ACCESS ECONOMICS

Forecast growth in labour costs

16 September 2009

Report by Access Economics Pty Limited for the

Australian Energy Regulator

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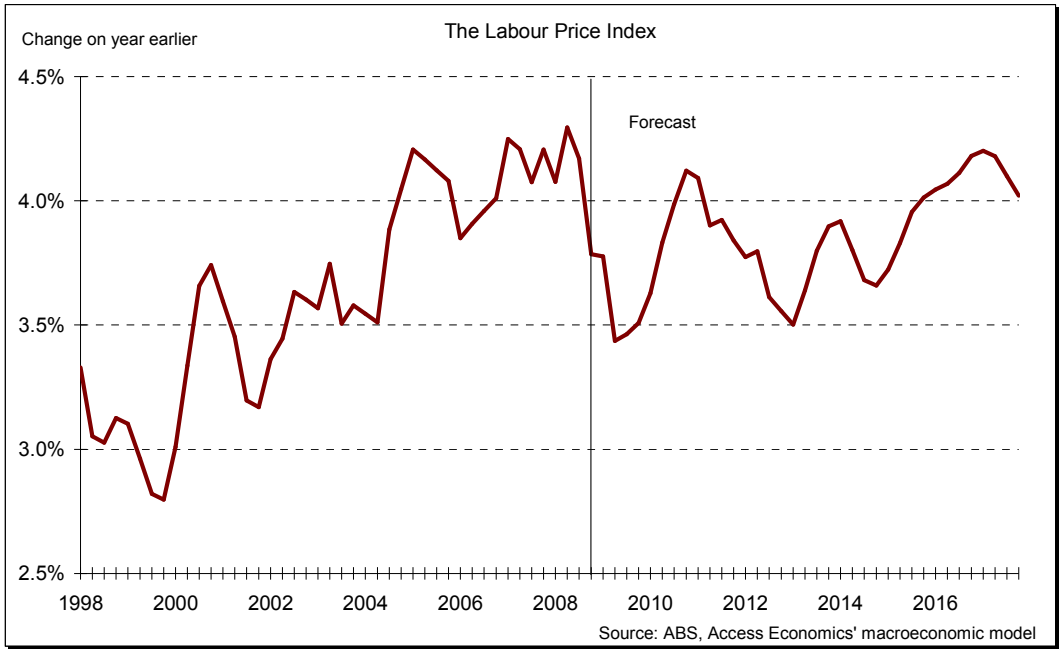
National wage growth

Wage growth edged steadily upwards through the long period of strong expansion in Australia's economy. The measure developed to best show underlying wage cost trends – the Labour Price Index seen in the chart below – steadily gathered pace, peaking in late 2008, but having spent most of the three years prior to that growing at 4% a year or better.



There were a number of reasons for the steady uptrend in wage growth, but most revolved around a strong economy and the resultant pressure on the labour force. Job growth in the 2000s averaged 2.3% a year, almost double the 1.2% a year evident in the 1990s. And the stronger economy pressured prices, with rising inflation also leading to rising wage growth.

However, and even allowing for the strong relative performance of Australia's economy, late 2008 marked a sea change. With job markets stalled, inflation easing and unemployment rising, it is no surprise that wage growth is now easing. Moreover, wage growth is easing relatively fast – Access Economics thought it would take a little longer for wage growth to slow this much, but the Labour Price Index (LPI, excluding bonuses) is already back under a 4% growth rate over the past year. That is the lowest in three years and, despite a degree of feistiness still seen in public sector wage growth, chances are that overall wage growth will ease further from here:

- Wage growth is moderating where you would expect it to in a downturn like that currently evident – in mining, finance, construction and manufacturing, with weakness also seen in business services, retail and communications. Moreover, wage growth in several of those sectors looks as though it is continuing to lose momentum – including in both mining and manufacturing, but also in business services and retail. At the other

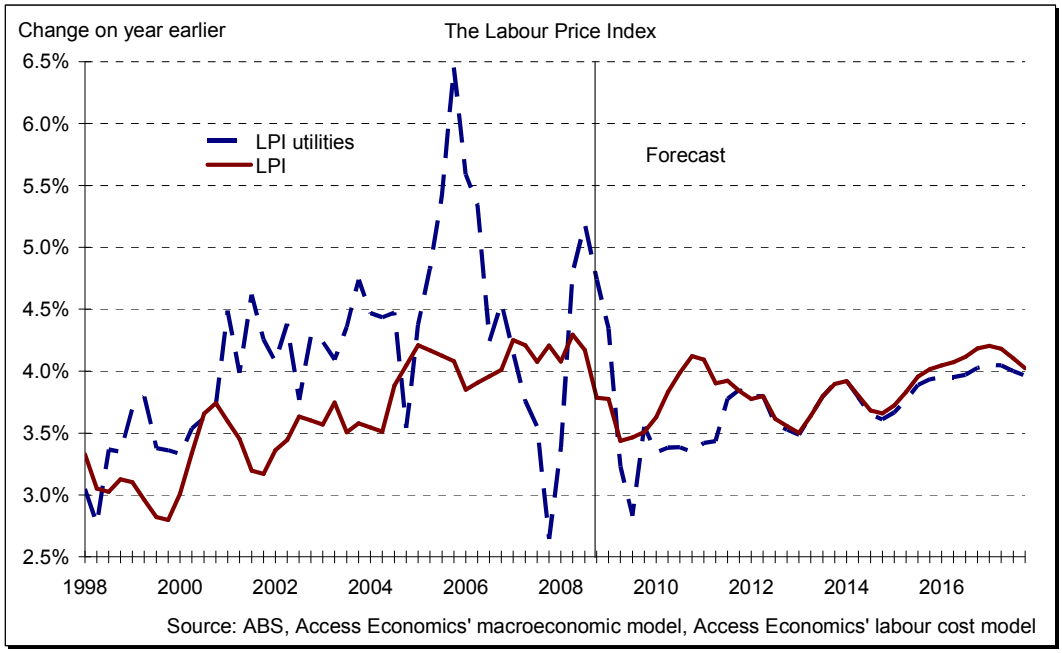
end of the scale, wage gains lifted further of late in health, defence and in education – all sectors well protected from the impact of market forces.

- The slowdown is similarly where you would expect it to be geographically, with the fastest slowdown in wage growth seen in Western Australia and the Northern Territory. Wage growth had not picked up pace to the same extent in NSW, Victoria and South Australia, and it continues to look subdued there.

As the above chart shows, Access Economics sees national wage growth (as measured by the LPI) easing to a trough of 3½% in 2010 before rising once more through 2011.

Utilities wage growth

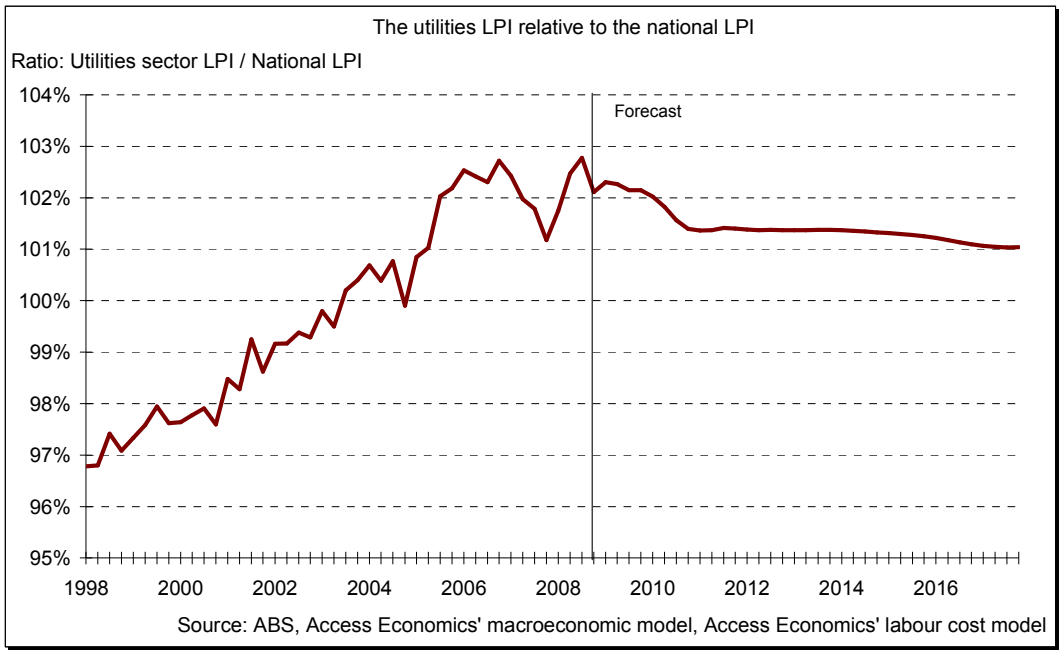
The composition of the job boom also stood out. Unusually, blue collar occupations did rather better in the 2000s than they had in earlier decades. As a result, a number of trades saw shortfalls in available labour, driving labour 'prices' ever higher as a result. Wage growth was most notable in mining and in sectors where miners were key alternative employers (such as construction and the utilities). Similarly, wage growth was strongest in resource States such as Western Australia, Queensland and the Northern Territory.



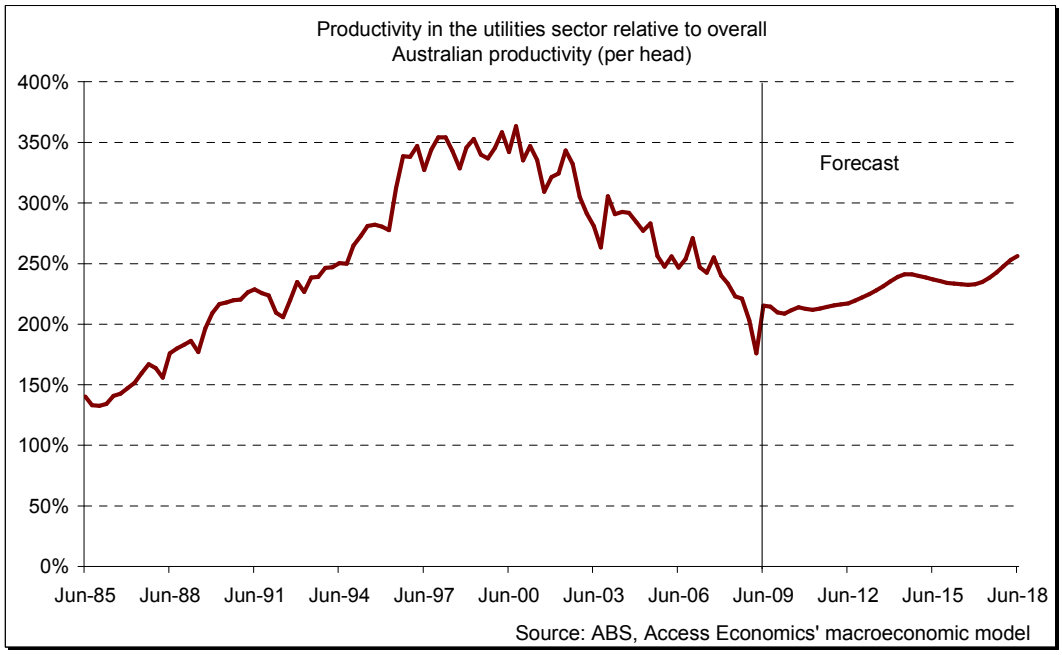
The upshot was that the utilities sector found itself in keen competition for many types of labour, and hence wage growth in the utilities outpaced overall wage growth nationally.

The chart above shows LPI growth in the utilities and in Australia as a whole, while the chart below shows wages in the utilities relative to national wages.[1] The latter chart shows the strong relative gains in wages in the utilities sector over the decade to early 2006, with the relativity levelling off since then.

[1] Note this is an index – it does not mean wage levels are much the same in the utilities as the national average.



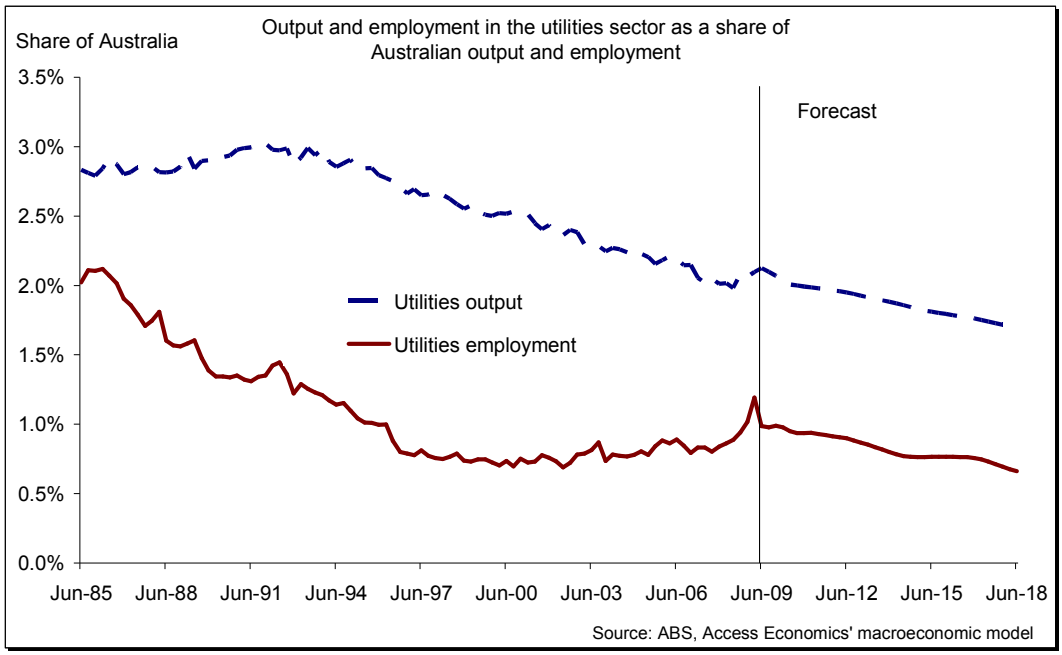
These wage moves are in contrast to productivity developments. Nationally, productivity growth levelled off in recent years, meaning that wage growth was translating at a faster-than-usual pace into increased labour costs.



And some sectors – notably mining, but also the utilities – saw their productivity levels fall, boosting labour cost growth (as opposed to wage growth) even further.[2]

The chart above shows the productivity of the average worker in the utilities sector relative to the productivity of the average Australian worker.

Australian governments embarked on reform of the utilities sector in the mid-1980s. That process saw relatively fewer workers achieve the same output, driving the productivity of the average worker in the utilities from about 1.5 times the Australian average in the mid-1980s to 3.5 times the Australian average from 1997 to 2002.



Since 2002, however, the poor productivity performance of the wider Australian economy was worse still in the utilities sector. There are a number of reasons, including that:

- The downswing in employment in the sector had arguably gone too far, requiring a degree of catch up (meaning that, in effect, relative productivity in the period 1997 to 2002 may have been unsustainably high). Spending on maintenance has lifted, and so too has spending on some new infrastructure (albeit with the latter still falling short of future requirements). That increased spending has added to employment without add to output, hence weighing on measured productivity.
- A compositional switch in the sector away from water to electricity and gas has also worked to lower measured average productivity in the sector.
- Within the water sector, a series of droughts in a number of States ate into measured productivity.

[2] Labour costs to businesses are essentially driven by changes in wages plus changes in the efficiency of work (productivity). For the typical sector, wage growth averages around 4¼% a year, and productivity growth is 1¾%, meaning that growth in unit labour costs is 2½% a year. In turn, the latter lies in the middle of the Reserve Bank's target range for inflation.

- Industry sources suggest that a reduction in outsourcing in recent years may also have raised employment without raising output.
- The reform momentum of earlier years faltered.

Accordingly, the pick up in relative wages in the utilities sector in recent years was not because employees were becoming more productive, it was because they were becoming more sought after in other key sectors.

However, as the above charts also show, Access Economics projects a degree of unwinding of some of the key drivers of recent years such that wage growth in the utilities may ease below that seen nationally for a time.

That is not because productivity in the sector has weakened. In fact it is Access Economics' assessment that some of the recent weakness in productivity in the sector is overstated, and we have therefore minimised the effect of productivity weakness on wages in the sector in our modelling of developments over the coming year.

Rather, it is because the current downturn in the economy is affecting the utilities and the sectors with which the employers in this sector compete with for workers:

- In the **utilities** sector itself the past year saw a surge in electricity output (up 11%) which may not be maintained. Structurally, warm winters are hurting electricity demand at the same time as scorching summers are adding to it, raising the peak load problems already facing a sector with more than enough on its plate as regulatory uncertainty over the ETS holds back much needed investment in new capacity. With business demand expected to weaken further from here, we see the sector suffering some short term weakness before recovering to its usual growth rate, averaging a little below that in the wider Australian economy.
- The most remarkable developments have been in **manufacturing**. That sector stopped growing in early 2008 as interest rates began to take their toll on the likes of car sales. But then the slowdown really hit in late 2008. In the year to the March quarter 2009, the wider manufacturing sector lost one in every nine workers and one in every 11 dollars of output. There were substantial job losses of late in each of food, wood and paper, plastics, building products and metal manufacturing, and in car making too.
- Similarly, employment in **mining** rose from 81,000 people in late 2003 to 182,000 in late 2008 – a gain of 125% across a period when the sector's output rose by only 21%. However, the sector has already shed 30,000 of those jobs in the crisis thus far, and its employment levels may not rebound for some time.
- Similarly, the lift in the share of Australian workers employed in **construction** over the past decade was also remarkable. By 2008 almost one in every ten Australian workers has been employed in construction. The current share is striking and – even with the Government stimulus package – it cannot last. After its longest ever surge, Australia's construction sector has stopped growing. Indeed, it has shrunk by almost 3% in the past six months alone. In the short term, weakness over the next couple of months will remain concentrated in housing construction, which continues to fall well shy of underlying demographic demands. However, the engineering and commercial construction sectors will weaken in 2010. Key parts of those sectors have been starved

of finance, and the combination of falling profits and falling capacity utilisation has eaten into demand for construction regardless of the availability of a supply of finance.

Hence these forecasts point to the June quarter 2009 weakness in wage growth in the utilities ushering in a period through to mid-2011 when wage growth in the utilities may fall short of the national average for wage growth.

That said, it is not just the demand side which is affecting this equation. The supply side is important too. The good news is that more people are studying in the fields which feed into employment in the utilities.

For example, the share of the Australian population aged 16 to 39 studying engineering lifted sharply in 2006, and stayed at that higher level in 2007 (the latest available data).

That share is currently 11% above its 2004 low.

Student participation rate by field of education (16 to 39 year olds)

	2003	2004	2005	2006	2007
Natural and Physical Sciences	0.82%	0.83%	0.83%	0.80%	0.80%
Information Technology	1.22%	1.05%	0.90%	0.86%	0.66%
Engineering and Related Technologies	3.12%	3.04%	3.15%	3.39%	3.38%
Architecture and Building	1.03%	1.11%	1.16%	1.28%	1.34%
Agriculture, Environmental and Related Studies	0.91%	0.87%	0.83%	0.82%	0.76%
Health	1.36%	1.39%	1.47%	1.58%	1.71%
Education	1.19%	1.18%	1.21%	1.21%	1.26%
Management and Commerce	5.12%	5.02%	4.97%	5.04%	5.15%
Society and Culture	3.53%	3.40%	3.42%	3.54%	3.43%
Creative Arts	1.09%	1.06%	1.06%	1.09%	1.10%
Food, Hospitality and Personal Services	1.29%	1.29%	1.34%	1.62%	1.63%
Mixed Field Programmes	0.84%	0.88%	0.90%	0.82%	0.96%

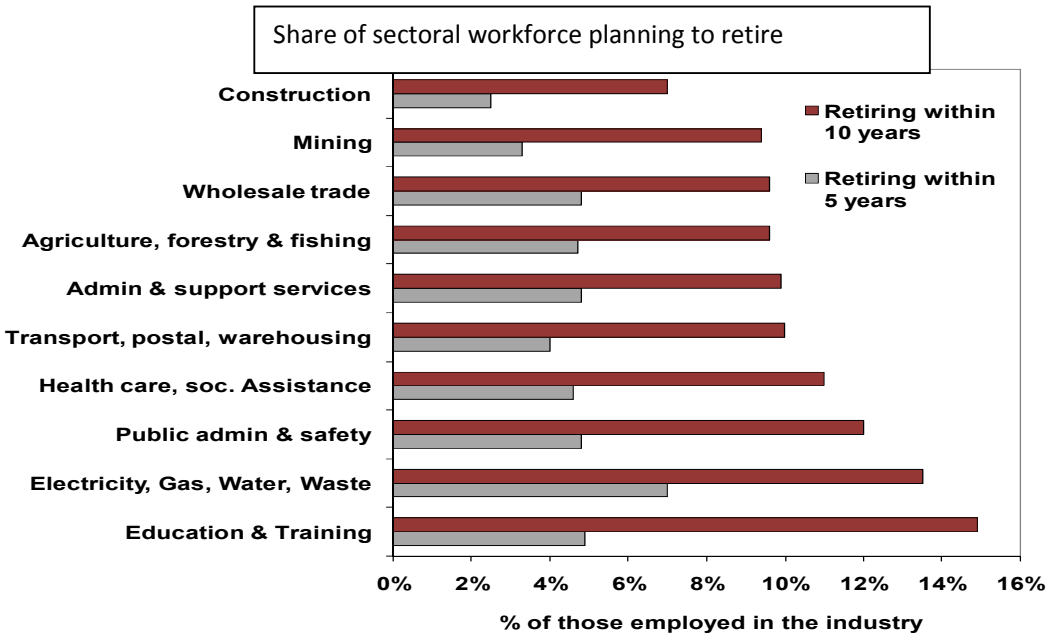
Source: DEEWR Higher Education Statistics; NCVER student enrolments; ABS 3101.0

On the other side of the ledger, the ABS Survey of Employment Arrangements, Retirement and Superannuation (SEARS) ranks the utilities sector as one which can expect a relatively faster rate of retirement over the next five and ten years.

