenous role for capital deepening and an exogenous role for total factor productivity growth, which along with a more detailed treatment of population dynamics acts as a long term anchor for output.

As Treasury Secretary Ken Henry noted in March 2007, Australia cannot:

“... generate higher national income without first expanding the nation’s supply capacity: one of the 3Ps — population, participation or productivity. Now you might be thinking that that’s all pretty obvious. It is, after all, a tautology. But

one of my messages to you today is that if you understand what I have just been talking about, then you are a member of a rather small minority group."

The redesigned model adds to the sectoral structure of the previous version, which included a business sector, a housing services sector and government sector, by netting out farm output from the business sector. Given the variable nature of farm output, this change allows us to account for volatile changes that could not be captured when farm output was combined with non-farm output.

In the new model, business sector factors of production (capital and labour) produce non-farm business sector output, which is non-farm GDP less the service flow from housing and the value of government services. The level of business sector output is the sum of potential output and the output gap.

Potential business sector output is the level of output that would exist if there were no temporary or cyclical influences. In constructing potential business sector output, considerable attention is paid to the population characteristics which influence labour force participation, the growth rate of residual total factor productivity and the expected rate of capital deepening. The output gap is the gap between actual and potential business sector output. Negative output gaps imply the economy is operating below its potential, while positive gaps imply the economy is operating above its potential.

Fluctuations in the output gap are driven by a number of cyclical factors, including fluctuations in interest rates, foreign GDP and the terms of trade.

Imports are effectively intermediate goods in the latest version of the AEM model. They are combined with domestically produced traded goods to produce gross national expenditure on traded goods. Higher domestic demand raises the demand for imports. In contrast to the previous version of the model, the level of exports is determined by foreign demand conditions rather than domestic supply conditions. Just as stronger domestic demand raises the demand for imports, stronger foreign demand raises the demand for exports.

The demand for capital and labour in the new model has been reworked so that the short and long run paths of capital and labour are consistent with the forecast potential output path.

One of the new features of the model is the introduction of an equation forecasting the price of business sector investment. This change was necessary because the previous model assumption that the pricing of consumption and investment goods are similar no longer fits with the data. This change should yield more accurate forecasts of investment and the returns to investment.

Changes to the household sector in the model were minor. The most significant change involved the introduction of equations for the price of consumption and housing investment.

With the exception of some minor changes caused by the introduction of distinct prices for consumption and investment, the balance of the model remains unchanged.

Finally, model parameters are estimated using quarterly data extending from September 1974 to the most recent quarter for which data are available. Quarterly data are used as annual data is too aggregated to allow analysis of turning points and interest rate movements. Monthly data is not feasible because most key ABS collections are produced on a quarterly

basis – notably the national accounts, the balance of payments, CPI and international investment data. Another advantage of quarterly data over annual data is that both calendar and financial year totals can be calculated.

Domestic production

Domestic production is divided into farm and non-farm. Non-farm production is further divided into household, general government and business sector production.

The current version of the model nets out **farm sector** production from total production. Given the variable nature of farm output, this change allows us to account for volatile changes in farm output that could not be captured when farm output was combined with non-farm output. Farm output is an exogenous input to the model.

In keeping with the previous version of the model the **household sector** produces housing rental services. This is the household sector's only output. The service flow is modelled as a fixed proportion of the housing capital stock.

Public sector production is limited to general government output, which comprises general government services (equal to the wage cost of the general government employees) and general government gross operating surplus (equal to the depreciation of general government capital).

All other non-farm production takes place in the **business sector**, which incorporates private and public enterprises. Business sector output is produced using capital and labour via a standard constant returns production technology. Business sector production is also influenced by the level of total factor productivity.

To capture the impact of cyclical fluctuations on the economy business sector output is divided into potential output and an output gap. **Potential business sector output** is the level of output that would exist if there were no temporary or cyclical influences. In constructing potential business sector output, considerable attention is paid to population characteristics which influence labour force participation, the growth rate of residual total factor productivity and the expected rate of capital deepening.

The **business sector output gap** is the gap between actual and potential business sector output. Negative output gaps imply the economy is operating below its potential, while positive gaps imply the economy is operating above its potential. Fluctuations in the output gap are driven by a number of cyclical factors including fluctuations in interest rates, foreign GDP and the terms of trade. Output gaps play an important role in determining the level of price and wage inflation.

AEM forecasts all components of aggregate demand. To ensure consistency between aggregate expenditure and aggregate output, the model uses adjustment factors which trim individual expenditure components so that aggregate expenditure equals aggregate output.

Labour market

The size of the **labour force** is forecast using exogenous assumptions about **age specific population growth** and **labour force participation**.

There are two measures of employment in the model. There is the potential employment that underlies the estimate of potential output and actual employment. The output gap to a large extent reflects the gap between the actual and potential employment.

Potential employment is the actual labour force less the level of unemployed workers implied by the natural rate of unemployment, where the natural rate of unemployment is the level of unemployment that would exist in the absence of cyclical fluctuations.

Actual employment is the actual labour force less the level of unemployed workers implied by the actual rate of unemployment.