Those industries which face a surge of retirements include education (where 14% of workers intend to retire by 2017), the utilities (13%), and public service employees (12%). At least 40% of employees in these three industries are aged 45 or over and around 15% of employees are 55 or over.

That said, recent developments in superannuation mean that a number of older Australians are staying in the workforce for longer than they planned at the time of the SEARS survey in mid-2007. On balance, therefore, Access Economics sees supply side developments also favouring weaker wage gains over the next year and a half – relatively few retirements, but more students with relevant qualifications becoming available.

Or, in other words, an assessment of the overall demand and supply outlook for workers in the utilities is a reminder that skill shortages are temporary – they don't drive permanent wedges in wage relativities.



Source: ABS Survey of Employment Arrangements, Retirement and Superannuation

General labour cost growth at the State level

Recent years saw not merely strength in the Australian economy through to late 2008, but particular strength in economies and the wage gains in the 'resource States' of Western Australia, Queensland and the Northern Territory.

State LPI forecasts

Financial year changes in nominal State LPI forecasts

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
NSW	3.8	3.6	4.2	4.3	3.9	3.9	4.0	4.1	4.3	4.3
VIC	4.0	3.5	4.4	4.0	3.5	3.5	3.6	3.9	4.2	4.2
QLD	4.2	2.9	3.3	3.8	3.8	3.8	3.7	3.8	4.0	4.1
SA	3.9	3.6	4.3	4.1	3.7	3.8	3.9	4.1	4.2	4.1
ACT	3.9	3.3	3.4	3.9	3.9	4.0	3.9	3.6	3.7	3.6

Financial year changes in real State LPI forecasts

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
NSW	0.7	1.8	1.2	1.4	1.4	1.9	2.0	1.6	1.6	1.8
VIC	1.2	1.5	1.3	1.1	1.0	1.5	1.6	1.4	1.4	1.6
QLD	0.4	0.9	0.2	0.6	1.0	1.5	1.5	1.1	1.0	1.3
SA	0.7	1.7	1.2	1.0	1.2	1.7	1.9	1.6	1.5	1.6
ACT	0.5	1.1	0.2	0.4	1.0	1.5	1.6	0.9	0.6	0.9

At the other end of the scale, States such as NSW and (more recently) Victoria saw their wage growth lag behind the national average.

Although Australia is suffering a much smaller downturn than that evident in other rich nations – and smaller than the recessions of times past – these patterns in relative wage growth across States are projected to partially unwind over the short term.

That is, and around a national growth rate in wages which is itself slowing for a time:

- Overall LPI growth in States such as NSW and Victoria is expected to more from below the national average to above it through 2010.
- South Australia – which has seen its wage growth broadly in line with the nation of late – is also expected to outperform the Australian average through 2010.
- In contrast, Queensland is projected to see its above average recent performance turn into a below average spell, while the ACT – which has been level pegging with national gains – may also record a short spell of relative underperformance.

That said, most of these differences are relatively short lived. Wage growth across States tends to differ less across a longer forecast time horizon.

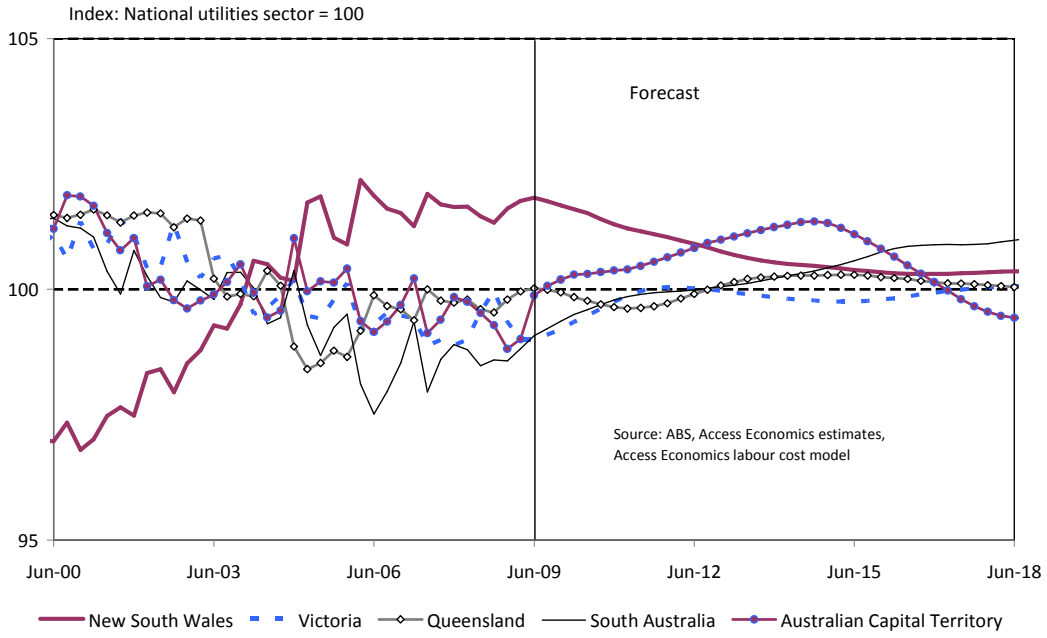
Utilities wage growth at the State level

There have also been some notable divergences in State relativities in wages in the utilities sector in recent years – as the chart below shows.

Although the utilities sector has seen relatively faster wage growth nationally, much of that strength has been in NSW and, at least to late 2008, in Western Australia (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 NSW through to 2005, and those relativities have not hanged much since then.

That is why the chart below shows a pattern across this decade to date of NSW doing better than the other jurisdictions, though that relative outperformance slowed from 2005.



Yet 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.
- 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 (both exiting and returning).
- Shifts by New Zealanders (who face fewer restrictions on migration).
- Shifts in wages see people substitute into growing areas related to their existing skills.
- Shifts in relative wages can delay retirements or exits, and encourage new entrants.
- Shifts in the use of labour due to changes in relative costs ("We'll use more enrolled nurses and less registered nurses as wages for RNs have risen relative to those for ENs").

Many of these 'equilibrating factors' can be very slow to operate, meaning that divergences in prices and 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 markets gradually make their presence felt.

Accordingly, the fact that relative wages have diverged in recent years does not mean those moves are permanent. Short term wage growth in the sector at the State level is affected by growth in the sector and in the State, but there is also a longer term trend towards a narrowing of wage relativities.

Other things equal, that leads to a slow pegging back of NSW's gains over the coming decade, with the other jurisdictions considered in this report making relative ground on NSW.

The ACT stands out in the chart, making good gains in the first few forecast years thanks to the a phase of catch-up to competitor sector wages, but then with the ACT ceding relative ground further out as the Territory's economy weakens amid the sustained tightening in public sector spending required to return the Federal Budget to balance.

The summary table of results follows.

Access Economics
16 September 2009

Summary table of results

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Private consumption expenditure	1.4	1.5	1.5	2.2	2.3	2.5	1.9	2.2	2.5	2.8
Public consumption expenditure	3.3	1.9	2.5	2.2	2.0	2.3	2.1	1.9	1.9	1.8
Capital expenditure										
Private non-business housing	-1.9	0.8	15.9	-0.3	-1.0	8.7	8.1	-3.6	-2.7	10.3
Private non-business real estate	-15.3	16.9	13.8	-0.2	-0.4	8.3	7.4	-3.2	-2.3	9.5
Private business										
Non-resi building construction	0.2	-16.6	-7.4	0.9	11.1	7.6	3.4	2.0	2.1	3.0
Engineering construction	15.6	-16.1	-3.7	4.9	4.6	-4.1	-4.6	-4.5	-0.5	3.3
Machinery and equipment	5.2	-9.3	5.4	4.6	2.3	3.5	0.9	-0.6	1.4	3.5
Computer software and livestock	10.9	1.3	8.2	12.3	11.8	9.5	4.4	0.5	2.4	4.4
Public										
General Government	8.8	6.3	5.6	2.0	1.9	2.0	2.0	1.8	1.6	1.6
Public enterprises	15.7	7.3	13.5	8.7	5.4	3.1	0.7	-1.0	0.4	2.5
Domestic final demand	2.6	-0.2	3.0	2.6	2.5	3.1	2.3	1.2	1.8	3.2
Private	1.9	-1.1	2.8	2.5	2.6	3.3	2.4	1.0	1.8	3.6
Public	4.8	2.8	3.7	2.8	2.3	2.3	1.9	1.6	1.7	1.8
Gross national expenditure	1.2	0.9	2.8	2.7	2.7	3.0	2.1	1.0	1.7	3.3
Plus exports	1.8	-9.9	6.6	9.7	12.8	11.6	6.8	3.4	3.4	6.0
less imports	-2.5	-5.2	4.1	5.7	9.0	7.8	2.3	-2.2	-0.3	6.2
GDP	1.0	1.9	3.2	3.4	3.3	3.8	3.2	2.3	2.6	3.3
Non farm GDP	0.7	2.2	3.2	3.4	3.3	3.7	3.1	2.3	2.7	3.4
Employment	1.1	0.5	1.8	2.0	1.8	1.9	1.7	1.3	1.3	1.8
Unemployment rate	4.9	6.4	6.7	6.6	6.1	5.6	5.2	5.2	5.2	5.1
CPI	3.1	1.9	3.0	3.0	2.5	2.0	2.0	2.5	2.8	2.5
LPI	4.1	3.5	3.9	3.9	3.7	3.7	3.8	3.9	4.1	4.1
AWE	3.9	3.3	4.0	4.4	4.1	3.8	3.7	3.6	3.7	3.7
NSW CPI	3.1	1.8	2.9	2.9	2.5	1.9	1.9	2.4	2.7	2.5
VIC CPI	2.8	2.0	3.0	2.9	2.5	2.0	2.0	2.5	2.8	2.6
QLD CPI	3.7	2.0	3.0	3.2	2.8	2.3	2.2	2.6	2.9	2.7
SA CPI	3.2	1.8	3.1	3.0	2.5	2.0	1.9	2.5	2.6	2.4
ACT CPI	3.4	2.2	3.2	3.4	2.8	2.4	2.3	2.7	3.0	2.7

Financial year changes in nominal Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
National LPI	4.1	3.5	3.9	3.9	3.7	3.7	3.8	3.9	4.1	4.1
Utilities	4.5	3.5	3.4	3.6	3.7	3.7	3.7	3.8	4.0	4.0
Mining	5.6	3.7	3.4	3.9	4.0	4.3	4.3	4.2	4.1	3.9
Construction	4.6	3.8	3.4	3.7	3.5	4.1	4.2	3.6	3.6	4.1
Manufacturing	3.7	3.5	4.5	4.4	4.2	4.1	4.1	4.3	4.4	4.2
NSW Utilities	4.6	3.5	3.0	3.4	3.4	3.5	3.6	3.7	3.9	4.1
VIC Utilities	4.8	3.4	3.9	3.9	3.6	3.6	3.7	3.9	4.1	4.1
QLD Utilities	4.6	3.5	3.1	3.8	4.0	3.9	3.8	3.8	3.9	3.9
SA Utilities	4.6	4.2	3.8	3.8	3.8	3.9	4.0	4.1	4.1	4.1
ACT Utilities	4.1	4.5	3.5	3.9	4.0	4.0	3.7	3.3	3.3	3.5

Financial year changes in real Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
National LPI	0.9	1.7	0.9	0.9	1.1	1.6	1.8	1.3	1.3	1.5
Utilities	1.4	1.6	0.4	0.6	1.1	1.6	1.7	1.3	1.2	1.4
Mining	2.4	1.8	0.4	0.9	1.4	2.2	2.3	1.7	1.3	1.4
Construction	1.4	1.9	0.4	0.6	1.0	2.0	2.2	1.1	0.8	1.6
Manufacturing	0.5	1.6	1.5	1.4	1.6	2.0	2.1	1.7	1.6	1.6
NSW Utilities	1.4	1.7	0.1	0.5	0.9	1.5	1.7	1.3	1.2	1.5
VIC Utilities	1.9	1.4	0.9	0.9	1.1	1.6	1.7	1.4	1.3	1.5
QLD Utilities	0.9	1.5	0.1	0.6	1.2	1.6	1.5	1.1	0.9	1.2
SA Utilities	1.4	2.3	0.6	0.7	1.3	1.8	2.0	1.6	1.4	1.6
ACT Utilities	0.7	2.2	0.3	0.5	1.1	1.5	1.4	0.6	0.3	0.7

Calendar year changes in key Labour Price aggregates

Annual % change	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
National LPI	4.2	3.8	3.6	4.0	3.8	3.6	3.9	3.7	4.0	4.2
Utilities	3.6	4.4	3.3	3.4	3.8	3.6	3.9	3.7	3.9	4.0
Mining	5.8	4.8	3.1	3.8	4.0	4.1	4.4	4.2	4.2	4.1
Construction	4.1	4.5	3.2	3.8	3.5	3.7	4.4	3.9	3.5	3.9
Manufacturing	3.7	3.4	4.1	4.6	4.3	4.0	4.2	4.1	4.4	4.3
NSW Utilities	3.5	4.6	3.0	3.1	3.5	3.3	3.7	3.6	3.9	4.0
VIC Utilities	4.0	4.0	3.8	3.8	3.8	3.4	3.7	3.7	4.0	4.2
QLD Utilities	3.6	4.7	3.0	3.3	4.1	3.8	3.9	3.7	3.8	3.9
SA Utilities	3.5	4.9	3.8	3.7	3.9	3.7	4.1	4.0	4.2	4.1
ACT Utilities	3.3	4.8	3.8	3.6	4.2	3.8	4.0	3.4	3.3	3.4

1 Background

The Australian Energy Regulator (AER) commissioned Access Economics to provide forecasts for labour costs growth for the Electricity, Gas, Water and Waste services[3] (utilities) industry to 2017-18 for New South Wales, Victoria, Queensland, South Australia, the ACT 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
- How market conditions are expected to affect the labour forecasts.

Access Economics' report:

- **Discusses the economic outlook**, starting with Australia as a whole (see Chapter 2), then looking at the States (see Chapter 3), and then at the utilities sector (see Chapter 4) as well as sectors which compete with the utilities sector for workers (mining, construction, manufacturing – see Chapter 5).
- **Discusses the outlook for wages**, starting with Australia as a whole (see Chapter 6, which also discusses the related outlook for prices), then looking at national wage growth in the utilities (see Chapter 7), as well as wage growth in those sectors which compete with the utilities sector for workers (mining, construction, manufacturing – see Chapter 8).
- The report then discusses **detailed forecasts at the State level of wage growth in the utilities and competitor industries** (see Chapter 9), followed by **overall rates of LPI growth at the State level** (see Chapter 10).
- **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.

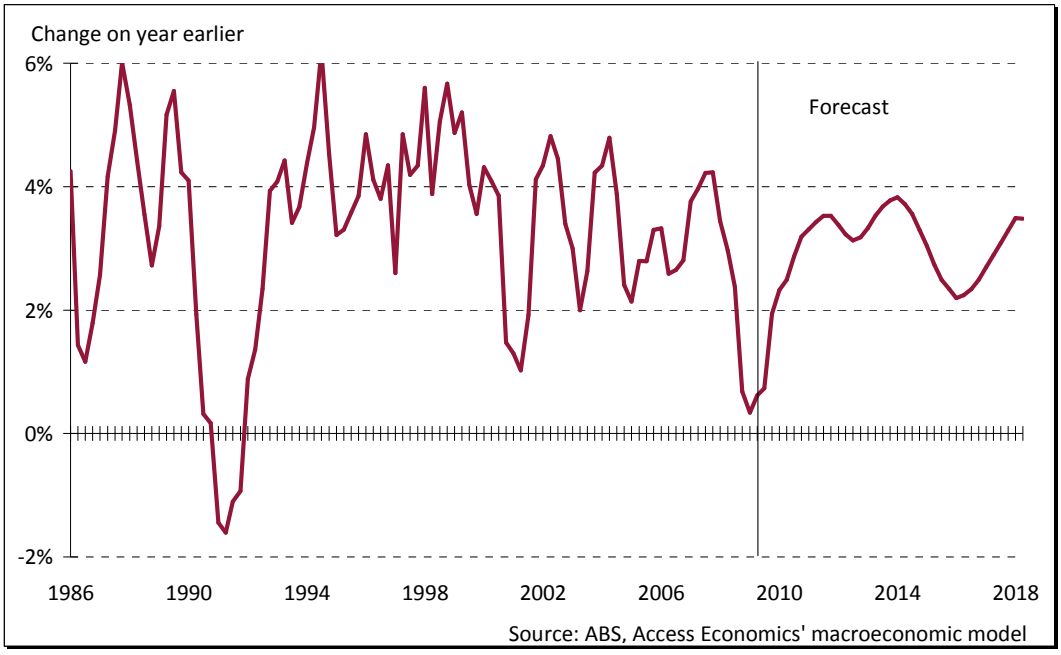
[3] This industry is part of the new Australian and New Zealand Standard Industry Classification 2006 (ANZSIC06), and differs in composition slightly to the old ANZSIC93 industry which was electricity, gas and water services. Much of the addition to this industry comes from the ANZSIC93 industry of Personal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

2 The Australian economic outlook

Australia continues to outperform the rich world in a year that is, globally, the worst seen since the Great Depression. While output growth has slowed more than Australia saw in 2000-01, we are considerably outperforming relative to the recession of 1991-92.

Indeed, Australia is not just outperforming countries whose banking systems are struggling – such as the US, Japan, the UK and Germany – but we are even comfortably outperforming nations such as Canada whose banks (like ours) remains healthy.

Chart 2.1: Real (year-to) output growth in the Australian economy



There are many reasons for our continuing outperformance, including:

- Our healthy banks, which are still lending: a key plus amid a global credit crisis, and one not seen in most of our peers. It might still be harder to get a loan in Australia than it has been for quite some time, but we have nothing like the troubles throughout the US and Europe.
- The large cuts to interest rates by the Reserve Bank and the Federal Government stimulus packages were early and large by the standards seen elsewhere. Cuts to interest rates have substantially reduced the cost burdens on families and businesses since late 2008. The Bank delivered a bigger boost to disposable incomes and did so faster than at any other time in its history. Similarly the Federal Government provided additional stimulus spending in May's Federal Budget, adding in more money for roads and ports and rail.
- The $A may now be rebounding notably (as are all asset prices as global governments and central banks pump money back into economies), but our currency is still well off the peaks it hit in mid-2008. That has provided vital breathing space for a number of industries, helping to cushion the blow for miners and mining profits in particular.

- Our population growth – at 1.9% – is the best this nation has seen since the late 1960s, with an extra 406,000 permanent residents added to Australia's population in the past 12 months, and a bit more still once you allow for migrants on temporary visas. That puts a healthier floor under our growth than that available to most other rich nations. A related positive is that we don't have the sorts of housing problems plaguing the US and the UK. We have too few houses, not too many, and that is helping to underpin Australia's housing prices and hence our wealth and confidence.
- Australia is starting to work through the pipeline of engineering and commercial building work with which we entered this downturn, but the big money in the pipeline for construction has proved a vital bumper bar in the early phase of this downturn.
- China is bouncing back. While the recovery is built on the back of government stimulus and the government-engineered surge in loans by China's banking system, it is still buying coal and iron ore in record amounts, even if it is stockpiling it.

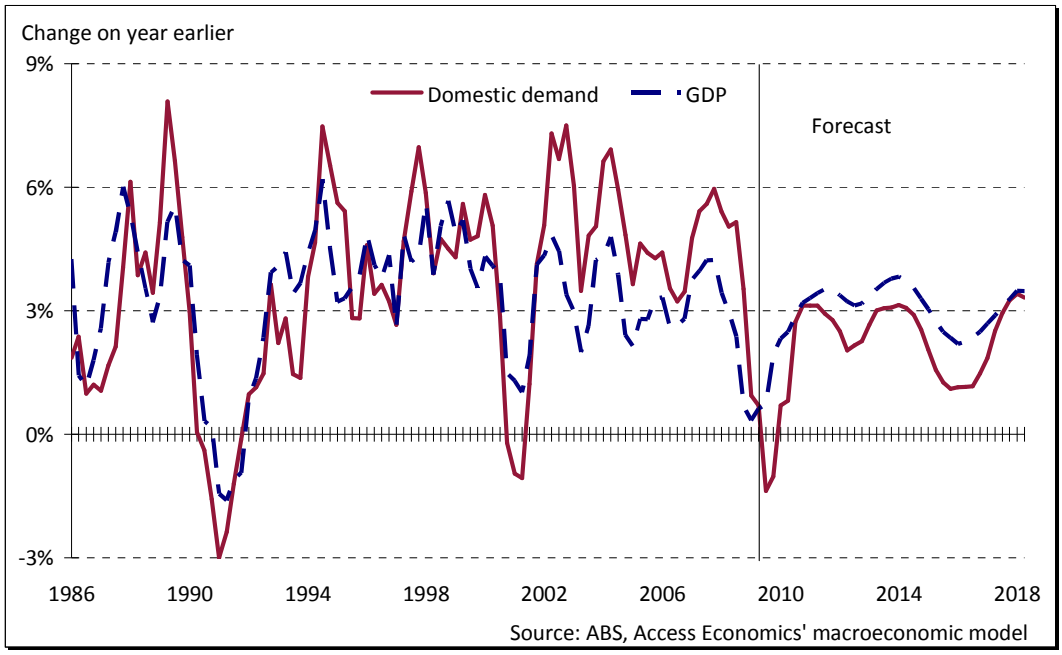
In combination, that led to Australia's 2009 being characterised by three very unusual facets:

- First, Australia lost few jobs while the rest of the world lost many. Australia's loss of 25,000 jobs since the global banking system failed in September 2008 is around one in every four hundred jobs in Australia. By comparison, job markets in much of the rich world have fared much worse – the US has already lost six million jobs through this crisis, which means that the US has lost 16 jobs for every one lost here in Australia.
- Second, Australia lost few export sales while the rest of the world lost many. Partly thanks to China's strong (and arguably unsustainable) stimulus, Australia's volume of export sales is up by 1.5% since the crisis hit whereas exports markets in much of the world have crumbled. Official forecasts are for trade to shrink some 10-12% in 2009, and many major trading nations still have export sales more than 20% below where they were in September 2008.
- Third, Australians are spending more in the shops while the rest of the rich world isn't. Buoyed by interest rate cuts and the Federal Government's stimulus packages – Australian retail spending is 6% higher than when the crisis hit. No other rich country in the world comes close to that.