There are three types of workers in the economy, civilian non-government (business sector workers), civilian general government and defence employees. Demand for business sector workers is endogenous, while the demand for the other two types is exogenous.

Business sector employment is driven by a standard labour demand function that relies on labour productivity, real wages and business sector output growth. Since labour force participation is tied down by exogenous assumptions, the actual unemployment rate for the economy is the residual after subtracting employment (for all three types of workers) from the labour force.

Other measures of employment, such as **wage and salary earners** are assumed to grow at the same rate as total employment.

Prices and wages

In addition to national account price deflators, the model also includes the underlying and headline measures of the **consumer price index (CPI)**, and prices for **new cars, house building materials, material used in manufacturing, and preliminary stage domestic and imported commodities**.

The model also includes a number of measures of wages. The central measure is **average quarterly earnings** estimated from the national accounts. Other measures include **average weekly ordinary time earnings, average weekly earnings** and the **labour price index**.

Price and wage inflation in AEM are governed by the behavioural equations of the:

- business sector output gap;
- real exchange rate;
- import prices (including oil prices);
- monetary policy reaction function;
- average quarterly wages; and
- underlying consumer price index.

The way these equations interact is best observed through some examples.

A positive shift in domestic demand that raises the gap between actual and potential output (a positive output gap) will have a direct impact on price inflation by raising the underlying CPI.

Wages respond with a lag to changes in underlying CPI inflation, with the long run real wage tied to CPI inflation and labour productivity growth.

A positive output gap also has a direct and indirect effect on real interest rates via the monetary policy reaction function, with the typical reaction to a widening output gap and higher price inflation being higher nominal interest rates. Higher interest rates dampen domestic demand which narrows the output gap and relieves upward pressure on price and wage inflation. Over time this mechanism forces the output gap back to zero, interest rates to a neutral position and inflation to return to the RBA target level.

A change in real wages that exceeded the change in labour productivity raises price inflation in the short run. Since wages increase by more than labour productivity this raises nominal unit labour costs, which in turn raises underlying CPI inflation. Wages in turn respond to changes in underlying CPI inflation. Over time wage inflation will equal price inflation (plus changes in productivity growth). In the long run, price inflation is governed by the same mechanism at work in the output gap example above, which forces the CPI inflation rate to return to the RBA target level.

While the real exchange rate and import prices do not have an import role in the output gap and real wage scenarios, they are key players in the next foreign price shock example. Holding other things constant, higher world prices raise domestic import prices. Higher import prices have a direct impact on price inflation by raising the underlying CPI. Higher price inflation causes nominal interest rates to rise via the monetary policy reaction function. Higher domestic interest rates and incomplete pass-through of world price changes to domestic prices causes the differential between domestic and world real interest rates to rise.

Ordinarily this would imply an appreciation of the real exchange rate but in the Australian case this is more than offset by a deterioration of the terms of trade due to higher import prices which causes a depreciation of the real exchange rate. Combined with incomplete price pass-through the nominal exchange rate appreciates in the short run, which partly offsets the rise in domestic import prices due to rising world price. Over time there is full pass-through of world prices to domestic prices, which eliminates the gap between domestic and foreign real interest rates and returns the terms of trade to its pre-price shock level. Just as in the domestic inflation example, wages respond with a lag to changes in underlying CPI inflation, with the long run real wage tied to CPI inflation and labour productivity growth.

Wage forecasting

The wage forecasting methodology adopted in this report involves estimation of the deviations between industry – and State-specific wage measures and the broadest measures of wages in the Australian economy. In other words, the AEM model has provided an overall picture for how the LPI will move, and the remainder of the modelling determines which industry, State and industries within States will see their LPI measures grow faster or slower than this value.

Industry and State Labour Price Indices

Modelling of specific labour price indices (LPIs) begins with the movements in the total Australian LPI – taken from the Access Economics Macroeconomic model. This measure serves as an anchor to overall wage rates in every part of the economy, in part because it provides a

measure of the wage rises that other employees are receiving, making it a common starting point for negotiations.

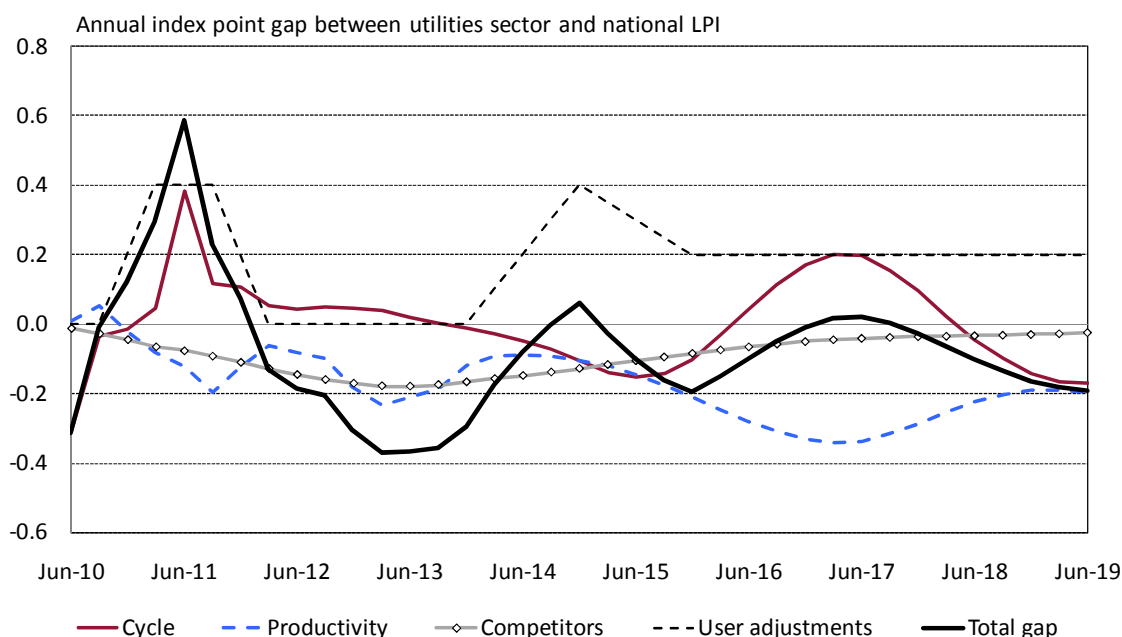
From this initial index, the model adds in deviations from the average. Three key factors will drive these wage differentials:

- **Business cycle factors.** Deviations in industry (or State) performance from the national average. Faster growing industries and States will tend to see faster growth in wages and vice versa. In this model, the key factor is how fast the industry (or State) is growing relative both to the national average, as well as to historical averages. So, while manufacturing growth in the future may be below the national average, if the gap is relatively less than has been seen in recent years, this is viewed as an out-performance by the sector and would see some upward pressure on wages. In this model the methodology is forward-looking, with forecast growth across the next six months (as well as the past twelve) used to determine the current performance of an industry.
- **Productivity factors.** The model assumes that industries with faster growth in productivity will see faster growth in wages – workers across an industry being rewarded for increasing the average amount of output per employee faster than the national average. As these factors take some time to become evident (and due to the inherent volatility in productivity measures at the State and industry level) an average productivity trend across the past two years is used.
- **Competition (relative wage) factors.** Depending on the nature of the industry, workers will have skills that are relatively more or less transferable to other sectors where wages may be rising faster than in their own. Indeed, many workers will be performing effectively the same task (or same occupation – effectively their job description) across different industries (as their industry classification is determined by what their employer produces, rather than what they do). This will tend to limit the ability of wage rates to diverge. As wage rates in (say) mining rise higher, companies in (say) the construction sector will be forced to pay higher wages to keep their staff. Similar factors operate across States – although they are likely to be less significant (and react only to relatively larger discrepancies in wages). The modelling here will see wages in competitor industries tend to move more closely together – with industries that are benefiting from the two previous factors tending to be drawn back towards the average, and wages in otherwise slow growing industries boosted.

In addition to these three ‘mechanical’ factors, there is often the need to use judgement to determine movements in wages – particularly when other data is volatile (which employment data currently is) and when factors not relevant to wage determination are having effects on broader output and employment measures.

It is important to remember that the LPI for an industry is a composite measure and can, in certain situations, behave in the perverse manner. When there is a significant change in the occupational structure of an industry, movements in the LPI may not be reflective of movements in the wages of individual employees. In an extreme case, it would be possible for (say) all the high-paid workers in an industry to take a pay cut but the overall LPI measure in the industry to rise as all the low-paid workers left the industry all together – shifting the average wage towards the higher level.

Chart C.1: Sample wage growth decomposition at the national level



Source: Access Economics labour cost model

The user-defined adjustments that are required have been explicitly shown in the charts that decompose the movements in industry LPI. The chart above (analysing the national utilities sector) compares movements to the national LPI – above the line means growth in the index of more than would be expected if it rose in line with the national LPI and below the line implies growth in the index less than that implied by the national LPI.

In the case of the utilities sector chart above, this indicates the following:

- The recent strength in the utilities sector will keep upward pressure on the wages in the sector (represented here by the **Cycle** line). By the end of 2011 growth rates will begin to move in line with the overall economy and the cyclical pressure will diminish; and
- The lower rate of productivity growth in the utilities sector will put downward pressure on the LPI for utilities across the forecast period (the **Productivity** line).
- The relatively strong growth in utilities sector wages implied by these first trend (and the recent strength in the LPI) means the sector will face minor downward wage pressure. Weakness in the manufacturing sector is particular will limit the impact from competitor industry wages (the **Competitors** line). In the longer term this effect will ease.

The final result of all of these effects is utilities sector LPI ahead of the national average early on, lagging through 2012 and 2013 and broadly similar beyond.