That is an impressive set of accomplishments given the global economic situation. Demand fell rather than collapsed (see Chart 2.2), and the debate is now about the size and strength of the coming rebound, whether the stimulus support from Canberra was too big, and the timing of the first interest rate increase from the Reserve Bank.

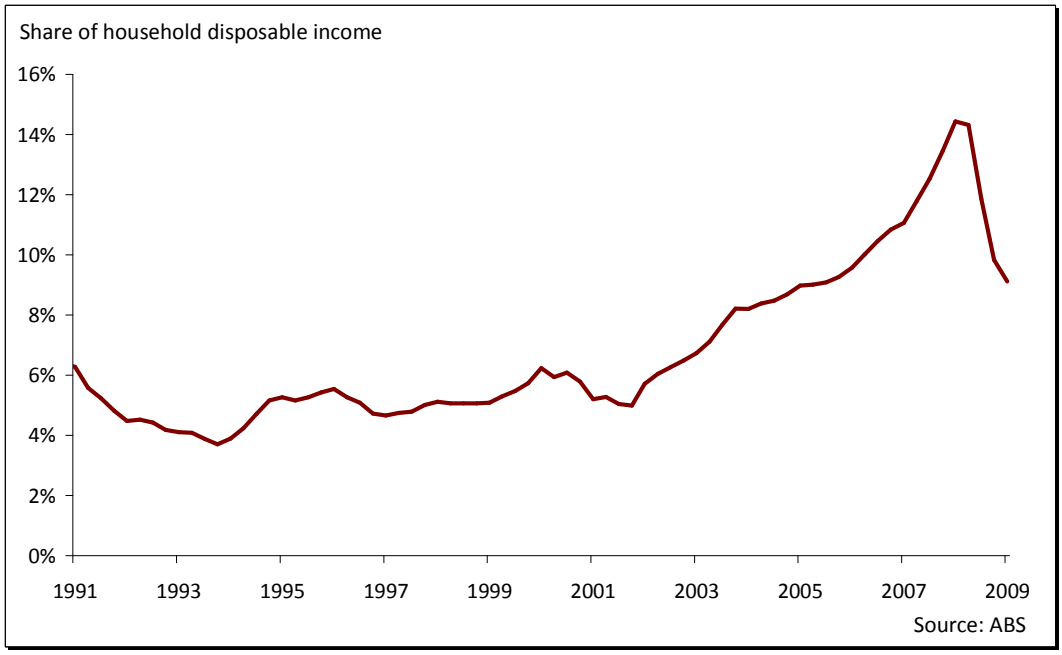
Yet we may be getting ahead of ourselves. Things are indeed improving, but the recovery – especially in retail – may be soft and slow. It is important to remember that Australia has never seen a bigger policy stimulus.

Chart 2.2: Real (year-to) output and domestic demand growth in the Australian economy



For a long time interest payments as a share of family incomes averaged 5%, or about one in every twenty dollars of disposable income. But families borrowed heavily during the boom years, and then the Reserve Bank lifted interest rates to try to slow us down. By mid-2008 more than one in every seven dollars of disposable income was lost to interest payments.

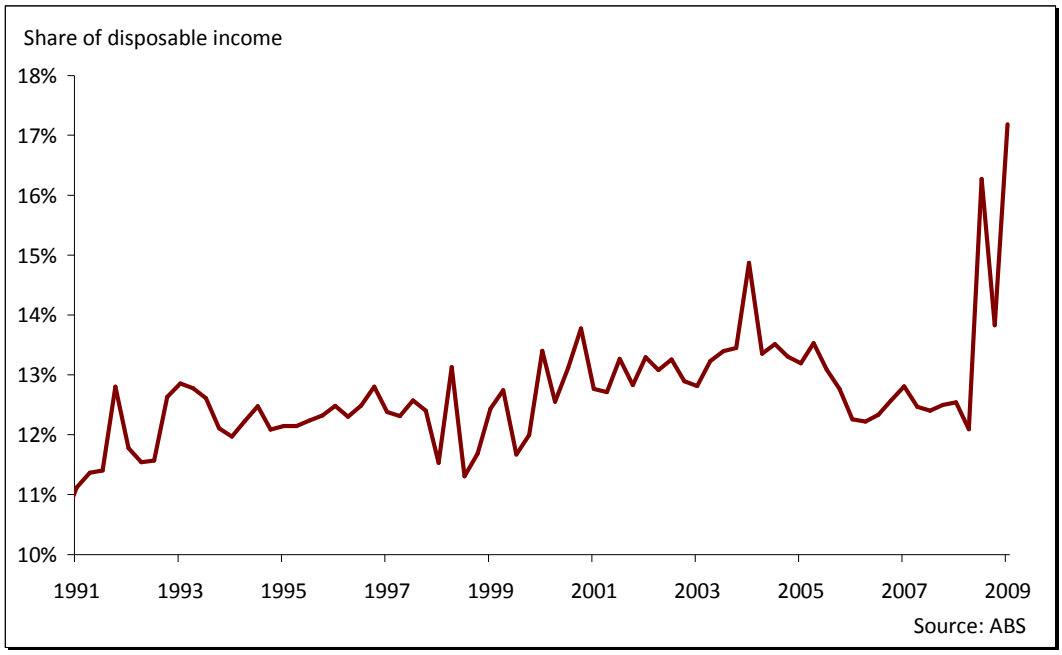
Chart 2.3: Interest payments as a share of household disposable income



The good news is that interest rates have been cut sufficiently sharply that the average family has seen its disposable incomes boosted by 5 percentage points (see Chart 2.3).

However, interest rates will rise from here. Australia's 'small' recession didn't slow our inflation much, or indeed dampen the enthusiasm underpinning housing prices, so Access Economics projected that official rates will rise 2 or 2½ percentage points over the next eighteen months, meaning that the Reserve Bank will take back more than half of the recent boost it has given to disposable incomes.

Chart 2.4: Welfare benefits as a share of household disposable income



The other part of the policy equation is the extent of the cash splash that kept Australian families spending at the shops. It too gave the average family the equivalent of a 5% boost to its disposable incomes (as seen in Chart 2.4). However, only half of the support to family incomes from the Reserve Bank will be lost, and that over the next eighteen months, almost all of the cash splash has already dried up.

Hence Australia's economy kept going through the crisis – our families are spending 6% more than when the crisis hit – because between them the Reserve Bank and the Government gave the average family 10% extra income to spend. Yet half of that has already disappeared, and much of the rest will go over the next eighteen months.

So Australia has dodged the bullet of a deeper downturn, but it comes at the cost of a softer and slower recovery than today's headlines suggest: there just isn't enough fuel in the family savings tank to get retailers through the period of policy withdrawal without damage.

3 State economic outlooks

3.1 New South Wales

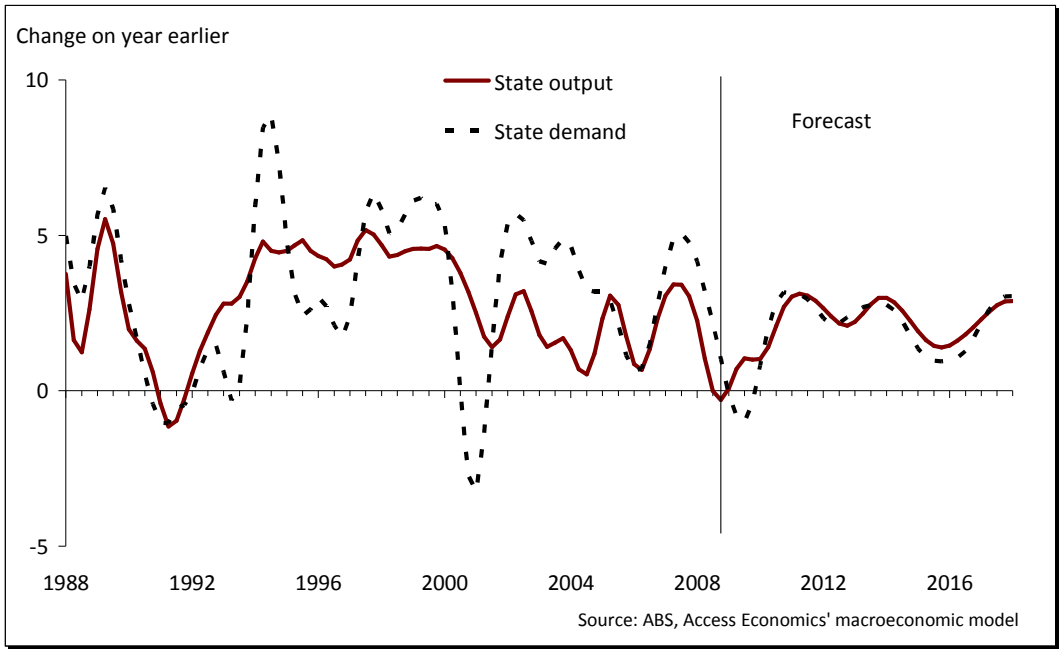
New South Wales has gone through a particularly painful decade, with the impact of the global financial crisis on the State's finance, manufacturing and tourism sectors meaning that there is more pain still to come. The State is at the heart of the recession in Australia, entering recession before any other State, and experiencing a more severe contraction.

The State faces a wide variety of problems, some of which have plagued New South Wales for several years, though some new challenges are a direct result of the global downturn. As Sydney is home to around half of Australia's financial institutions, the financial crisis has had a particularly pronounced effect in New South Wales compared to other States.

Moreover, that development came after prolonged drought, as well as pressure on the State's manufacturers from overseas competitors and on its tourism sector (struggling under fears of swine flu and a stronger Australian dollar).

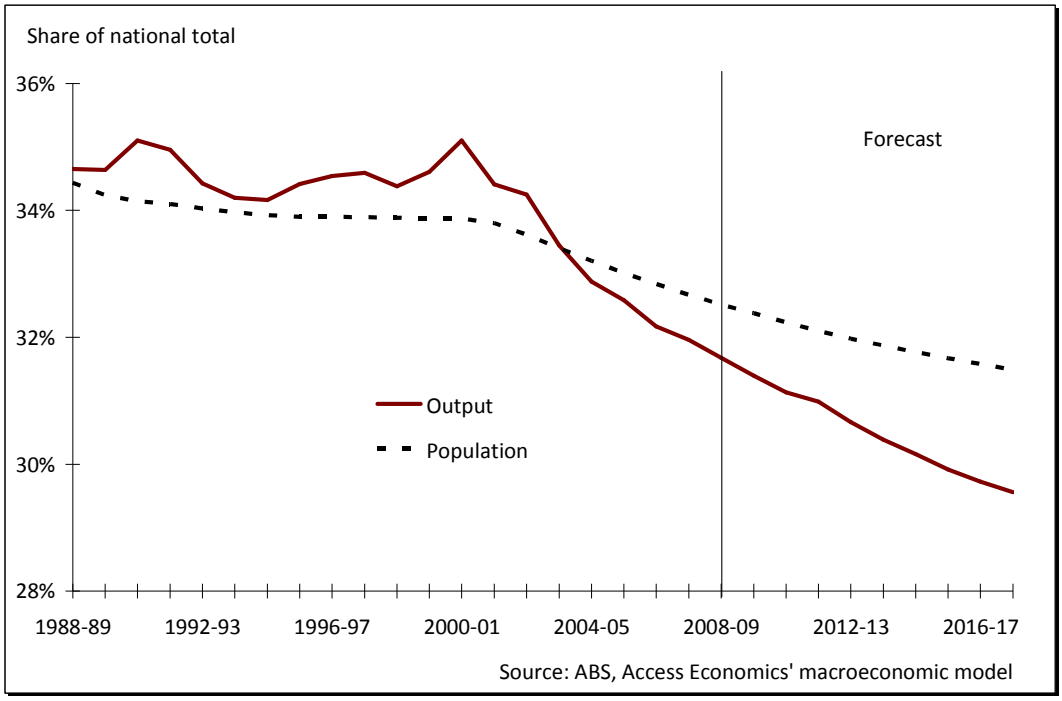
As a result, job levels have been stalled for some time now, unemployment is climbing and, as in the US, NSW's housing prices are little different to where they were in 2004. The resultant momentum in the State's weakness suggests that its unemployment rate – already high – will remain the highest in the nation as unemployment peaks in 2010-11.

Chart 3.1: NSW output and demand



Hence the short term is weak, whether measured as further contraction in the State in an absolute sense (as seen in Chart 3.1) or in a relative sense (as seen in Chart 3.2).

Chart 3.2: NSW output and population share



Yet Access Economics sees New South Wales bouncing back faster than most of the other States, with that turnaround becoming evident from mid-2010. Whereas much of Australia – WA and Queensland in particular – will suffer a downturn in engineering and commercial construction over the next couple of years, NSW will feel that pain to a lesser extent.

The State had less engineering and commercial construction work to lose than other States anyway. And the passing of the first impact of the financial crisis suggests that the State's manufacturers and the finance sector may soon begin their recovery (though the rebound in the $A will keep pressure on the State's tourism sector).

Moreover, some of the fundamental drivers are already looking healthier than they were. Population growth in the State was 1.4% over the past year, the best rate seen in the past two decades, and sufficient to shift the relative pace of New South Wales' gains up from two-thirds to about three-quarters of the national rate.

In addition, the big levers on relative State growth have already shifted. In particular, interest rates are much lower than they were, and that is a vital boost for this State. For example, and largely thanks to lower interest rates, retail is now bettering national growth. And the fall in mortgage rates suggests housing construction will lift as those affordability effects are felt.

Hence Access Economics projects that, some time in 2010, NSW will start to lift in relative terms as the tectonic plates of relative State growth respond to the recent shifts in interest and exchange rates and commodity prices – leaving NSW's share of the national economy levelling off for the first time in some time (see Chart 3.2).

3.2 Victoria

Victoria managed to maintain its share of the national economy since the start of the decade – an impressive feat given that it did not benefit from the commodity boom to same extent as States such as Western Australia and Queensland. Indeed, the Victorian economy has been steadily improving in relative terms since the recession of the early 1990s, during which it suffered a far more severe contraction than any other State. Since then, the gradual improvement in Victoria's share of the national economy has been notable, while its population share has also stabilised.

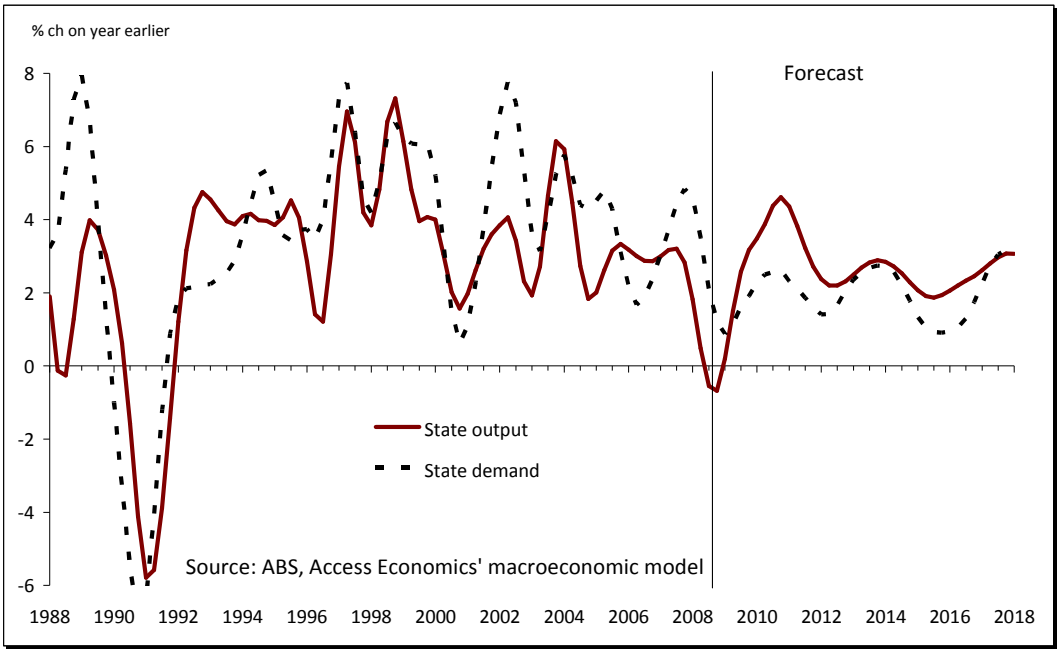
Part of Victoria's relative success during this decade has been its capacity to steal market share away from New South Wales in key sectors such as finance, with New South Wales' underperformance in recent years to Victoria's advantage.

Yet despite those positives, the slowdown has already produced a lift in the unemployment rate, pointing to further weakness in activity in 2009 and 2010. The global downturn is pressuring the Victorian economy. The State's large manufacturing base is suffering, and Victoria's share of the national economy may slip. Nationally, the last year saw manufacturing output dive by 9%, and manufacturing employment fell by an even sharper 11%. There have been notable job losses lately in each of food, wood and paper (where Victoria's early 2009 fires didn't help), plastics, building products and metal manufacturing, and now in car making too. And, with manufacturing in trouble, that has kept Victoria's employment levels stagnant since late 2007.

Victoria is battling other negatives too. Most importantly, its construction pipeline is now falling away quickly – not only is recent construction work falling away faster in Victoria than it is Australia-wide, but that is even more marked for the pipeline of work remaining to be done.

As Chart 3.3 above therefore shows, Victoria's current performance is weak.

Chart 3.3: Victorian output and demand

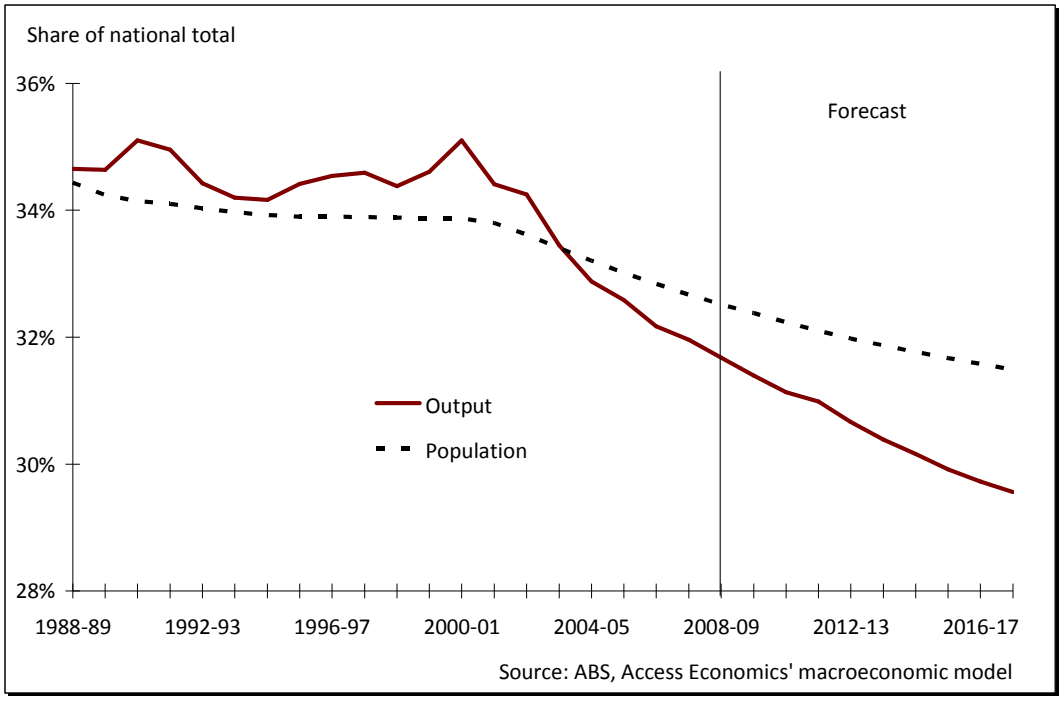


That said, a recovery towards the end of 2010 may see Victoria start to regain ground – particularly as resource rich States such as WA and Queensland are not expected to begin their downturn until then due to their significant momentum. Indeed, the State has some very strong positives on its side. In particular, population growth is still strong, up almost 2% in the past year alone. That is the fastest population growth rate that Victoria has seen since 1965. Indeed, population gains in Victoria have matched those in Australia throughout this decade to date. And although birth rates are up, some three-fifths of the State's population gain comes courtesy of international migrants, with Victoria attracting a very respectable net 68,000 migrants in the past year alone (close to NSW's 74,000).

Victoria's great population growth may soon peak as a result of consecutive cutbacks to the official migration intake, but for now it is underpinning housing construction (which remains very strong relative to the rest of Australia), and it is helping to protect the State's retailers. Victoria also did better than NSW in applying for its share of national stimulus funding.

2010 therefore looks like the recovery year for Victoria and, beyond 2008-09, Victoria looks like holding onto its share of Australian population and output (as seen in Chart 3.4).