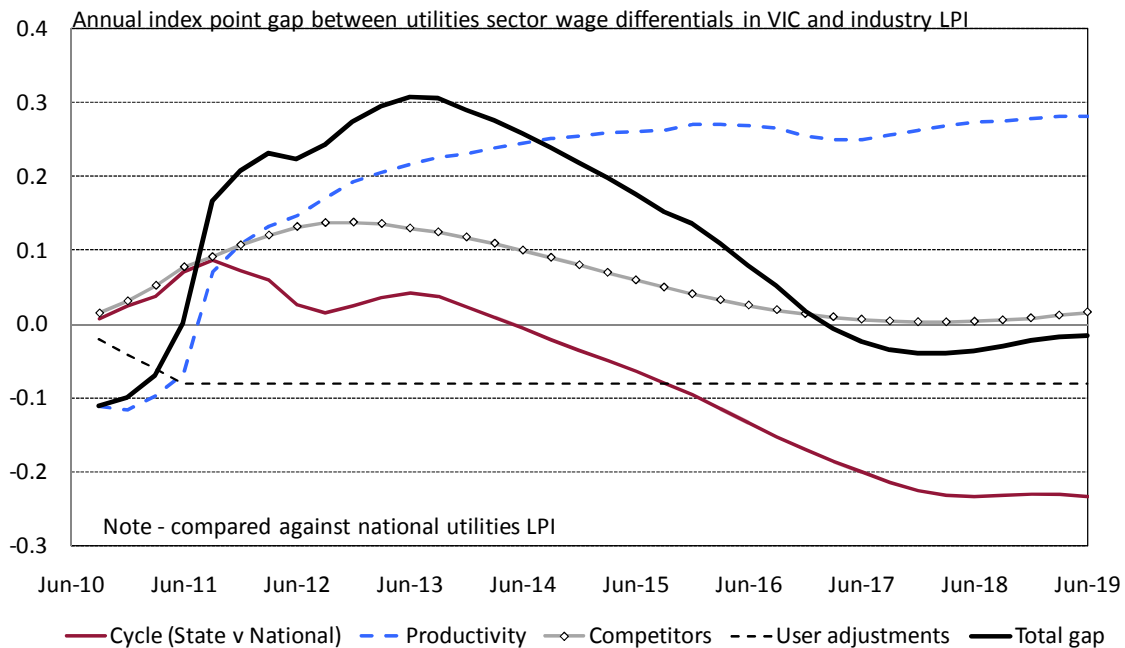
In the case of State-level indices, our point of departure is the national industry LPI. So the chart below implies that Victoria’s utilities sector LPI will:

- Grow relatively fast initially as Victoria’s economy rebounds, but be dragged lower in the longer run as other State’s see the strongest output growth;

- Be boosted in the longer run by stronger productivity growth; and
- Will initially be boosted as the Victoria’s LPI is currently low by historical standards, with the effect less of a factor in the longer run.

Note, in this case we have marginally lowered the longer term growth rate in addition to the modelled effects.

Chart C.2: Sample wage growth decomposition at the State level



Source: Access Economics labour cost model

Labour prices versus labour costs

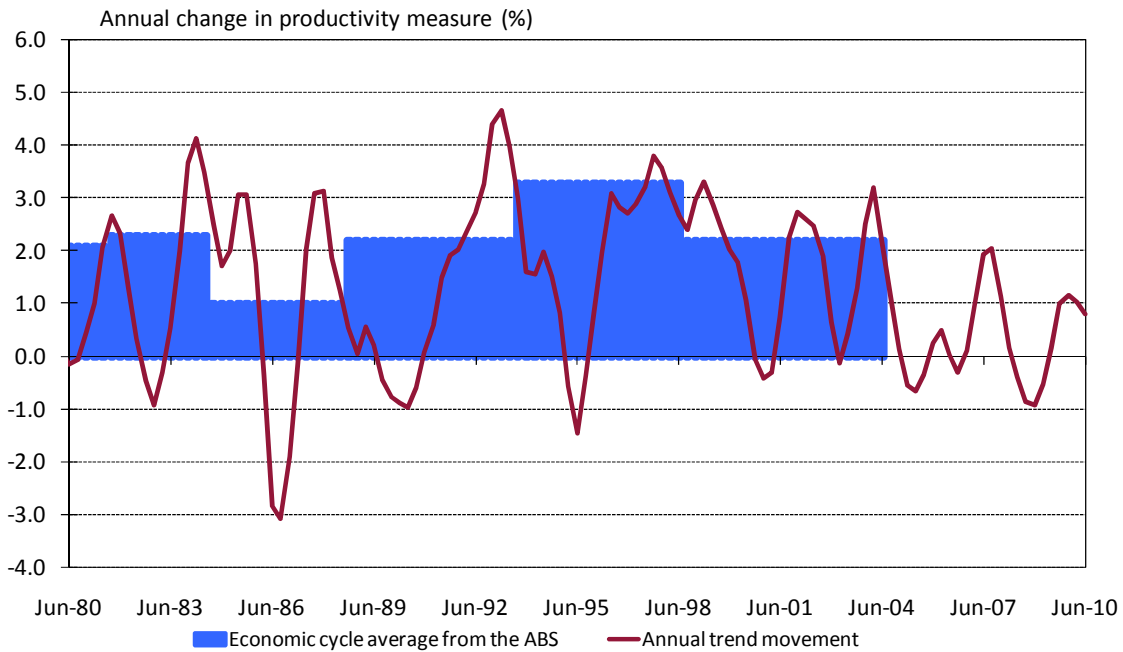
The methodology above estimates movements in labour prices – the cost of employing the average employee, whether broadly in the Australian economy, or in a specific industry in a specific State.

However, labour costs will rise at a different rate due to the effects of labour productivity growth. Effectively, labour productivity measure the number of units of output an individual employee can produce in a given time period. The more units of output each worker can produce, the fewer workers are required to create a given level of industry output. If productivity is rising, the total cost of labour (the price of each employee multiplied by the number of employees) will rise less rapidly than the individual employee’s price.

The measure adopted for increases in labour costs is the growth in productivity-adjusted labour prices. Because so many factors can influence productivity (for example, during times of rapid expansion in employment, productivity may fall as new workers are often less productive than those who have been working in an industry for longer, but productivity may also rise as ‘economies of scale’ become available, and workers who may have been underemployed in their workplace increase their effective level of output) it is often best measured over an entire economic cycle. The chart below shows annual growth in a simple

productivity measure against the ABS' cyclical average measure (the last published cycle ends in 2003-04, so the last few years have no official cyclical productivity growth measure).

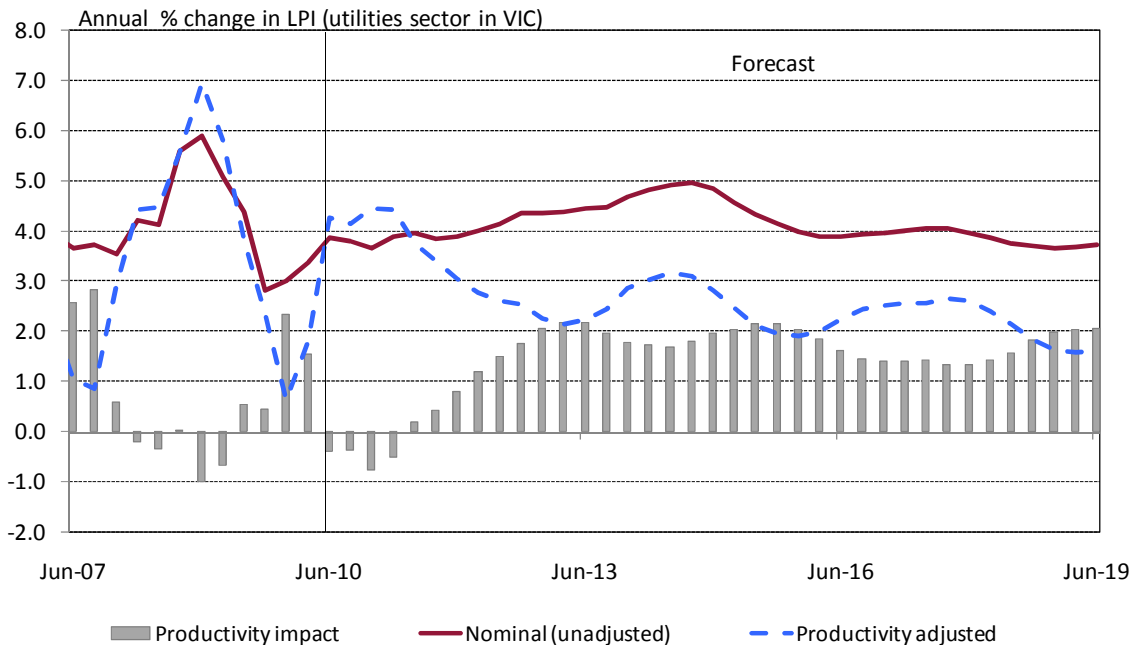
Chart C.3: Measures of cyclical productivity



Source: ABS

However, in the methodology used here the volatility in the underlying productivity data is minimised by creating a composite productivity measure based on national, industry and State-specific productivity movements – where the relative impact of movements in the smaller and more volatile States and industries is lessened.

Chart C.4: The impact of productivity on wages growth



Source: ABS, Access Economics labour cost model

In the example above, the cyclical impact of productivity becomes more clear. Across the latter part of the forecast (from 2011 to 2019), the nominal (or unadjusted) LPI rises by 4.2% per year, while the rate of increase adjusted for productivity improvements is just 2.3% per year – the gap implying productivity improvements of 1.8% per year.

Appendix D: Different measures of wage growth

The Australian Bureau of Statistics published an article in the October 2005 issue of Australian Labour Market Statistics (catalogue 6105.0) which discussed the comparative features and relative merits of the measures they produce.¹² The following reproduces part of that article, and then adds some observations.

Introduction

Statistics on employee remuneration are in demand from a wide range of users, including economic analysts, social researchers, policy makers, and employer and employee associations. The ABS publishes a number of measures relating to the remuneration of employees, to meet the different needs of users. These measures include average weekly earnings, changes in the price of labour, and compensation of employees.

The variety of measures available can sometimes lead to misunderstanding and misapplication. The choice of measure will depend on what type of analysis is being undertaken. This article explores the differences between the various measures of employee remuneration.