Chart 3.4: Victorian output and population share



3.3 Queensland

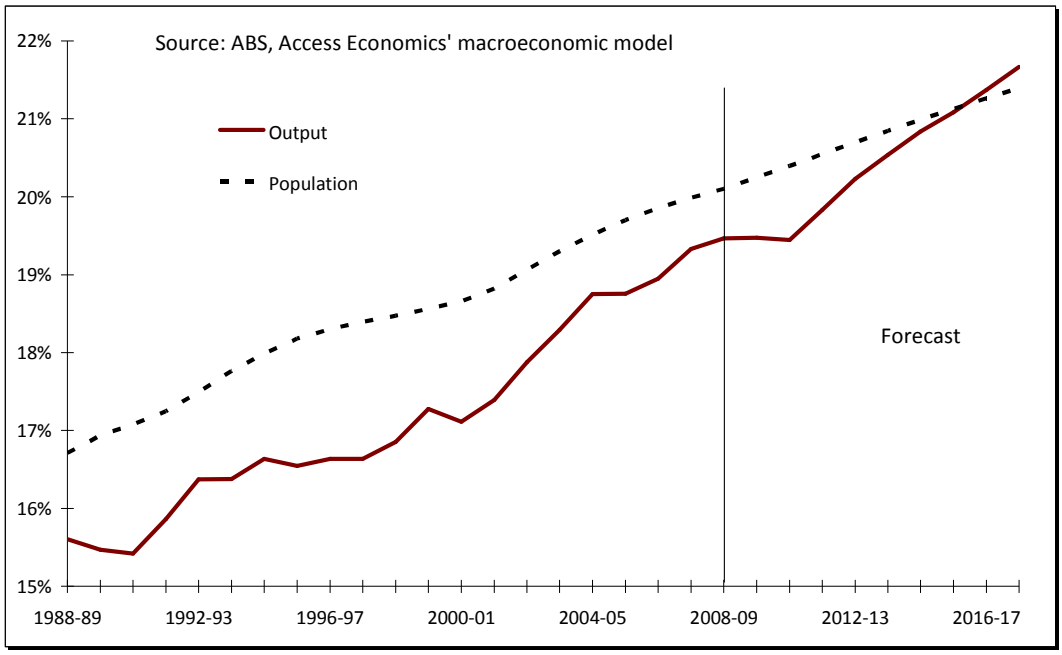
Queensland's economy did very well through the past decade, and is well placed to continue this relative outperformance in the future.

Chart 3.5 shows that the State's share of Australia's population and output have climbed steadily over the last two decades, and are now close to one fifth of the national total.

That steady rise in population growth remains a key factor in the State's success, as an increasing population leads to rising demand for goods and services. While population growth

has slowed slightly recently, it should remain strong enough to continue to the upward trend seen in Chart 3.5.

Chart 3.5: QLD output and population share



The growth in global commodity demand of recent years also played to Queensland's strengths. Its economy responded to a surge in investment in new mining projects and related export infrastructure. In addition, the State began a long overdue overhaul of its urban infrastructure plans as it put into place a framework to catch up with the road, water and other demands of the fast growing population share in Queensland's south east.

Looking longer term, Queensland's economy remains well-positioned, with predominance in industries that are expected to continue expanding solidly over the coming decade. Rapid development in emerging nations – particularly in Asia – will mean that demand for commodities such as coal will be maintained after the current downturn abates.

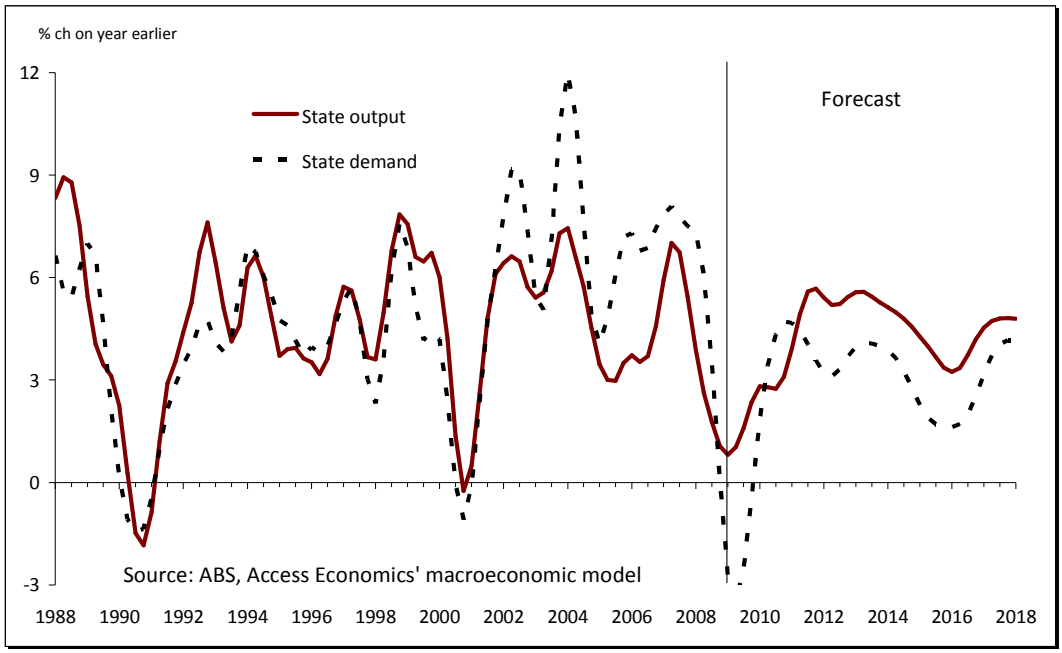
Queensland is therefore well placed to continue to capitalising on its rich mineral deposits and geographic proximity to growing global markets, which should help the State to continue outperforming the rest of the nation.

That said, riding the global resource boom means feeling the impact of the global resource bust. Japan is Queensland's biggest customer, and also one of the biggest victims of the globe's current chaos. And unlike Western Australia (which benefits more from China's current rebound), Queensland is still rather more tightly bound to Japan rather than to China.

Yet, even in Queensland, China's impact is growing fast. One of the side-effects of the global crisis was that China closed many of its high cost and unsafe coal mines, meaning that recent months saw China become a sudden Australian coal customer on a scale we've never seen before.

The depth of Queensland's downturn seen in Chart 3.6 now rests very heavily on China and the sustainability of its recent coal buying. But China's rebound merely limits the impact of the current global crisis on Queensland. The big coal price falls are beginning to have an impact on profits. Moreover, the resultant weakness in engineering and construction prospects has affected commercial construction, and the weakening in housing approvals in the State suggests that further bad news lies ahead.

Chart 3.6: QLD output and demand



Further, Queensland's population outperformance – traditionally a strong suit of the State – has been increasingly eroded in recent years, with the gap between State and national population growth rates eroding ever since Sydney housing prices stopped rising.

In brief then, the combination of engineering, commercial and housing construction weakness is hitting harder than the State has felt for a time. And the lags in the impacts from construction decisions to construction occurring suggests further negative news is to come.

That said, Queensland's economic outlook remains good in the longer term, with its strengths matching what the world needs. However the next 18 months will see this State feel the effects to income and GSP that the financial crisis has yet to bring.

3.4 South Australia

Short term performance comes down to the resilience of demand. In contrast, longer term performance comes down to the strength of potential supply. That split is important, as South Australia is relatively well placed on short term demand positives, but its performance is weaker on the supply side strengths for the longer term.

The State was well positioned to handle some of challenges brought by the global financial crisis. Household finances were not as stretched as other States, leaving the State less

susceptible to the phase of high interest rates and, compared with elsewhere in Australia, the State's households are similarly less worried about the need to rebuild better saving habits.

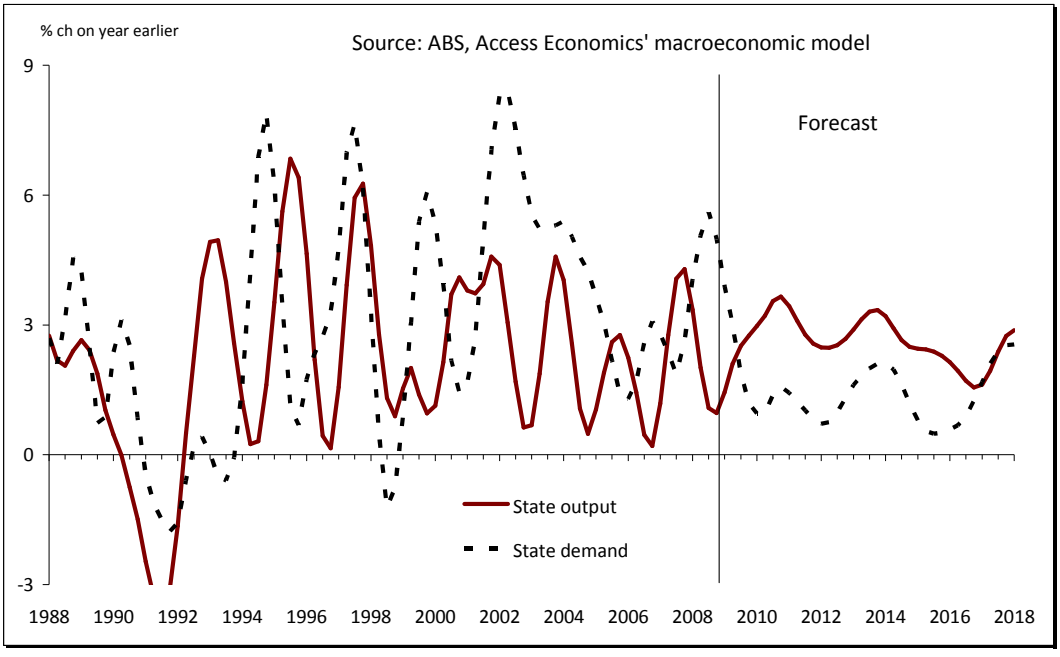
Moreover, the State's relatively lower incomes and housing prices mean that the Federal stimulus resulted in a bigger boost to household finances in SA than in most other States.

Its relative industry composition helps protect it as well. South Australia lost a lot of finance and business service sector jobs in the 1990s, thereby making it less at risk of job losses in those sectors, while mining employment in the State is similarly small.

The State has done well out of the Federal Government stimulus packages as well, with extra spending on capital works by both State and Federal Governments projected to add 2% to total State demand in 2009-10 alone, while spending on Defence continues to increase, thereby helping to insulate South Australia's defence manufacturing demand. That is helping to boost the State's construction pipeline (with projects like the Air Warfare Destroyer contract and spending at Olympic Dam) at a time when other States are seeing some construction projects dry up.

There are other sources of strength for South Australia too – housing construction remains the strongest in the nation, with housing starts only just off peaks last seen in the early 1980s, while SA is getting a solid stream of skilled migrants from the rest of the world, and its older workers – of whom the State has more than its fair share – are staying in the workforce as they rebuild their retirement savings after recent superannuation losses. Moreover, population growth is steady at 1.1% over the past year. That has slipped relative to national population growth rates, but it is still as good as the State has recorded since the early 1980s.

Chart 3.7: SA output and demand



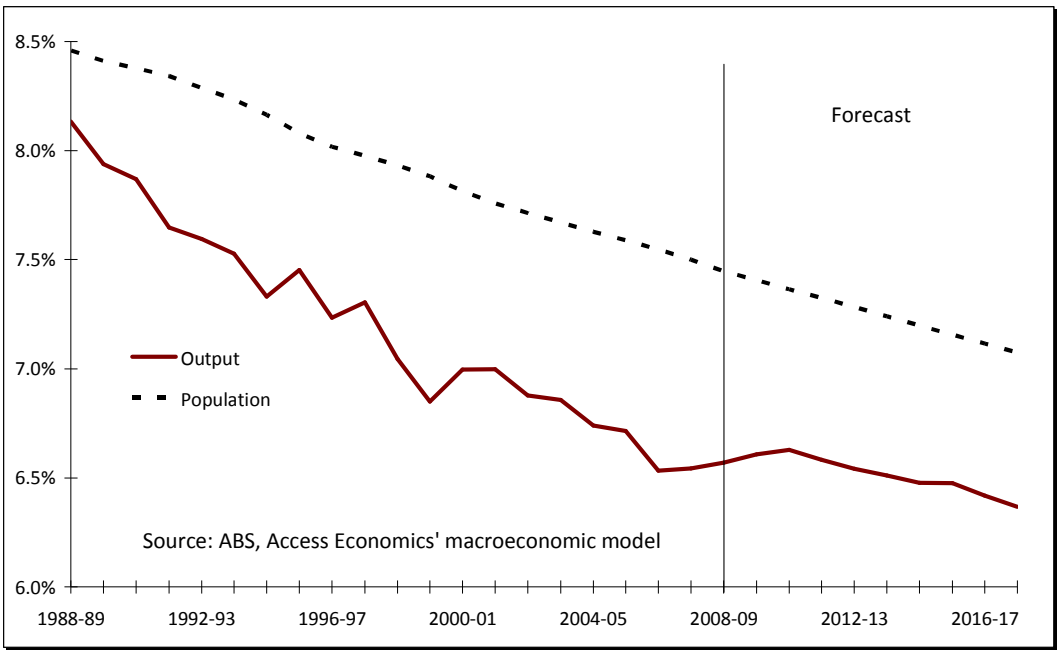
Yet South Australia is battling short term problems as well, some directly related to the global crisis. Exports are under pressure, as the State mostly sells to economies in lots of trouble.

Car production remains depressed. And the State's conservative consumers are saving more, leaving retail spending growth back at national rates. Moreover, the worsening short term outlook has seen job ads halve, suggesting weakness in jobs is just around the corner, while the Federal Government's cuts to the official migration intake point to population pressures down the track for the State. That combination suggests that, as Chart 3.7 shows, South Australia will suffer a milder downturn than most. Consumers are easing back, business spending will increasingly do the same, and overall growth will be pretty modest.

Even so, that rates very well against developments in other States. It is the longer term outlook where the State faces greater risks. Its supply side strengths are relatively modest. Population growth is slower than that seen nationally, the State's relatively older workforce will see it go through an earlier impact from baby boomer retirements, and the State may be getting skilled migrants from the rest of the world, but it continues to lose skilled workers to the rest of Australia (currently at rates last seen in the mid-1990s).

Water is also a longer term constraint on the State's ability to spend. South Australia is constructing the $1.6 billion Adelaide Desalination Plant, but much more depends on national developments and the need to charge similar water prices to all users. That said, one important positive potential for the State for the longer term is that its world class mineral resources will ultimately see it become a bigger player in mining markets, both within Australia and globally. Yet despite that latter caveat and as Chart 3.8 shows, South Australia's relative short term strength is likely to revert to longer term weakness.

Chart 3.8: SA output and population share



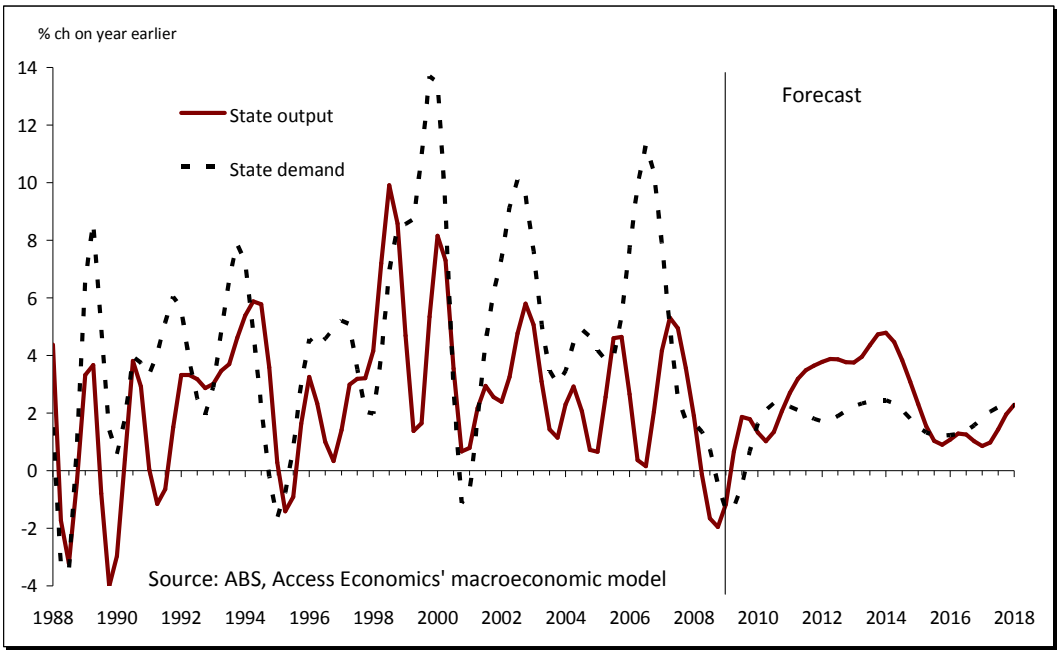
3.5 Australian Capital Territory

The ACT faced some important short term risks of late – the surge in Federal spending in recent years had boosted commercial construction in the Territory to unsustainable highs (most notably through office and retail construction), and the subsequent winding back of the commercial construction boom combined with higher interest rates (which hit the mortgage

belt) and the Federal efficiency dividends to result in a notable slowdown through 2008 (see Chart 3.9).

That slowdown was made worse still by slowing housing construction, while retail sales growth fell behind the national rate, and has stayed there.

Chart 3.9: ACT output and demand



The good news for the Territory was that the Federal Budget failed to deliver on its hard line rhetoric on the need to rein in spending in the years beyond the recession. That is bad news for Australia, but good news for the ACT's short term economic outlook.

The 2008 Budget planned to cut 1,200 public service jobs, but the year ended with 2,500 more. And the 2009 Budget now expects 2,800 further to be added, partly as the tight efficiency dividends which bore down on Federal Departments in 2008-09 have been mostly dropped.

The Federal stimulus has also had a notable effect on the ACT – not only does its large mortgage belt respond well to the cash handouts and lower variable mortgage interest rates, but its public servants manage the stimulus programs. That suggests that the short term risks to the ACT economy are fading. So too does a continuing lift in population growth, now back up to a healthy 1.7% in the past year. And lower interest rates may not yet have had much impact on the ACT's housing sector, but they will.

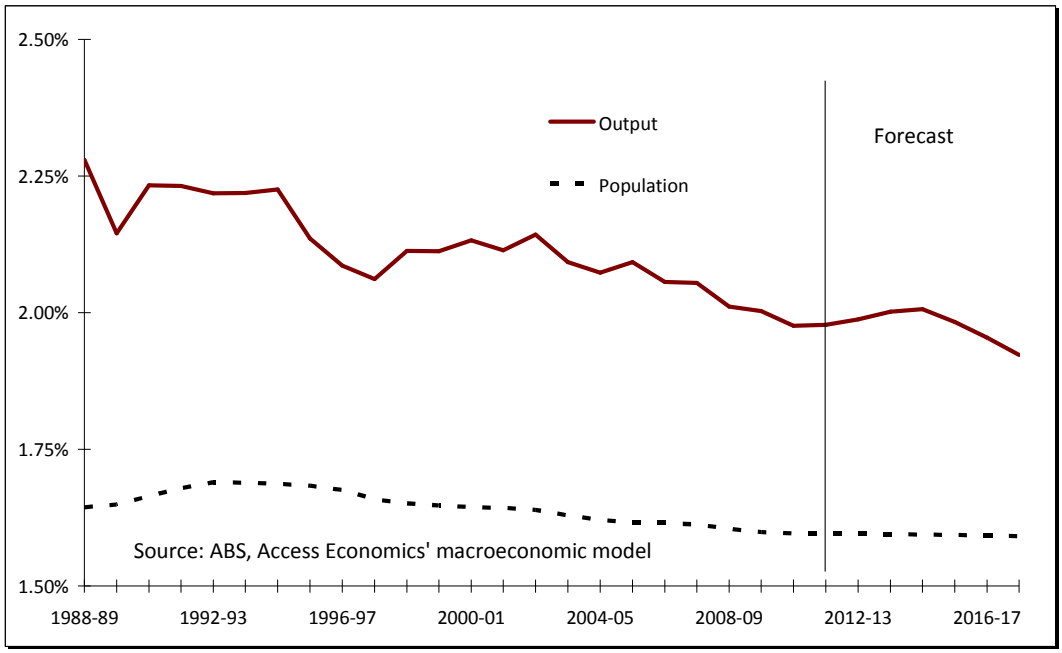
Of course, the ACT economy is traditionally a bastion of stability through national recessions – governments spend more to stop the rot, while public servants are much less likely to lose their jobs in a downturn anyway. That is consistent with the relatively modest rise in unemployment so far. Hence it seems as if the ACT will ride out the short term storm in relative comfort, with the economy weak, but certainly not out for the count.

Yet it was always going to be the longer term effect of this crisis which held the most significance for the ACT's economy. During the boom years from 2002-03 onwards some $45

billion a year more was spent as a result of Federal decisions, while taxes were cut to the tune of a similar amount. The total loosening of Federal policy – at about $90 billion a year – was too big, and at some stage there will be a notable Budget repair task in Australia. Federal Treasury estimates (and we agree) that there will still be a Federal deficit of over $25 billion in 2012-13.

The Government's response to that has been to promise to keep Federal spending to 2% a year after inflation for some years. Were that to actually happen, then the ACT would suffer from a prolonged period of stagnation. In practice, and as Chart 3.10 shows, a combination of (1) slow progress on spending restraint and (2) some increases in taxes means that there shouldn't be an overly harsh penalty on the ACT as a share of Australia's economy or Australia's population. However, the strength of the ACT's recovery may lag that seen nationally.

Chart 3.10: ACT output and population share



4 The utilities sector economic outlook

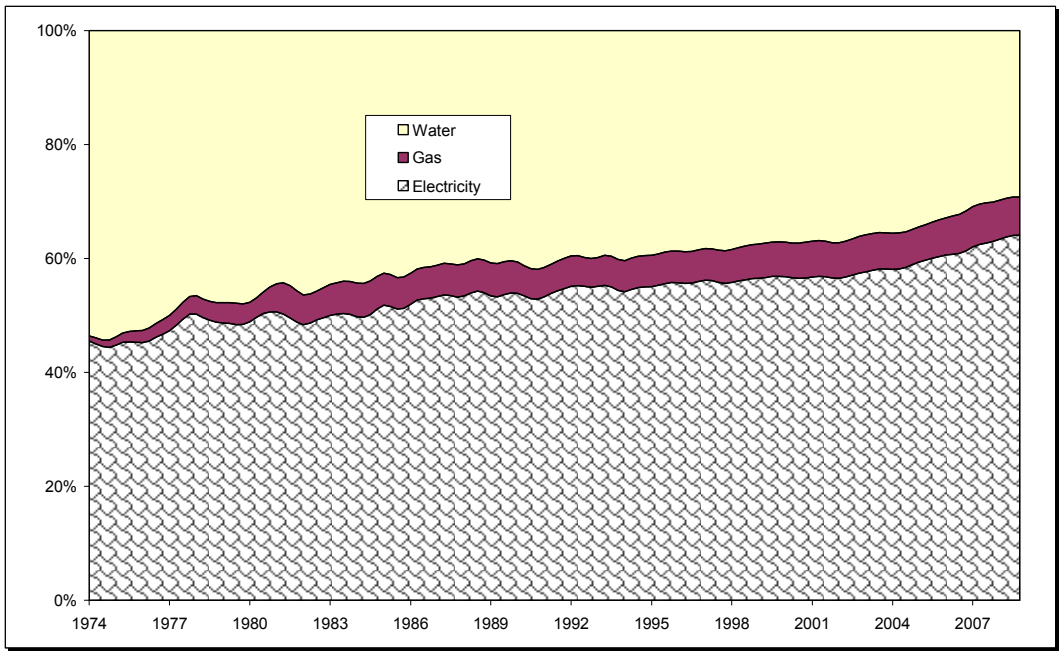
This sector covers:

- the generation, transmission or distribution of electricity;
- the manufacture and distribution of town gas;
- the storage, purification or supply of water; and
- the operation of sewerage or drainage systems including sewage treatment plants.