Measures of employee remuneration

Three distinct measures of employee remuneration are discussed in this article: earnings; changes in the price of labour; and compensation of employees. Each measure is outlined below.

Earnings

Estimates of the level of earnings are produced from a number of surveys: the Survey of Average Weekly Earnings (AWE); the Survey of Employee Earnings and Hours (EEH); and the Survey of Employee Earnings, Benefits and Trade Union Membership (EEBTUM).

The AWE survey is one of the major sources of data on earnings, and is designed to provide a quarterly measure of the level of earnings. Three earnings series are produced from AWE:

- average weekly ordinary time earnings for full-time adults;
- average weekly total earnings for full-time adults; and
- average weekly total earnings for all employees.

While the AWE survey provides a frequent time series, data are only available for full-time adult employees and all employees, and can only be cross-classified by a small number of variables, such as sex, state, sector, and industry. The EEH and EEBTUM surveys provide additional detail, although on a less frequent basis. The EEH survey is run every two years and provides a large number of variables important in the analysis of weekly earnings, including: managerial/non-managerial status; state; sector; level of government; industry; occupation;

¹² See <http://www.abs.gov.au/AUSSTATS/abs@.nsf/90a12181d877a6a6ca2568b5007b861c/9b6a7239b96304ddca2570930000e4bf!OpenDocument>

employer size; sex; full-time/part-time status; adult/junior status; and type of employee (e.g. permanent/fixed-term contract or casual). The EEH survey therefore supplements AWE survey data by providing detailed information on the composition and distribution of employee earnings and hours.

The annual EEBTUM survey is a household survey, in contrast to the AWE and EEH surveys which are business surveys. The EEBTUM survey, which is conducted as a supplement to the monthly Labour Force Survey, collects weekly earnings data cross-classified by a range of socio-demographic information, including: sex; age; marital status; relationship in household; geographic region; school attendance; birthplace and year of arrival in Australia. The EEBTUM survey also collects details about the type of employment, including: occupation; industry; hours worked; full-time or part-time status; sector; size of workplace and leave entitlements.

While the EEH and EEBTUM surveys are run less frequently than the AWE survey, they are a valuable source of information as they enable detailed analysis of earnings levels.

Changes in the price of labour

Information on changes in the price of labour is available from the quarterly Labour Price Index (LPI). The LPI is compiled from information collected from businesses on changes in wage and non-wage costs. Information collected on wages is used to produce a Wage Price Index (WPI).

The WPI was first compiled for the September quarter 1997 and is the main ABS measure of changes in wages. The WPI measures quarterly changes over time in the cost to an employer of employing labour, and is unaffected by changes in the quality or quantity of work performed.

The ABS publishes four wage price indexes each quarter. The headline WPI series is the index of total hourly rates of pay excluding bonuses. This series excludes bonus payments (which generally relate to the individual performance of the employee or to the organisation's performance), and so represents a pure price measure for combined ordinary time and overtime hourly rates of pay.

Compensation of employees

Compensation of employees (CoE) is a quarterly measure of the total remuneration paid to employees in return for work done and is published as part of the national accounts. Compensation of employees is a broader measure than earnings as it includes irregular payments (e.g. annual bonuses) and social contributions paid by the employer (e.g. severance, termination and redundancy payments; employer superannuation contributions; and workers compensation premiums). These payments are excluded from measures of earnings, which have a narrower focus.

Table D.1: Measures of wage growth

	AWE Survey	EEH Survey	EEBTUM Survey	LPI	CoE
Key series produced	Average weekly total earnings (AWTE) for full-time adult employees and all employees. Average weekly ordinary time earnings (AWOTE) for full-time adult employees	Average weekly earnings for all employees. Average weekly earnings for full-time adult non-managerial employees	Median and mean weekly earnings of full-time, part-time and all employees	Labour Price Indexes. Wage Price Index (WPI) of total hourly rates of pay excluding bonuses.	Non-farm Average Earnings National Accounts (AENA)
Designed to measure	Level estimates of weekly earnings and the distribution of earnings	Level estimates of weekly and hourly earnings and the distribution of earnings	Level estimates of earnings and the distribution of earnings	Changes in the price of labour	Level estimates of average compensation of employees
Frequency and basis of survey	Quarterly survey of businesses	Biennial survey of businesses	Annual survey of households	Quarterly survey of businesses	Quarterly national accounts series based on quarterly survey of businesses
Benefits of the methodology	Quarterly time series (original, seasonally adjusted and trend estimates available)	Provides detailed job information allowing analysis by industry, occupation, hourly rates etc. Source of distributional data (e.g. quartiles)	Provides detailed demographic and job information. Source of distributional data (e.g. medians)	Provides estimates of wage and non-wage inflation	Broad measure of remuneration
Limitations of the methodology	Few cross-classificatory items	Survey run infrequently (two-yearly)	Only provides average weekly total earnings (no series on ordinary time earnings). Includes payments not related to the period of work performed (e.g. backpay and pay in advance)	No level estimates or in-depth cross-classificatory items	Few cross-classificatory items
Publication description and ABS catalogue number	Average Weekly Earnings, Australia (cat. no. 6302.0)	Employee Earnings and Hours, Australia (cat. no. 6306.0)	Employee Earnings, Benefits and Trade Union Membership, Australia (cat. no. 6310.0)	Labour Price Index, Australia (cat. no. 6345.0)	Australian National Accounts: National Income, Expenditure and Product (cat. no. 5206.0)

A quarterly measure of the average CoE per employee, known as Average Earnings National Accounts (AENA), is produced by dividing the total compensation of employees for the quarter by the total number of employees. The total number of employees is estimated using Labour Force Survey data, calculated as an average of the three months in each quarter. Some adjustments are made to this estimate of employment. Two measures of AENA are produced: average non-farm compensation per employee; and average compensation per employee. The average non-farm compensation per employee estimate is the key series, as it is a more stable estimate. This is because employee earnings in the agricultural sector can fluctuate due to seasonal effects.

Comparison of the surveys and their key series

Table D.1 provides a comparison of each of the surveys discussed. It outlines the key series produced, what each survey is designed to measure, the frequency and type of data source, the benefits and limitations of each survey, and the related publication.

Access Economics' view

As the above discussion from the ABS suggests, they see the LPI as their preferred measure for "changes in the price of labour".

That is the task at hand here, and hence the LPI (excluding bonuses) is Access Economics' preferred measure for this type of analysis.

Indeed, the LPI was originally developed because of the shortcomings of existing wage measures for this type of analysis. For example, AWOTE is affected by shifts in the composition of employment. For example, if a sector employs relatively more high paid full time workers over time (as has happened, for example, in the manufacturing sector as low skilled jobs have been lost to competitors in developing Asia), then that will tend to raise measured AWOTE even if the wage levels for a given level of skill have not changed at all.

More broadly, compositional changes arising from the business cycle, changed educational levels, the pace of recruitment and retirement, the degree of outsourcing, changed relativities in the employment of men and women and compositional changes arising from shifts in average hours worked can all distort AWOTE as a proxy for "changes in the price of labour".

That said, 'best measure' is not the same as 'perfect measure', and there are also drawbacks to using the LPI.

First, the LPI is published by State and by sector separately, but not by State and by sector. That is, the LPI for NSW is published, and the mining sector LPI is also published, however the NSW mining sector LPI is not. The latter data is only available by special request and, in the case of small sample sizes, the ABS does not release their estimates. In contrast, more series at the 'by State and by sector' are available for AWOTE from the ABS 6302.0 release.

However, it is possible to 'back out' reasonable estimates of LPI at the 'by State and by sector' level. Appendix E discusses how Access Economics does that. The resultant series are rather less volatile than the matching ABS AWOTE series.

Second, it is sometimes relevant that the composition of the workforce is changing. That is particularly true in analysing the implications of wage developments for the Australian

economy as a whole. For example, promotions are easier to get during a sustained expansion, reflecting the strength of cyclical demand rather than pure productivity. Other things equal, that adds to total incomes in the economy, but doesn't show up in the LPI (which does not 'recognise' that people at a certain seniority today are, on average, different to those who were at that level some years past).

As the LPI has only existed since 1997, and Australia's long economic expansion began in 1992, there is an argument that the LPI has understated true 'like-for-like' wage gains across most of the time it has been in existence.

However, that bias is unlikely to have been large.

Moreover, the cycle has since swung. Even though the current slowdown in the economy is smaller than the recessions of the early 1980s or early 1990s, the change in the cycle suggests that – other things equal – the pace of promotions is slowing and hence that – again, other things equal, LPI is more likely to overstate potential wage growth than understate it.

EBAs and contract rates

Access Economics' forecasts are developed using a more formal modelling approach rather than a more 'institution-based' approach.

The latter focuses on:

- increases in the **Federal Minimum Wage / Fair Pay Commission** decisions,
- increases in **collective agreements** under enterprise bargaining, and
- increases in **individual agreements**.

That said, close attention to such institutional factors can assist in short term forecasting (as opposed to longer term forecasts), given that most such decisions have lingering effects on wage outcomes.

Accordingly, Access Economics notes developments in DEEWR's Trends in Federal Enterprise Bargaining¹³, and takes account of these in its short term forecasting if they appear likely to have a material impact.

¹³ These can be found at

www.workplace.gov.au/workplace/Publications/ResearchStats/Agreement/TrendsInFederalEnterpriseBargaining

Appendix E: LPI sectoral history at the State level

As discussed in Appendix D, the historical LPI data is not necessarily released for each sector by State. This is due to small sample sizes, and reasons of confidentiality. In some cases, where a specific LPI series is not available, a comparative series for average weekly earnings (AWE) can be obtained.

The following table shows (for the key States and sectors modelled) which data is available in time series for the LPI and (for those where LPI is not available) AWE. These are data series provided on the new ANZSIC06 basis. In the case of LPI data this has been provided across the period from September quarter 2008 to December quarter 2009 (six quarters of data on a consistent basis). For the AWE data only estimates since June 2009 are available from the ABS.

In addition, the AWE data for two series indicated with an asterisk (Mining in New South Wales and Utilities in the Australian Capital Territory) have ceased to be made available since the end of 2009.