The utilities sector buys inputs from sectors such as mining, manufacturing and property and business services, and – reflecting the nature of its products – sells its output to a wide base of business sectors and to residential users.

The sector saw a series of reforms starting in the mid-1980s and going through until more recently. Those reforms revolutionised and revitalised the sector, leading to a sharp gain in productivity (though, as discussed in Chapter 7 below, that was partly unwound in recent years).

Chart 4.1: Composition of output in the utilities sector



Source: ABS Cat. No. 5206.0

There has been a gradual compositional shift in the output of the sector, with a series of droughts weighing on the relative size of the water sector, while technological and other developments have seen relative increases in the size of the electricity and gas components of this sector.

Turning to the short term economic outlook, the good news for the utilities industry during economic downturns is that it sells necessities – and sectors selling necessities are less affected in downturns than sectors selling luxuries.

Consumers might be more tempted to save money on heating or water if the opportunity presents itself, but that is unlikely to result in a large contraction. Nor is business use of electricity, gas and water, likely to fall quickly – though the wider weakness in business demand is a problem. This degree of protection helps explain why the utilities industry is one of the better performed sectors at the moment. Electricity demand continues to outperform the rest, up by a striking 11% in the past year alone, though gas demand is also still rising. Only water has felt the downturn sharply so far.

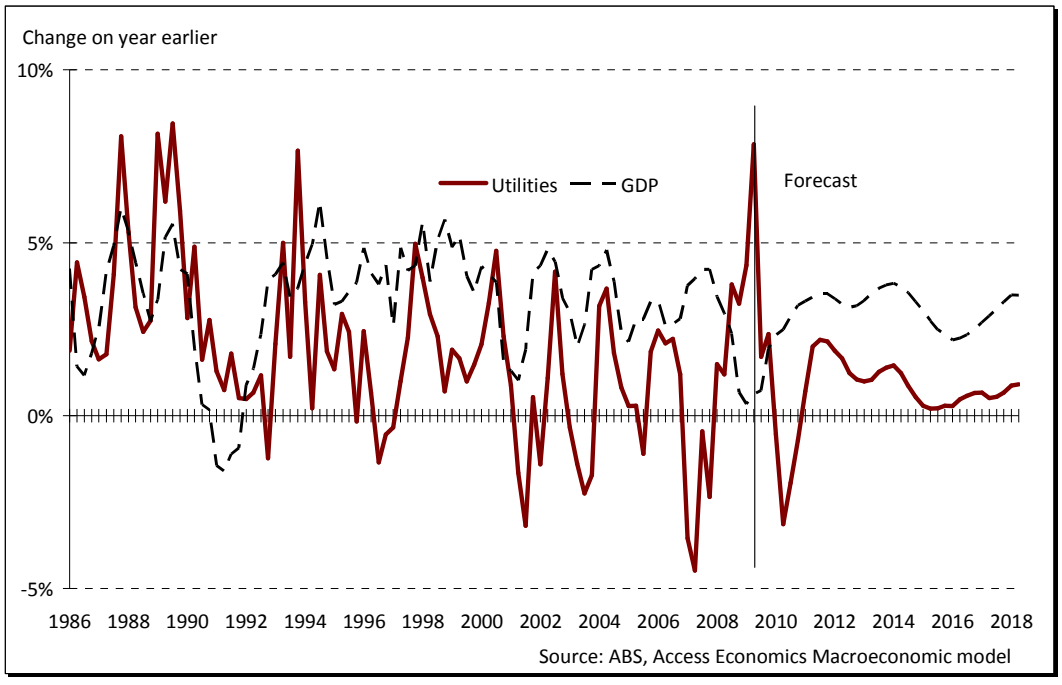
However, the wider business environment for the sector remains fraught. Investment decisions are clogging up as carbon policies wait to be decided, leading to rising risks (with baseload power generation in NSW perhaps the prime example). Other parts of the sector – notably water – are seeing some much–needed investment, not because the public sector has its policies and the related pricing of water well established, but as consumers are clambering for that investment.

Additionally, warm winters are hurting electricity demand at the same time as scorching summers are adding to it, raising the peak load problems already facing the sector.

With business demand expected to weaken further from here, Access Economics sees the sector suffering some short term weakness before recovering to its usual growth rate at a little below that in the wider Australian economy.

The latter period will merely extend the trend evident since the early 1990s, with utilities carving out a steadily smaller share of Australia's economy since then. Selling necessities has its advantages in the slowdown, but demand for them tends to grow more slowly over time.

Chart 4.2: Utilities output growth



5 The competitor industry economic outlook

Individual sectors can be expected to see their wage cycles differ from the average:

- Longer term wage outcomes by occupation and by sector reflect developments in labour productivity and inflation.
- Shorter term outcomes also reflect the pace of demand and the availability of supply among relevant types of skilled labour.

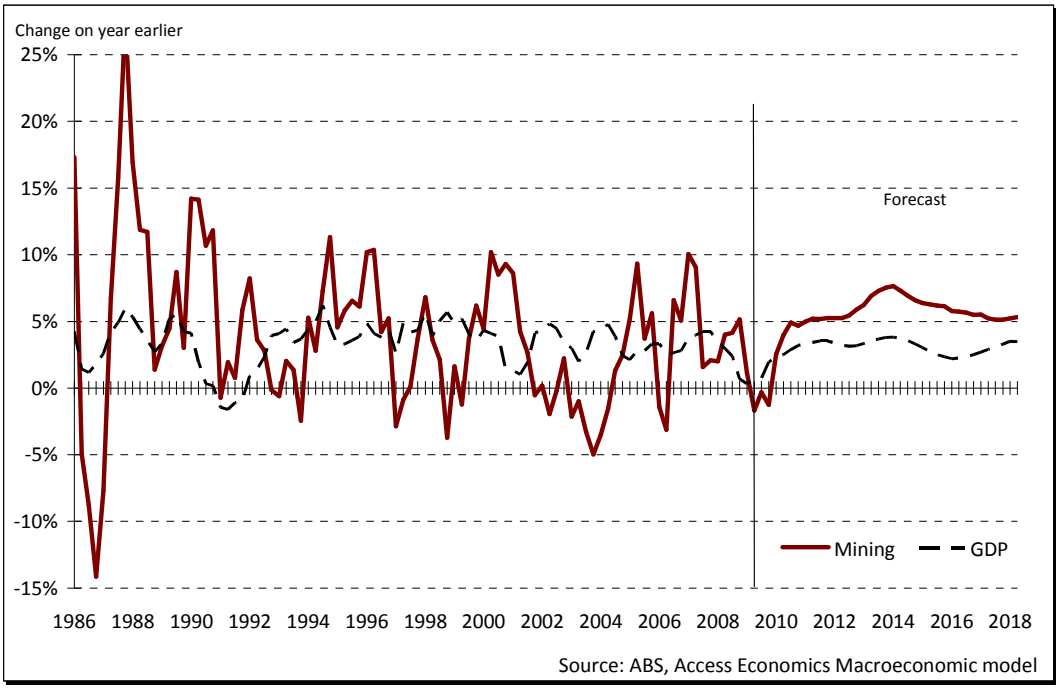
This chapter discusses the three industries which compete most heavily for labour with the utilities sector – the mining, construction and manufacturing industries.

In brief, **all three are in trouble to varying degrees**.

5.1 The mining industry

Australia's miners have history on their side – over the longer term, an accelerated industrial revolution among half the world's population will lead to a substantive lift in global industrial commodity demand. And Australia remains well placed to be able to sell into that longer term trend.

Chart 5.1: Mining output growth



However, it is not the longer term outlook for mining output which is at issue – it is the next few years. The mining sector stabilised in recent months as China's stimulus packages and associated easy credit for public- and private-owned steelmakers generated a surge in commodity buying. Charts of the volume of Chinese imports of iron ore, coal and copper show that current import quantities are well above where you would expect them to be even if there had never been a crisis at all. In part that strength is because Chinese mines are often

higher cost, so it has been sensible for them to close amid the crisis. In turn, that has opened market opportunities for Australian producers, who tend to sit lower on the cost curve.

Even so, it is unlikely that this can last. Accordingly, and as Chart 5.1 shows, although the mining sector's output growth is projected to lift from here, it may remain below longer term trend for another year and a half, with minerals having a tougher time of it than energy:

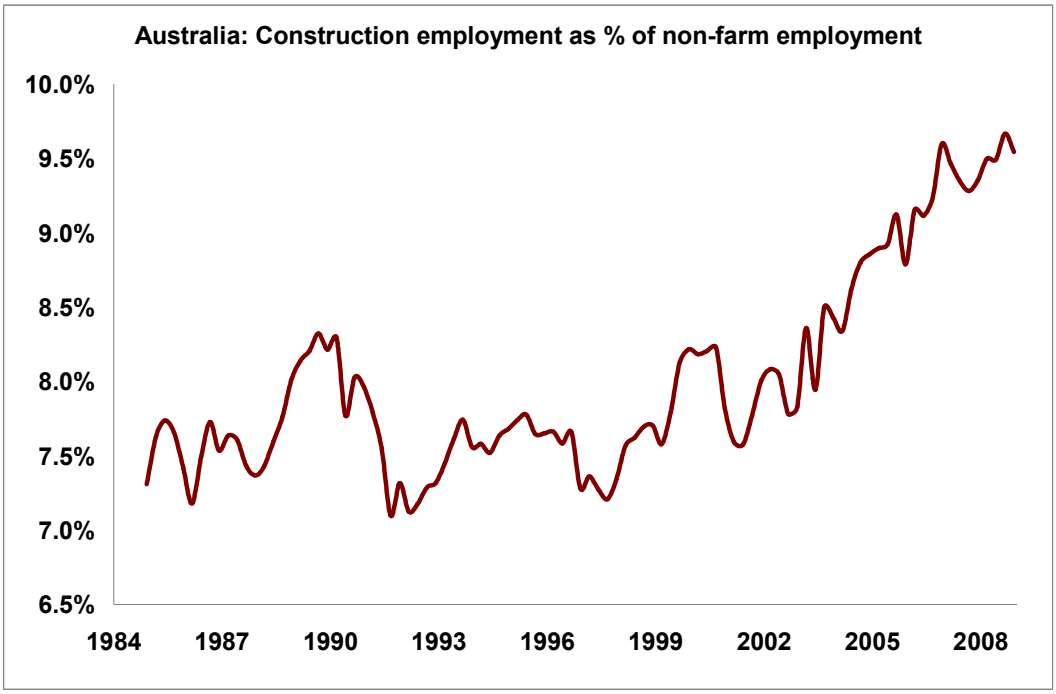
- ABARE expects Australian thermal coal production to lift by 8% in 2008-09 compared to 2007-08, helping export volumes to rise by 13% to 131 million tonnes. The large rise in contract prices achieved in April 2008 could see thermal coal export earnings rise by as much as 110% in 2008-09, aided by the completion of a number of new coal mines which have boosted export capacity. However the 44% decline in the coal contract price which was agreed by Australian suppliers and Japanese steel makers in April will see a similar fall in Australian thermal coal export earnings in 2009-10.
- Australia's liquefied natural gas (LNG) production is expected to increase by 5% in 2008-09 as a result of additional facilities coming online in the North West Shelf off WA. While LNG currently represents just 2% of world energy markets, it is considerably cleaner than many other forms of energy, making it a good prospect over the longer term. ABARE estimates that Australian LNG exports increased 11% in 2008-09, and it expects a further 11% rise in export volumes in 2009-10. Long term export volumes are expected to be solid given that LNG is sold under long term supply contracts, however recent prices falls mean that ABARE has forecast a fall in the value of Australian LNG exports of more than 30% in 2009-10.
- Australian iron ore exports are also feeling the pinch after recent contract negotiations. Rio Tinto has settled prices for iron ore fines some 33% lower than a year earlier, while the price of lump was revised down by around 44%. ABARE sees Australian iron ore export values falling by 24% in 2009-10 to $25 billion after an estimated 64% rise in 2008-09. Export volumes are tipped to remain strong due to a ramp up in production at Fortescue Metal Group's Pilbara operation.
- The outlook for base metals is mixed. Copper export earnings are forecast to fall by 19% in 2008-09 before lifting by 2% in 2009-10, while Australian gold production is projected to rise by 9% in 2009-10 reflecting the commissioning of some 14 new facilities. Even so, export volumes will remain relatively steady, while export values will lift by 3% following a 61% rise in 2008-10 (helped by a 30% increase in the $A price of gold).

5.2 The construction industry

The lift in the share of workers employed in construction has been remarkable. In 2008 almost one in every ten Australian workers has been employed in construction.

The current share is striking and – even with the Government stimulus package – it cannot last. After its longest ever surge, Australia's construction sector has stopped growing. Indeed, it has shrunk by almost 3% in the past six months alone. Like many other things around the world, it peaked in September 2008, and growth has been falling ever since. There may be worse still to come for the sector. In the short term, weakness over the next couple of months will remain concentrated in housing construction, which continues to fall well shy of underlying demographic demands.

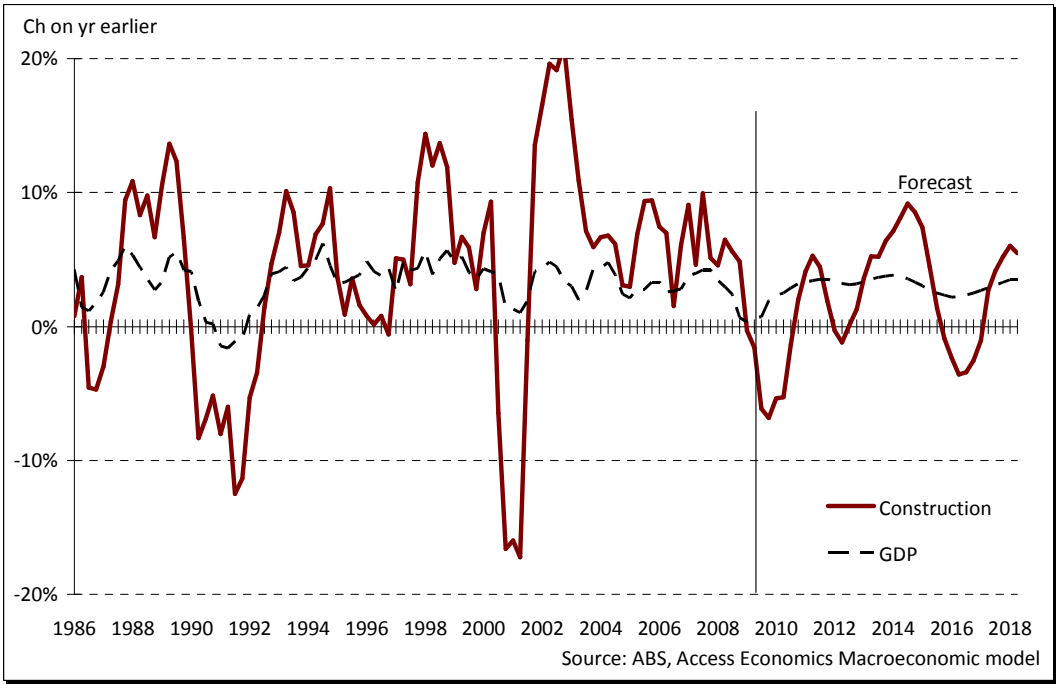
Chart 5.2: Construction as a share of non-farm employment



Source: ABS

That said, by and large it is not the housing sector which explains the weakness in the wider construction sector projected in Chart 5.3.

Chart 5.3: Construction output growth



Housing accounts for almost half of the turnover in the wider sector, and it should stronger through the course of calendar 2010 in particular. However, it will be from sometime soon that the engineering and commercial construction sectors will weaken notably.

Key parts of those sectors have been starved of finance, and the combination of falling profits and falling capacity utilisation has eaten into demand for construction regardless of the availability of a supply of finance.

That won't be particularly evident for a few more months yet given the strong pipeline of engineering and commercial construction work yet to be done. Yet both these sectors are set for a substantial downswing after their big boom of recent years. Engineering construction peaked in late 2008 at almost three times its longer term average as a share of Australia's national income. Although fast growing developing nations will continue to underpin demand for Australian infrastructure into the longer term, it may not require a continuation of those big levels of investment in new engineering construction.

The outlook is a bit better for commercial construction. Although it also peaked in late 2008, as a share of Australia's economy its peak was shy of the very high rates seen in the late 1980s, and its downswing should be shorter in length.

With engineering and commercial detracting more than housing is growing, Chart 5.3 shows the sectoral shakeout now starting in construction may be not quite as bad as those seen in the early 1990s and early 2000s, though the duration this time round may be closer to the recession of the early 1990s rather than the downturn of the early 2000s.

5.3 The manufacturing industry

Most of Australia's economy didn't fall off a cliff in response to the global crisis. But you can't say that for the manufacturing sector. The sector stopped growing in early 2008 as interest rates began to take their toll on the likes of car sales. But then the slowdown really hit in late 2008.

In the year to March 2009 the wider manufacturing sector lost one in every nine workers and one in every 11 dollars of output. There were very large job losses of late in each of food, wood and paper, plastics, building products and metal manufacturing, and in car making too.

The more discretionary the markets into which manufacturers are selling, the tougher it has been. That is why car makers are struggling, but there have also been remarkable drops in output in each of metal products, chemicals, printing and textiles, clothing and footwear.

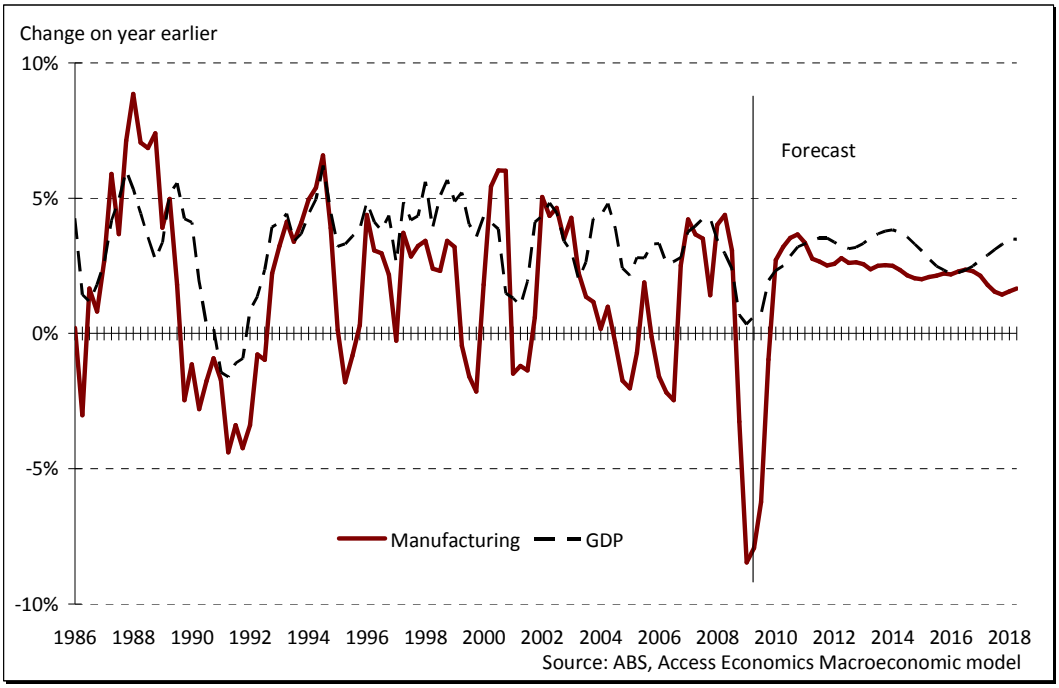
It is unlikely that the wider manufacturing sector will see continuing falls of anything like the magnitude evident in recent days. Yet equally it is clear that the sector has taken a big hit at least on par with its troubles in the recession of the early 1990s.

Access Economics has often noted that the remaining manufacturers in Australia are the survivors of past crises and have long lived with the chronic pressure from high interest rates and overvalued exchange rates, high costs of inputs (such as industrial commodities), a relative lack of economies of scale in domestic markets and the rising competitive challenge from Asia.

However that challenge became greater in the wake of the financial crisis, and it is likely that there will be more Australian manufacturers relocating production facilities into Asian markets

or simply closing their doors soon. So although Chart 5.4 doesn't see the pace of the current downturn maintained for more than a few more months, this sector won't be regaining market share any time soon.

Chart 5.4: Manufacturing output growth



On the other side of the ledger, however, the fall in interest rates and industrial commodity prices – and the smaller fall in the $A relative to its peak in mid-2008 – all augur well for a rebound in parts of this sector in 2010-11.

Moreover, as Chapter 8 discusses, that may also allow for a period of above average wage growth in the manufacturing sector.

6 The national wage outlook

Downturns are dampeners, and tougher times have seen price growth slow. Yet those times haven't been as tough as expected, and inflation pressures have merely moderated. Price pressures are projected to remain steady in the coming year, held there by a resurgent $A and a recent slowing in the pace of wage claims. However, price pressures will again be on the rise through 2010-11. Indeed, upstream price indicators are already stirring – yet another factor which will soon see the Reserve Bank back in tightening mode.

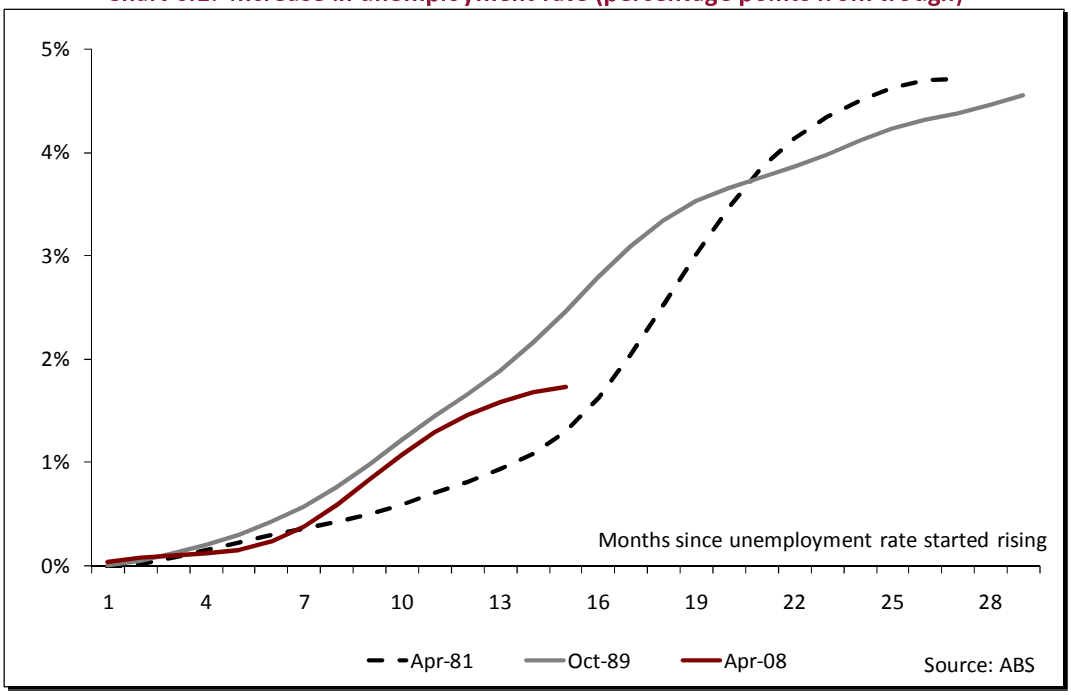
With job markets stalled, unemployment rising and inflation dropping back, it is no surprise that wage growth is easing. But it is easing relatively fast – Access Economics thought it would take a little longer for wage growth to slow this much, but the Labour Price Index (LPI) is already back under a 4% growth rate over the past year. That is the lowest in three years and chances are that overall wage growth will ease further from here.

6.1 Job markets and their impact on wages

Labour costs are the largest single determinant of most prices, while the largest single driver of swings in labour costs is swings in labour markets.

That is why it is important for these forecasts to note that Australia isn't losing jobs – or, at least, we're not losing many. Chart 6.1 shows the lift in Australia's unemployment rate in the current downturn and in the past two recessions. Unemployment fell to 5.6% in April 1981, before peaking at over 10% in mid-1983 – an increase of almost five percentage points in the unemployment rate.

Chart 6.1: Increase in unemployment rate (percentage points from trough)



Similarly, unemployment dropped to a low of 5.7% in September 1989, before peaking at 10.7% in late 1992: again, a lift of some five percentage points. The good news this time round comes in two parts.

- First, unemployment started at a lower rate than it did just ahead of the last two recessions, dipping to 4% in April 2008.
- Second, and more importantly, although Australia's unemployment rate has jumped by two percentage points to around 6% since then, that means the lift in unemployment has in recent months begun to look as if it will fall well shy of what Australia suffered in the past two recessions. That is very good news, and an outlook markedly better than the Federal Budget forecast released last May of a peak unemployment rate of 8.5%. (Access Economics' forecast is that the unemployment rate will peak at 6.8%.)

Australia has lost 25,000 jobs since last September, or around one in every four hundred jobs. In contrast, job markets in much of the rich world have been much harder hit. For example, the US has already lost six million jobs through this crisis, more than 4% of US jobs. Allowing for the different size of our economies, the US has lost 16 jobs for every one lost in Australia.

That lack of job losses is great for confidence, and it is also important because a lost job has its own direct economic implications. Job losses feed on job losses, a vicious cycle into which many of Australia's peers have been drawn into over the past year.

One of the many such channels worth noting is that many home loan foreclosures in other nations have been a direct result of job losses – lost job, lost home. In turn, those foreclosures then trigger other developments with bad implications for the wider economy.

However, while smaller job losses are good news for the economy, the slowdown is still set to take away as much money from households as that lost in the 1990s recession.

Chart 6.2: Growth in hours worked and in jobs

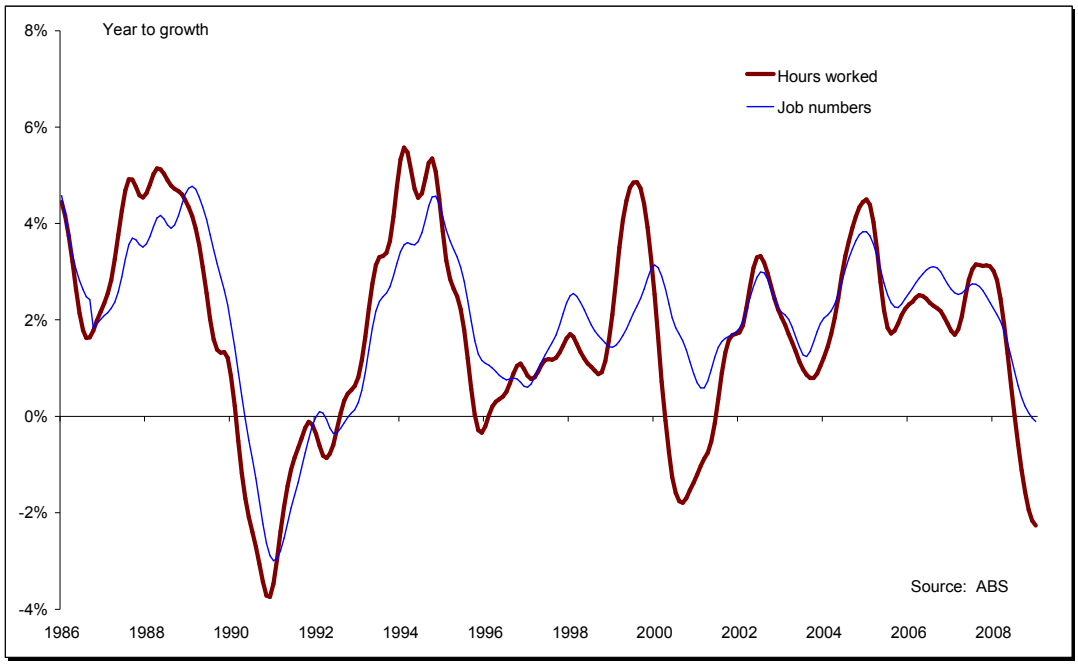


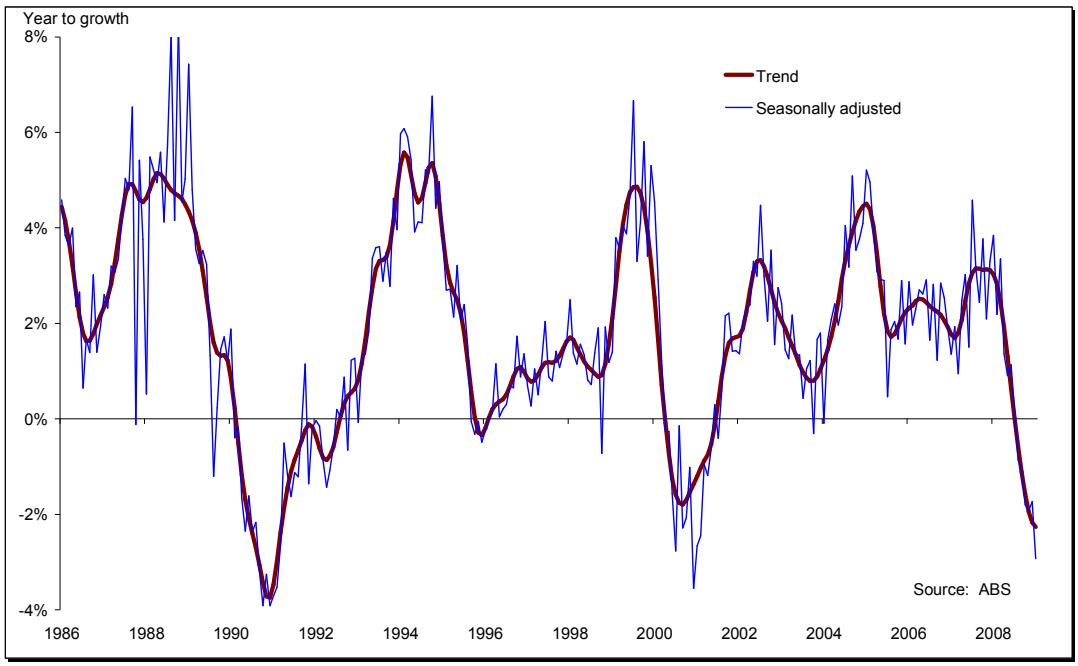
Chart 6.2 shows growth on a year earlier for both jobs and hours worked. The job line has only just dipped below zero, a very far cry from the 3% job losses recorded in the recession of the early 1990s.

Yet the story is very different when the pattern of hours worked is examined. It is not unusual for employers to fight hard to hang on to employees through a downturn. But we are seeing that 'labour hoarding' occur with unusual ferocity this time – remarkably few jobs have been lost since the crisis hit, though there has been a big shift from full-time to part-time work as employers and employees agree on reduced hours through the downturn.

The end result has been that the number of hours that Australians are working has already fallen sharply, and so far appears on track to see as big a shakeout as it saw in the early 1990s.

Indeed, as Chart 6.3 shows, the latest seasonally adjusted data suggest that the trend could worsen further from here.

Chart 6.3: Growth in hours worked

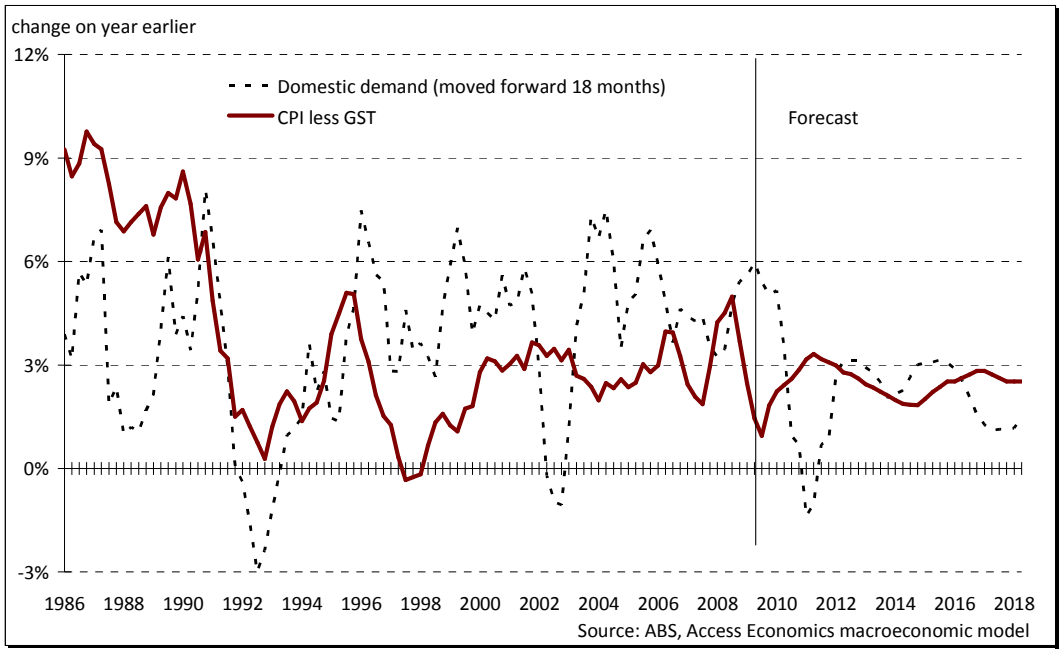


That means the headlines on jobs may be wonderful, but the bottom line implications for household finances are rather worse. Added to this is the fact that interest rates are on the way up, and the Federal Government stimulus packages have dried up, and the hit to household income is greater.

6.2 The outlook for the CPI

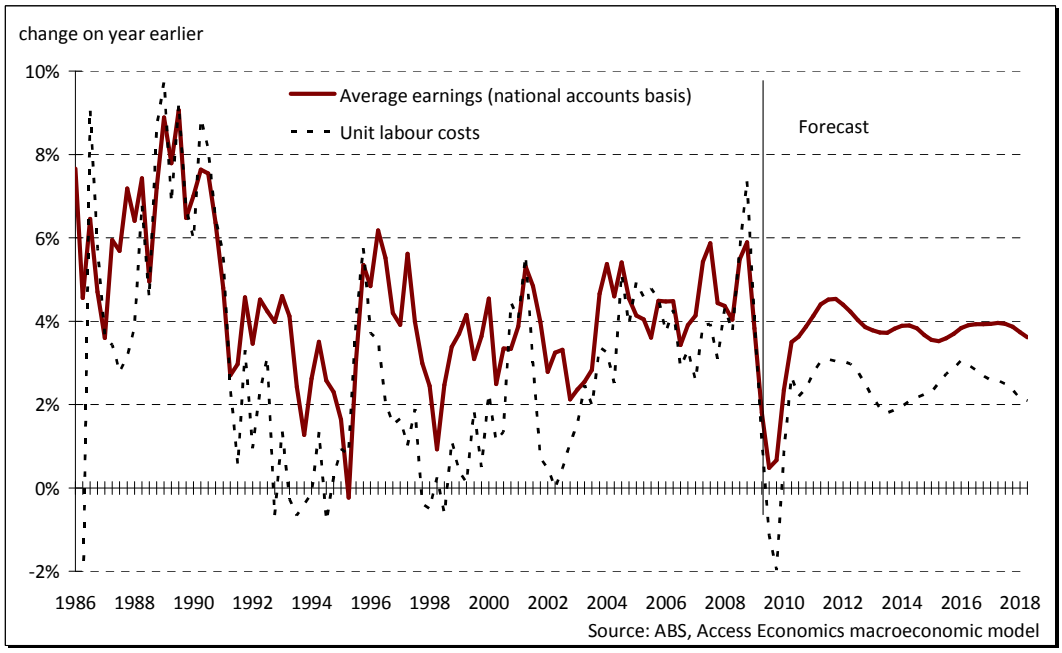
Demand pressures will weaken further from here, but some of the initial shock to retail margins from the crisis may now ease. Retail and other discounting is starting to be less sharp now that shop shelves are less full. As a result, the net impact – as Chart 6.4 suggests – may be that demand pressures figure less prominently as an underpinning to inflation trends in Australia over the next year before regathering some pace through 2011.

Chart 6.4: CPI and domestic demand



Labour costs reacted faster than usual to this slowdown, easing nationally, and easing even more in sectors and States where wage acceleration had been most marked. The Fair Pay Commission followed suit, with no increase in minimum wages in its latest decision (after the 4% increase it granted in 2008). Chances are wage growth will stay low for a time. Although unemployment looks set to peak well shy of past recessions, labour demand is down across a range of sectors and underlying consumer price inflation is also easing. And although it may not slow too much further from here, a rebound in wage growth is not expected until 2011.

Chart 6.5: Wages and labour costs

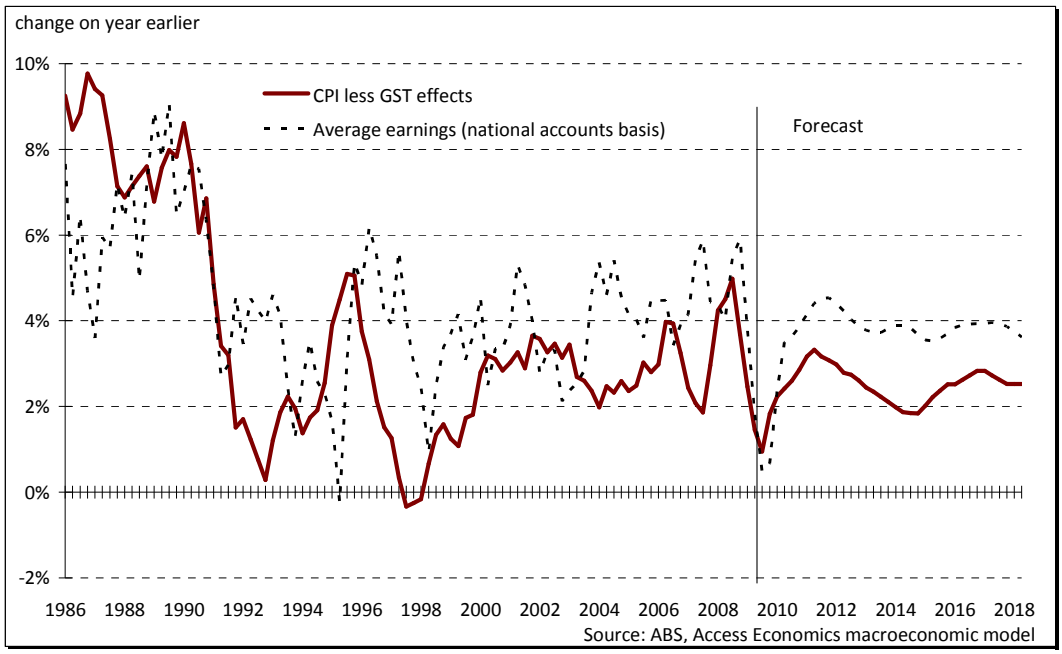


6.3 The outlook for wage growth

With job markets stalled and unemployment rising, it is no surprise that wage growth is easing.

But it is easing relatively fast – Access Economics thought it would take a little longer for wage growth to slow this much, but the Labour Price Index (LPI) is already back under a 4% growth rate over the past year. That is the lowest in three years and, despite a degree of feistiness still seen in public sector wage growth, chances are that overall wage growth will ease further from here (see Chart 6.6).

Chart 6.6: Wages and inflation



Wage growth is moderating where you would expect it to in a downturn like that currently evident – in mining, finance, construction and manufacturing, with weakness also seen in business services, retail and communications. Moreover, wage growth in several of those sectors look as though it is continuing to lose momentum – including in both mining and manufacturing, but also in business services and retail.

At the other end of the scale, wage gains lifted further in health, defence and in education – all sectors well protected from the impact of market forces.

The slowdown is similarly where you would expect it to be geographically, with the fastest slowdown in growth seen in Western Australia and the Northern Territory. Wage growth had not picked up pace to the same extent in NSW, Victoria and South Australia, and it continues to look subdued there.

Other key wage measures are also giving interesting results. Average Weekly Ordinary Time Earnings (AWOTE) were up by 6.1% in the past year, but total earnings – Average Weekly Earnings (AWE), which allows for overtime and the changing mix of full- and part-time workers

– were up by just 3.8%. That is as overtime is getting cut and hours are too, with a rising share of part-time work moderating the pace of growth in the overall national wage bill.

Chart 6.7: Productivity growth

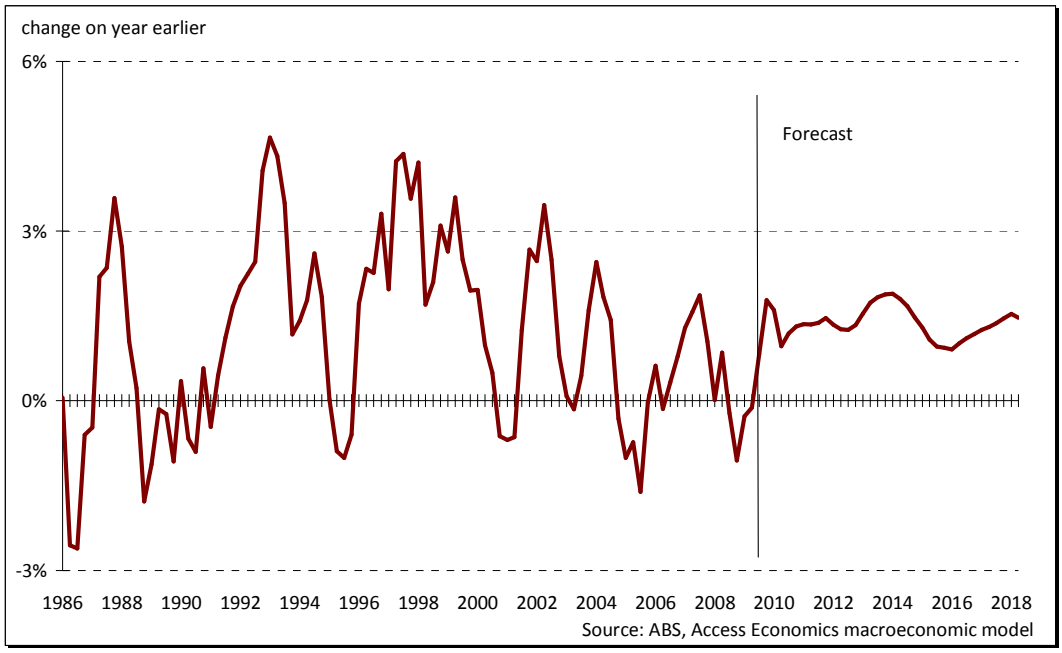
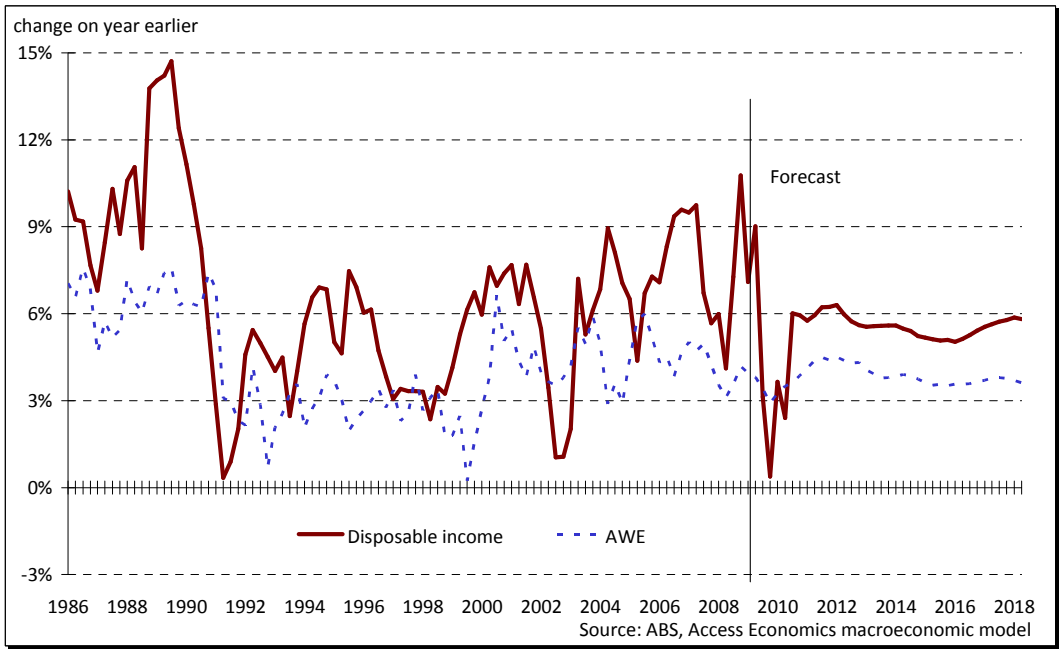


Chart 6.8: Wages and household disposable income



Enterprise bargains continue to report moderate wage growth. The modest uptick of late may yet prove to have as much to do with a small number of agreements than the start of an upswing in wage growth. Indeed, we see wage growth staying subdued in the next little while. Although the 'award modernisation round' is resulting in a levelling up of wages in some

sectors, the Fair Pay Commission did not grant an increase (versus $21 or 4% last year). That said, although wage growth always slows in a slowdown, it won't stay that way for too long.