(The latter trend – the expected reduction over time in the depth of detail which the ABS will be willing to release among AWE measures – is another reason to support the use of LPI data over time in this type of analysis.)

Table E.1: Wage data series availability

	Utilities	Mining	Construction	Manufacturing
New South Wales	LPI	-*	LPI	LPI
Victoria	LPI	-	LPI	LPI
Queensland	AWE	LPI	LPI	LPI
South Australia	AWE	AWE	AWE	LPI
Australian Capital Territory	-*	-	AWE	AWE

Source: ABS

As the table shows, we have some data for all the utilities series outside of the Australian Capital Territory (which was available until the end of 2009), and all the series for key competitor industries apart from the (very small) Victorian and ACT mining sectors¹⁴ and the NSW mining sector. However, the overall AWE data itself is not consistent with the LPI data for Australia (as noted in the chart in the executive summary), so rather than using the raw data, to obtain a State by industry LPI we have used the deviations in the AWE growth from State AWE averages and applied a consistent ratio to the known State LPIs.

In other words, if the Queensland utilities sector AWE measure is rising faster than the overall Queensland AWE measure, then we allow the Queensland utilities sector LPI measure to rise faster than Queensland's overall LPI over the past six months. Because the AWE data has been far more volatile than LPI in recent years, we limit the deviations that this might imply¹⁵.

¹⁴ In these two cases (and all cases where we have no official data) we have used the relevant national LPI as a proxy for growth in the past six months.

¹⁵ We do that by comparing the variations in published AWE and LPI measures within each State and adjust the unknown deviations accordingly.

Note that in the case of sectors where only the AWE data is published, we have retained our historical estimates from the last report (that is, up to June quarter 2009) and only applied these growth rates to the interim results. For series where the longer LPI series is available, we have replaced our earlier estimates with these actuals.

ANZSIC 2006

Since the initial report (September 2009), the ABS has converted all the publications relevant to this report (industry output, industry employment and industry wages) from the old Australian and New Zealand Standard Industry Classifications (ANZSIC) which were produced in 1993 to the updated 2006 version.

ANZSIC 2006 has seen industry classifications expand, from 17 to 19, while the composition of industries has also changed.

New ANZSIC06 level LPI and AWE series by State and industry are only available from mid-2008 (for LPI) and mid-2009 (for AWE). For earlier data, Access Economics has used a concordance table (which excludes agriculture, as does the LPI) to reclassify the LPI estimates into the new ANZSIC structure. This concordance is shown in the table below.

The concordance shows that some industries remain unchanged – for example the mining sector remains as it was.

However some sectors have been distributed widely among the new industries. For example large portions of the ANZSIC 1993 Personal and Other Services has been reclassified into the Utilities, Administrative and Support Services and Public Administration.

The latter development has required recalibration of the historical LPI data to reallocate it across the new sectoral definitions.

Table E.2: Concordance between ANZSIC 2006 and ANZSIC 1993

Allocation of ANZSIC93 industries to ANZSIC06	ANZSIC93	Agriculture, Forestry and Fishing	Mining	Manufacturing	Electricity, Gas and Water Supply	Construction	Wholesale Trade	Retail Trade	Accommodation, Cafes and Restaurants	Transport and Storage	Communication Services	Finance and Insurance	Property and Business Services	Government Administration and Defence	Education	Health and Community Services	Cultural and Recreational Services	Personal and Other Services
ANZSIC06	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	
Agriculture, Forestry and Fishing	A	97.9					1.0											
Mining	B																	
Manufacturing	C	0.0		93.0			0.7	1.4										0.5
Electricity, Gas, Water and Waste Services	D					0.0												5.4
Construction	E	1.7		0.5		96.1		2.6					2.2					
Wholesale Trade	F						83.8	0.4					0.3					
Retail Trade	G						7.4	74.0										
Accommodation and Food Services	H							11.6	97.1									
Transport, Postal and Warehousing	I							0.8	90.0	43.2						0.4	1.2	
Information Media and Telecommunications	J			4.4						56.8		2.4				23.7	0.8	
Financial and Insurance Services	K										99.2							
Rental, Hiring and Real Estate Services	L							2.7				13.2						6.4
Professional, Scientific and Technical Services	M											59.1	2.0		1.5	0.8	0.7	
Administrative and Support Services	N			0.4		2.0	0.2	0.4	7.2	0.8	18.1				3.1	16.8		
Public Administration and Safety	O	0.2						0.3				2.7	98.0		1.4		20.6	
Education and Training	P								0.9			0.6				8.1		
Health Care and Social Assistance	Q														96.4			
Arts and Recreation Services	R							0.3				0.4					62.0	
Other Services	S	0.1		1.6		1.9	6.9	8.5	1.9			1.1			0.7	2.0	47.8	

Source: ABS, Access Economics – shaded cells indicate 100%, blank cells indicate 0%.

At the end of the reclassification process, Access Economics' labour cost model normalises the data, in order to make sure that the totals add both across States and across Industries to their respective LPIs. Employment weights are used in this process.

Overall industry LPI (and AWE) are available across the historical period, which provides an additional level of checking on our estimates.