Access Economics sees wage growth easing to a trough of 3½% in 2010 before rising once more through 2011 (see Chart 6.8 and Table 6.1).

Chart 6.9: Real unit labour costs (Index: 2006-07 = 100)

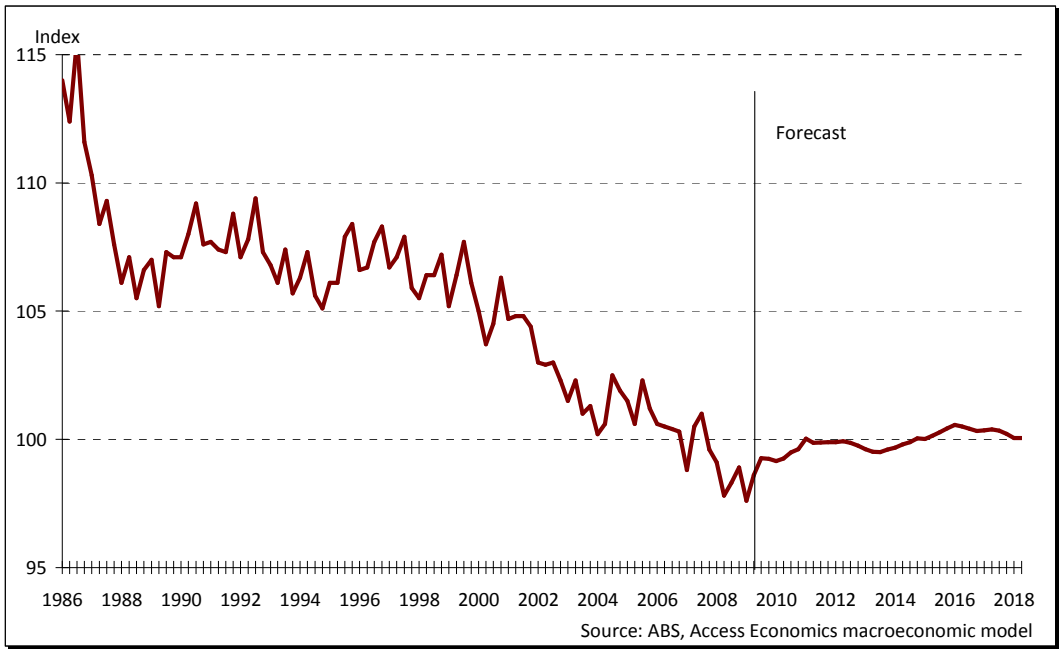


Table 6.1: National wage forecasts

Financial year nominal wages forecasts

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
LPI	4.1	3.5	3.9	3.9	3.7	3.7	3.8	3.9	4.1	4.1
AWE	3.9	3.3	4.0	4.4	4.1	3.8	3.7	3.6	3.7	3.7
AWOTE	4.9	5.5	4.0	4.1	4.6	4.9	4.1	4.0	4.1	4.3
Unit labour costs	3.8	4.6	0.1	2.6	3.0	2.3	1.9	2.3	2.9	2.7

Financial year real wages forecasts

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
LPI	0.9	1.7	0.9	0.9	1.1	1.6	1.8	1.3	1.3	1.5
AWE	0.7	1.4	1.0	1.4	1.6	1.7	1.7	1.0	0.9	1.1
AWOTE	1.8	3.6	1.0	1.0	2.0	2.7	2.1	1.5	1.3	1.7
Unit labour costs	0.6	2.6	-2.8	-0.4	0.5	0.3	-0.1	-0.2	0.1	0.1

6.4 Differences in wages by State and industries

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.
- 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 (both exiting and returning).
- Shifts by New Zealanders (who face fewer restrictions on migration than do those from other nations).
- Shifts in wages will see people substitute into growing areas related to their existing skills.
- Shifts in relative wages can delay retirements or exits, as well as encourage new entrants.
- Shifts in the use of labour due to changes in relative costs ("We'll use more enrolled nurses and less registered nurses as wages for RNs have risen relative to those for ENs").

Many of these 'equilibrating factors' can be very slow to operate, meaning that divergences in prices and 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.

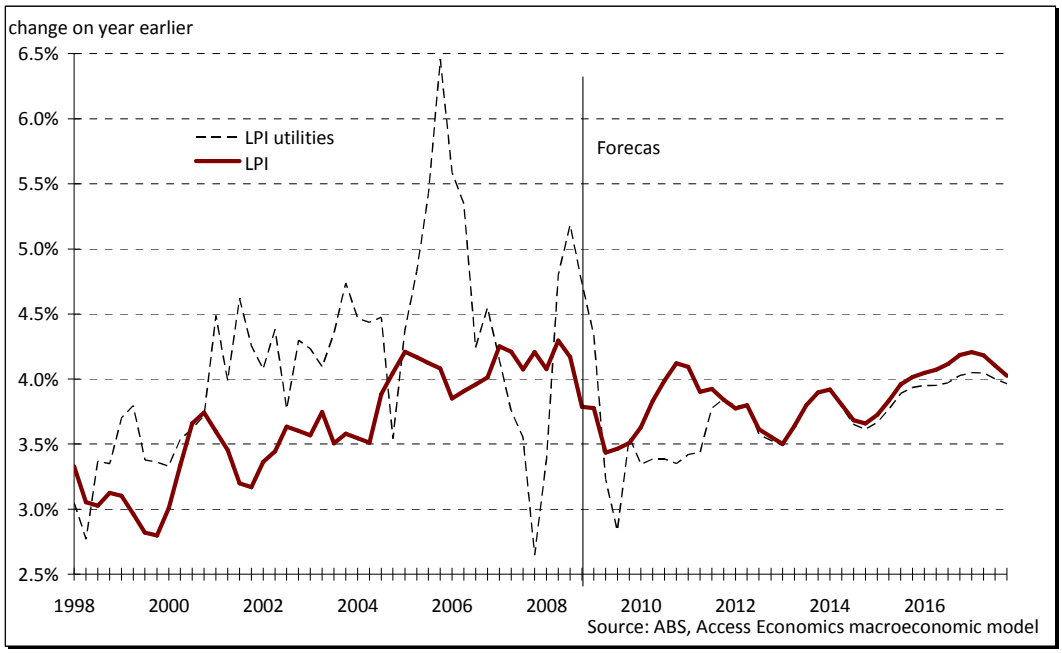
7 The national outlook for wage growth in the utilities

7.1 Strength in relative wages in recent years

There are a number of reasons for the steady uptrend in national wage growth in this decade to date, but most revolve around a strong economy and the resultant pressure on the labour force. Job growth in the 2000s averaged 2.3% a year, almost double the 1.2% a year evident in the 1990s. And the stronger economy pressured prices, with rising inflation also leading to rising wage growth.

Yet the composition of the job boom also stood out. Unusually, blue collar occupations did rather better in the 2000s than they had in earlier decades. As a result, a number of trades saw shortfalls in available labour, driving labour 'prices' ever higher as a result. Wage growth was most notable in mining and in sectors where miners were key alternative employers (such as construction and the utilities). Similarly, wage growth was strongest in resource States such as Western Australia, Queensland and the Northern Territory.

Chart 7.1: Wage growth nationally and in the utilities

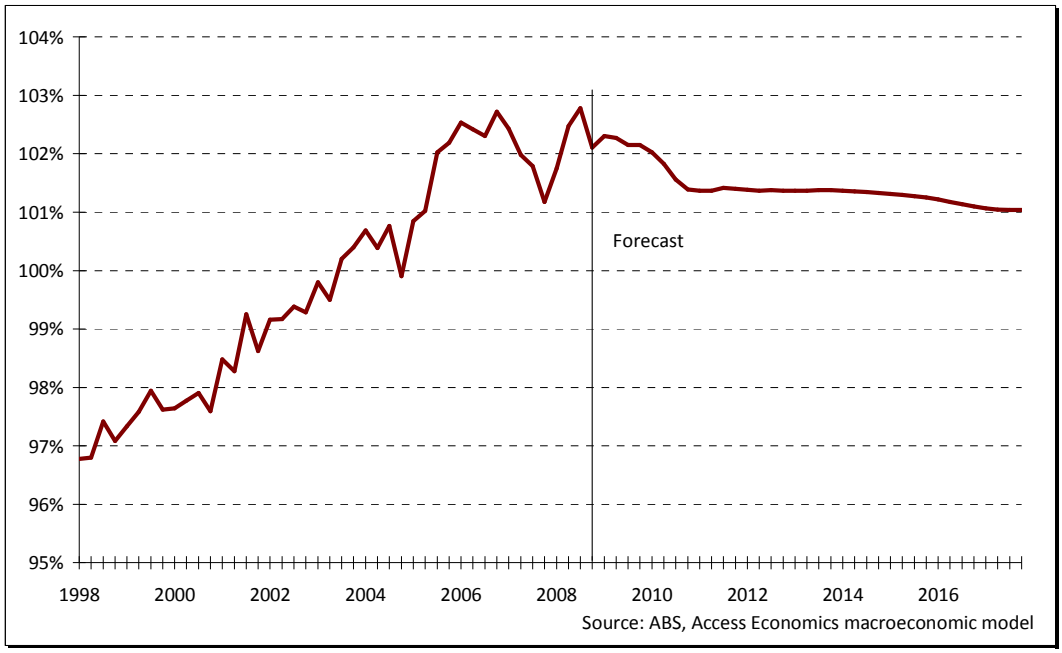


The upshot was that the utilities sector found itself in keen competition for many types of labour, and hence wage growth in the utilities outpaced overall wage growth nationally.

Chart 7.1 shows LPI growth in the utilities and in Australia as a whole, while Chart 7.2 shows wages in the utilities relative to national wages.[4] The latter chart shows the strong relative gains in wages in the utilities sector over the decade to early 2006, with the relativity levelling off since then.

[4] Note this is an index – it does not mean wage levels are much the same in the utilities as the national average.

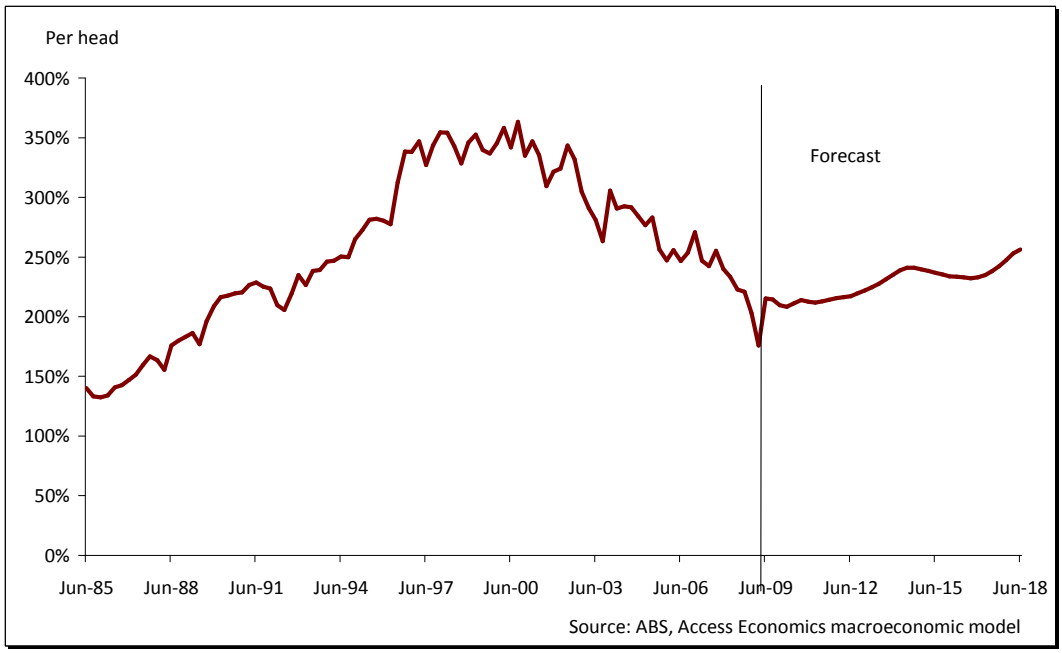
Chart 7.2: Utilities LPI relative to national LPI (index, 2003-04 = 100)



7.2 Weakness in relative productivity in recent years

These wage moves are in contrast to productivity developments. Nationally, productivity growth levelled off in recent years, meaning that wage growth was translating at a faster-than-usual pace into increased labour costs.

Chart 7.3: Utilities productivity relative to national productivity

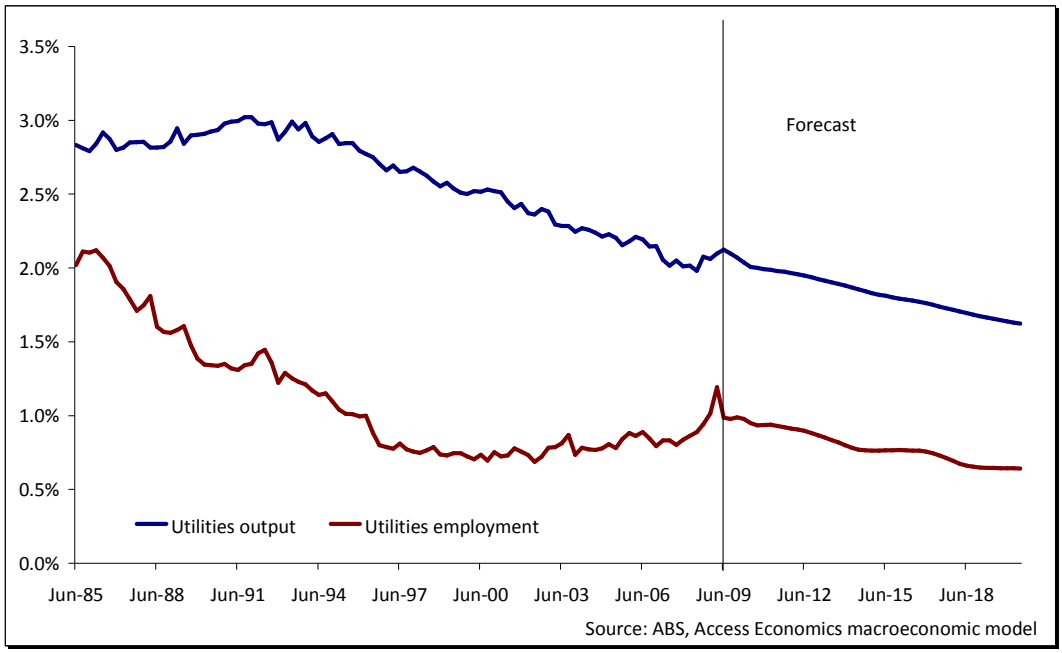


And some sectors – notably mining, but also the utilities – saw their productivity levels fall, boosting labour cost growth as opposed to wage growth) even further.[5]

Chart 7.3 above shows the productivity of the average worker in the utilities sector relative to the productivity of the averaged Australian worker.

Australian governments embarked on reform of the utilities sector in the mid-1980s. That process saw relatively fewer workers achieve the same output, driving the productivity of the average worker in the utilities from about 1.5 times the Australian average in the mid-1980s to 3.5 times the Australian average from 1997 to 2002.

Chart 7.4: Utilities output and employment as a share of national equivalents



Since 2002, however, the poor productivity performance of the wider Australian economy was worse still in the utilities sector. There are a number of reasons, including that:

- The downswing in employment in the sector had arguably gone too far, requiring a degree of catch up (meaning that, in effect, relative productivity in the period 1997 to 2002 may have been unsustainably high). Spending on maintenance has lifted, and so too has spending on some new infrastructure (albeit with the latter still falling short of future requirements). That increased spending has added to employment without add to output, hence weighing on measured productivity.
- A compositional switch in the sector away from water to electricity and gas has also worked to lower measured average productivity in the sector.

[5] Labour costs to businesses are essentially driven by changes in wages plus changes in the efficiency of work (productivity). For the typical sector, wage growth averages around 4¼% a year, and productivity growth is 1¾%, meaning that growth in unit labour costs is 2½%. In turn, the latter lies in the middle of the Reserve Bank's target range for inflation.

- Within the water sector, a series of droughts in a number of States ate into measured productivity.
- Industry sources suggest that a reduction in outsourcing in recent years may also have raised employment without raising output.
- The reform momentum of earlier years faltered.

Accordingly, the pick up in relative wages in the utilities sector in recent years was not because employees were becoming more productive, it was because they were becoming more sought after in other key sectors. However, as the above charts also show, Access Economics projects a degree of unwinding of some of the key drivers of recent years such that wage growth in the utilities may ease below that seen nationally for a time.

That is not because productivity in the sector has weakened. In fact it is Access Economics' assessment that some of the recent weakness in productivity in the sector is overstated, and we have therefore minimised the effect of productivity weakness on wages in the sector in our modelling of developments over the coming year.

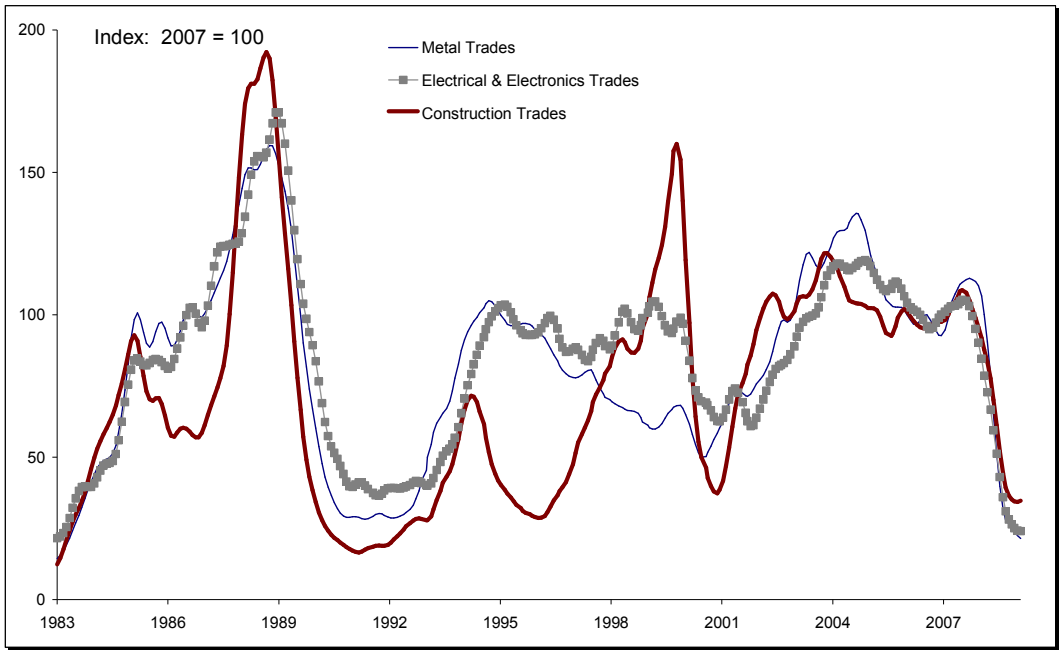
7.3 Business cycle developments in the sector and its competitors

Rather, it is because the current downturn in the economy is affecting the utilities and the sectors with which the employers in this sector compete with for workers:

- In the **utilities** sector itself the past year saw a surge in electricity output (up 11%) which may not be maintained. Structurally, warm winters are hurting electricity demand at the same time as scorching summers are adding to it, raising the peak load problems already facing a sector with more than enough on its plate as regulatory uncertainty over the ETS holds back much needed investment in new capacity. With business demand expected to weaken further from here, we see the sector suffering some short term weakness before recovering to its usual growth rate, averaging a little below that in the wider Australian economy.
- The most remarkable developments have been in **manufacturing**. That sector stopped growing in early 2008 as interest rates began to take their toll on the likes of car sales. But then the slowdown really hit in late 2008. In the year to the March quarter 2009, the wider manufacturing sector lost one in every nine workers and one in every 11 dollars of output. There were substantial job losses of late in each of food, wood and paper, plastics, building products and metal manufacturing, and in car making too.
- Similarly, employment in **mining** rose from 81,000 people in late 2003 to 182,000 in late 2008 – a gain of 125% across a period when the sector's output rose by only 21%. However, the sector has already shed 30,000 of those jobs in the crisis thus far, and its employment levels may not rebound for some time.
- Similarly, the lift in the share of Australian workers employed in **construction** over the past decade was also remarkable. By 2008 almost one in every ten Australian workers has been employed in construction. The current share is striking and – even with the Government stimulus package – it cannot last. After its longest ever surge, Australia's construction sector has stopped growing. Indeed, it has shrunk by almost 3% in the past six months alone. In the short term, weakness over the next couple of months will remain concentrated in housing construction, which continues to fall well shy of underlying demographic demands. However, the engineering and commercial

construction sectors will weaken in 2010. Key parts of those sectors have been starved of finance, and the combination of falling profits and falling capacity utilisation has eaten into demand for construction regardless of the availability of a supply of finance.

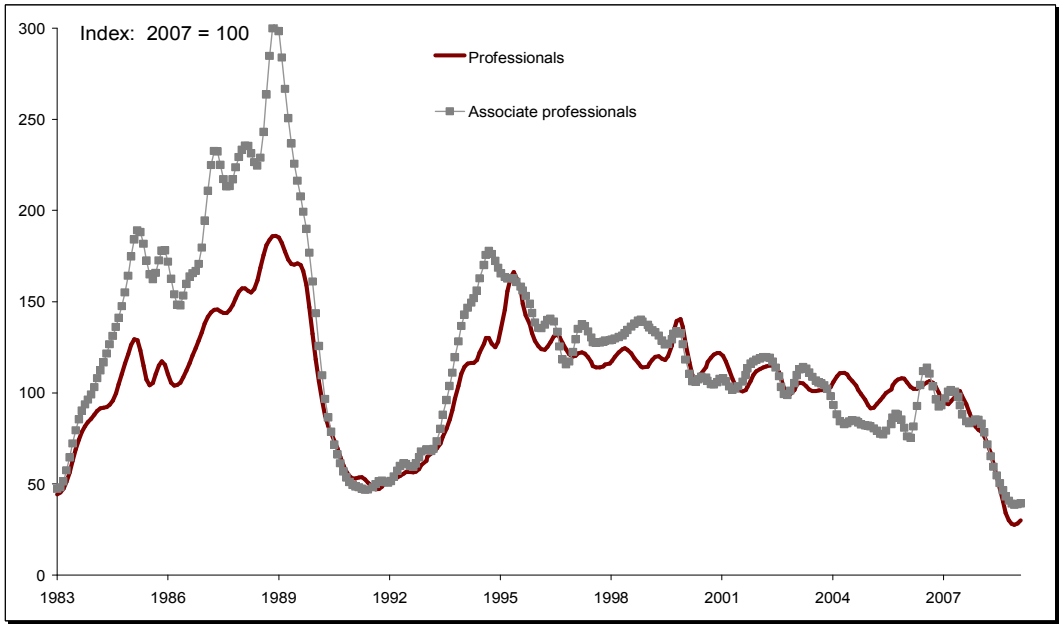
Chart 7.5: Trades vacancies



Source: DEEWR vacancies data

Those cyclical effects are already evident in the vacancies data complied by the Federal Department of Education, Employment and Workplace Relations (DEEWR).

Chart 7.6: Professionals and associate professionals vacancies in building and engineering



Source: DEEWR vacancies data

Chart 7.6 focuses on vacancies in the trades. Several relevant trades are noted – construction, electrical and electronics, and the metal trades.

For both the latter two, vacancies haven't been this weak since 1983. For construction, vacancies are the lowest since 1996.

Turning to vacancies for professionals and associate professional – as seen in Chart 7.7 – demand for both these categories of labour are at record lows.

Hence these forecasts point to the June quarter 2009 weakness in wage growth in the utilities ushering in a period through to mid-2011 when wage growth in the utilities may fall short of the national average for wage growth.

7.4 Supply side factors

That said, it is not just the demand side which is affecting this equation. The supply side is important too. The good news is that more people are studying in the fields which feed into employment in the utilities.

For example, the share of the Australian population aged 16 to 39 studying engineering lifted sharply in 2006, and stayed at that higher level in 2007 (the latest available data).

That share is currently 11% above its 2004 low.

Table 7.1: Student participation rate by field of education (16 to 39 year olds)

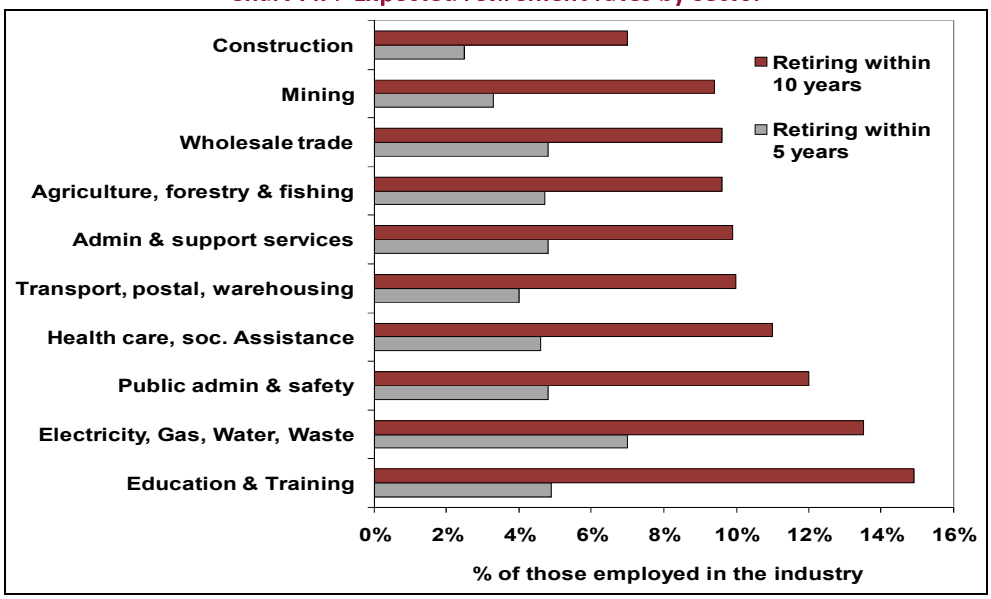
	2003	2004	2005	2006	2007
Natural and Physical Sciences	0.82%	0.83%	0.83%	0.80%	0.80%
Information Technology	1.22%	1.05%	0.90%	0.86%	0.66%
Engineering and Related Technologies	3.12%	3.04%	3.15%	3.39%	3.38%
Architecture and Building	1.03%	1.11%	1.16%	1.28%	1.34%
Agriculture, Environmental and Related Studies	0.91%	0.87%	0.83%	0.82%	0.76%
Health	1.36%	1.39%	1.47%	1.58%	1.71%
Education	1.19%	1.18%	1.21%	1.21%	1.26%
Management and Commerce	5.12%	5.02%	4.97%	5.04%	5.15%
Society and Culture	3.53%	3.40%	3.42%	3.54%	3.43%
Creative Arts	1.09%	1.06%	1.06%	1.09%	1.10%
Food, Hospitality and Personal Services	1.29%	1.29%	1.34%	1.62%	1.63%
Mixed Field Programmes	0.84%	0.88%	0.90%	0.82%	0.96%

Source: DEEWR Higher Education Statistics; NCVER student enrolments; ABS 3101.0

On the other side of the ledger, the ABS Survey of Employment Arrangements, Retirement and Superannuation (SEARS) ranks the utilities sector as one which can expect a relatively faster rate of retirement over the next five and ten years.

Those industries which face a surge of retirements include education (where 14% of workers intend to retire by 2017), the utilities (13%), and public service employees (12%). At least 40% of employees in these three industries are aged 45 or over and around 15% of employees are 55 or over.

Chart 7.7: Expected retirement rates by sector



Source: ABS Survey of Employment Arrangements, Retirement and Superannuation

Table 7.2 below focuses on occupations rather than sectors:

- It indicates that, apart from 'Computing professionals', the other occupations listed here have a significant proportion (greater than 10%) of workers 55 or over (the early stages of retirement).
- The professional and associate-professional engineer occupations may be of concern as they have over 16% of workers over 55.
- These may also be of higher concern as they are higher skilled occupations, where workers may be difficult to replace.

The age profile of the trade occupations indicates there is little problem associated with retirement. This is because workers tend to leave these occupations prior to retirement (perhaps to seek employment within the company at a less physically demanding job).

Table 7.2: The age profile of selected occupations, 2006

Occupation	15-24	25-34	35-44	45-54	55-64	65+	Total	% 55+
Miscellaneous generalist managers	4,947	16,086	26,850	27,665	18,011	3,918	97,477	22.5%
Engineering, distribution and process managers	2,585	22,735	38,069	31,288	13,271	1,361	109,309	13.4%
Miscellaneous specialist managers	4,063	19,562	29,106	36,415	16,364	1,409	106,919	16.6%
Building and engineering professionals	10,043	33,413	28,231	24,734	15,124	3,311	114,856	16.1%
Computing professionals	11,072	46,411	39,582	23,020	6,830	510	127,425	5.8%
Miscellaneous professionals	3,325	10,120	11,250	10,174	5,873	871	41,613	16.2%
Building and engineering associate professionals	8,497	19,495	23,108	21,687	12,196	1,740	86,723	16.1%
Electrical and electronics tradespersons	34,036	37,952	39,414	33,519	15,373	1,933	162,227	10.7%
Miscellaneous tradespersons and related workers	13,302	19,253	19,383	15,272	6,761	990	74,961	10.3%
Miscellaneous intermediate clerical workers.	24,288	38,734	34,405	32,315	15,549	1,749	147,040	11.8%

Source: ABS Survey of Employment Arrangements, Retirement and Superannuation

More generally, attrition includes workers leaving employment for the following reasons:

- Retirement from the workforce altogether;
- Moving to employment in another occupation;
- Becoming unemployed, and continuing to seek work in the same or a different occupation; and
- Exiting the labour force with the intention to return to the same occupation after a period of time, a component that is more prevalent in occupations with a female dominated workforce.

The ABS Labour Force Mobility survey shows that **the higher the level of skill (or the more qualified one has to be to undertake the occupation), the lower the rate of occupational turnover**.

Table 7.3 below shows that attrition rates are highest among the trades and lowest either where skills are more specific (such as computing professionals) or where wages are high (generalist managers).

Table 7.3: Estimated annual attrition rates from selected occupations

Occupation	% change occupation	% unemployed	% NILF[6]	Total
Miscellaneous tradespersons and related workers	8.3%	2.2%	4.0%	14.5%
Miscellaneous intermediate clerical workers	4.9%	2.8%	3.8%	11.5%
Miscellaneous professionals	3.1%	2.8%	4.1%	10.1%
Miscellaneous specialist managers	5.3%	1.3%	3.0%	9.7%
Building and engineering associate professionals	3.1%	1.7%	3.1%	7.9%
Electrical and electronics tradespersons	3.1%	2.0%	2.5%	7.6%
Engineering, distribution and process managers	4.0%	1.7%	1.5%	7.2%
Building and engineering professionals	2.2%	1.1%	2.8%	6.1%
Computing professionals	2.3%	1.7%	1.9%	5.9%
Miscellaneous generalist managers	2.3%	0.6%	2.9%	5.7%

Source: ABS Labour Force mobility survey

Note that people who had changed employers over the course of the year (including from the public to the private sector or vice versa) but had the same occupation are not included within this definition of turnover – they are still part of the labour force at the start and end of the year, with the same occupation.

That said, recent developments in superannuation mean that a number of older Australians are staying in the workforce for longer.

On balance, therefore, Access Economics sees supply side developments also favouring weaker wage gains over the next year and a half – relatively few retirements, but more students with relevant qualifications becoming available.

7.5 The components of the forecast

Chart 7.8 shows the forecast component drivers for the utilities LPI. These build up to show a total gap between wage growth in the utilities LPI and that in the national LPI.

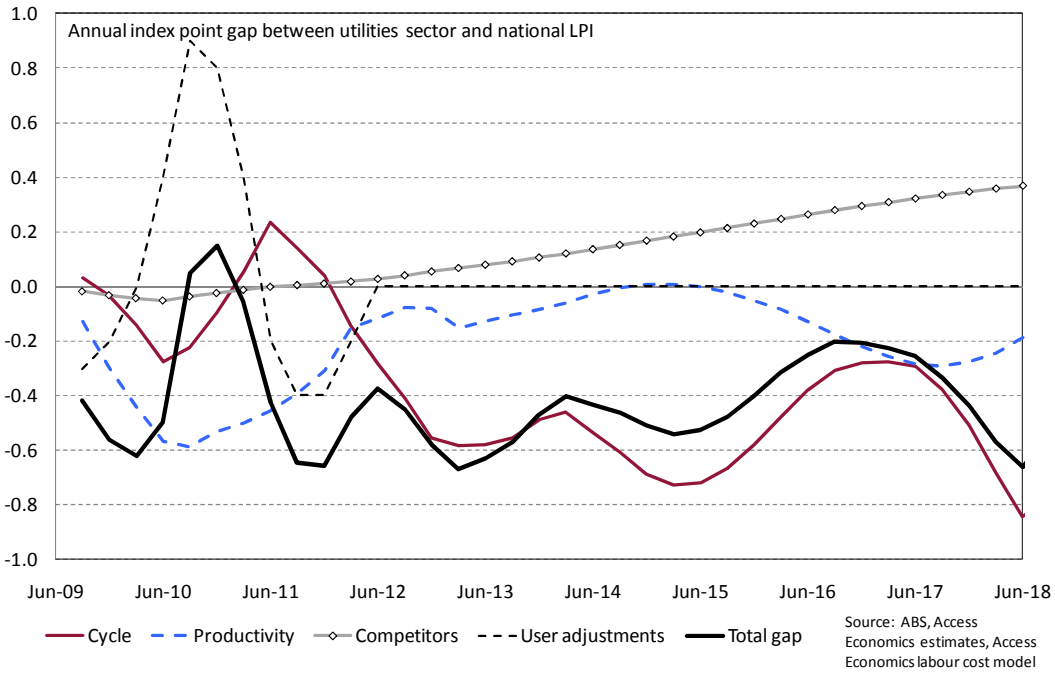
The **cyclical component** is the main driver of the difference between the two series, and reflects the movement in labour prices in the industry due to economic performance. This component is driven by Access Economics' macro forecasting, and reflects forecast growth and profitability in the industry.

The **productivity component** shows difference in productivity levels between the utilities sector and the national average. Productivity is expected to be slower in the utilities sector over the next couple of years, as output falls while employment remains steady. Productivity is expected to start climbing again after 2012-13, however will remain below the national

[6] NILF: Not In the Labour Force (retirees plus those leaving temporarily, including moving overseas).

average over the course of the forecasts. Productivity gains add to the LPI, as workers are rewarded for their additional productivity through wage rises, so similarly when productivity falls, pressure on the LPI falls with it.

Chart 7.8: Utilities forecast composition



The **competitors' component** reflects the effect other competing industries have on the cost of labour in the utilities industry. If a competing industry, for example the mining industry, pays their workers a higher wage than those in the utilities industry, then the utilities industry will be forced to pay a premium for its workers in order keep loosing them to the mining industry.

This can be seen clearly in Chart 7.8 above for the utilities industry, with the competitors' component adding around 0.4 index points to the utilities LPI by the end of the forecast period.

The **user adjustments** reflect Access Economics' changes to these forecasts. They adjust the forecasts for anomalies in the historical data, as well as to implement particular views held regarding particular industries (this may include knowledge regarding investment, changes to Government policies not yet implemented in the forecasts and the like). In the case of the utilities industry, the employment data showed a large spike in the March 2009 quarter.

Given the volatility of the employment data, and the level of the spike, a manual adjustment was made to reduce the impact of this outlier to the forecasts. Other things equal, those adjustments added to overall wage growth in the utilities sector.

8 The national outlook for wage growth in competitor industries

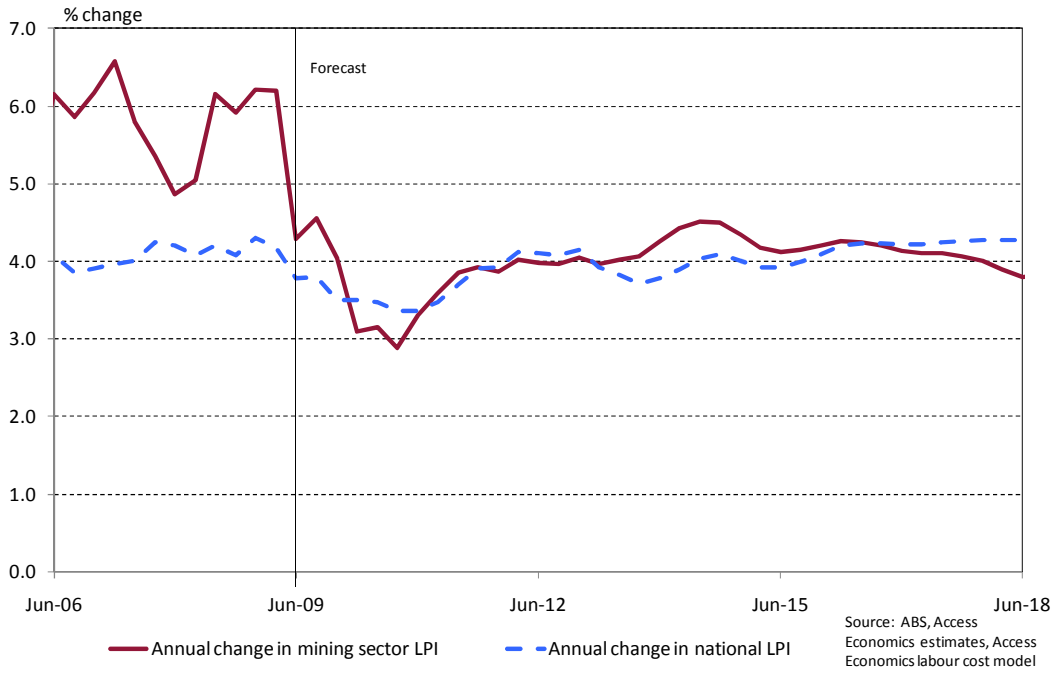
8.1 Mining

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 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 skills shortage saw mining wages grow at annual rates of around 6% for several years (see Chart 8.1).

Chart 8.1: Mining growth forecast



However with the financial crisis ending the commodities boom, the mining sector has eased the number of investment projects in the pipeline, while shedding staff at a rapid rate.

In the June quarter of 2008, mining wages grew by 2.5% in that quarter alone. The matching quarterly gain in the June quarter of 2009 was 0.7%: a striking slowdown, and one not likely to be unwound soon.

That is because, as noted in Chapter 5, employment in mining rose from 81,000 people in late 2003 to 182,000 in late 2008 – a gain of 125% across a period when the sector's output rose by

only 21%. However, the sector has already shed 30,000 of those jobs in the crisis thus far, and mining employment may not rebound for some time.

This will see growth in the mining LPI stay slow over the next couple of years as the sector regroups. However, wage growth is only projected to fall to 3%, which, although half of the growth rate seen recently, is still quite strong growth when compared to some other sectors.

Wage growth in the mining sector is then expected to pick up in 2010-11 as the world recovers from the current economic downturn, and is expected to resume its higher than average growth over the rest of the forecast period.

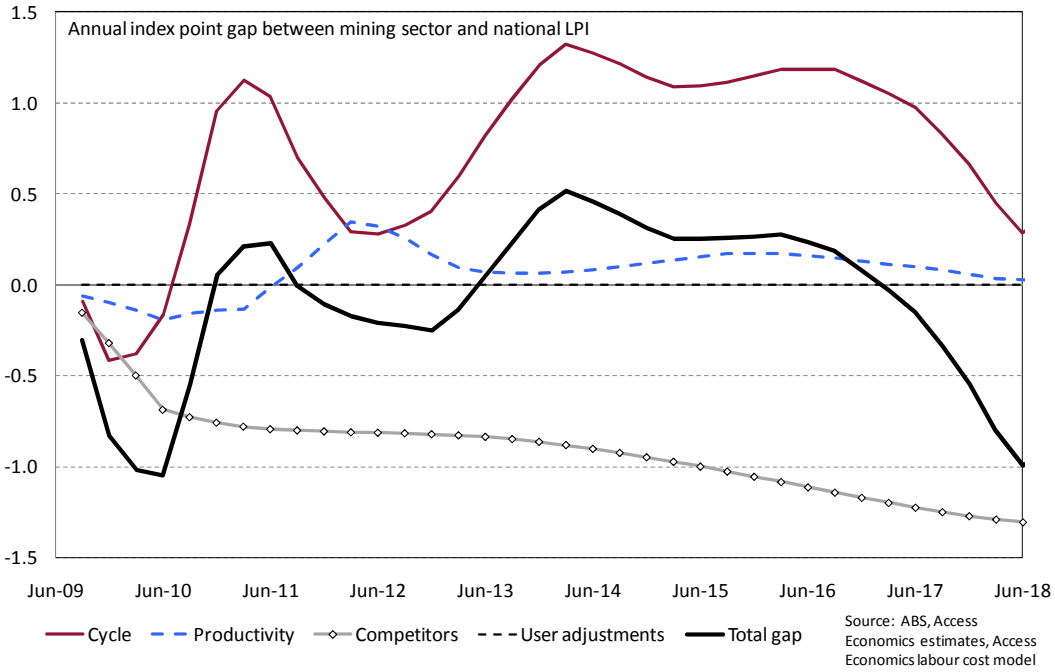
Chart 8.2 identifies the drivers of the components of mining sector wage growth relative to national wage growth.

It shows that productivity gains are expected to be higher in the mining sector than that seen nationally over the forecast period, with the exception of the short term (which still feels the after effects of the very large falls in productivity levels in recent years).

This projected lift in productivity is due to a more parsimonious use of staff than in the boom years of high profits, as well as due to the large amount of mining investment concluding and being put into use.

The competitors' series weighs on mining labour costs, though not by enough to stop this sector to shift to even higher relative wages over the forecast period. This is because the impact of competitors tends to be a greater constraint on wage setting in sectors paying less than their competitors than in those paying more (as employees are less likely to move from the mining sector to, say, the utilities sector).

Chart 8.2: Mining forecast composition



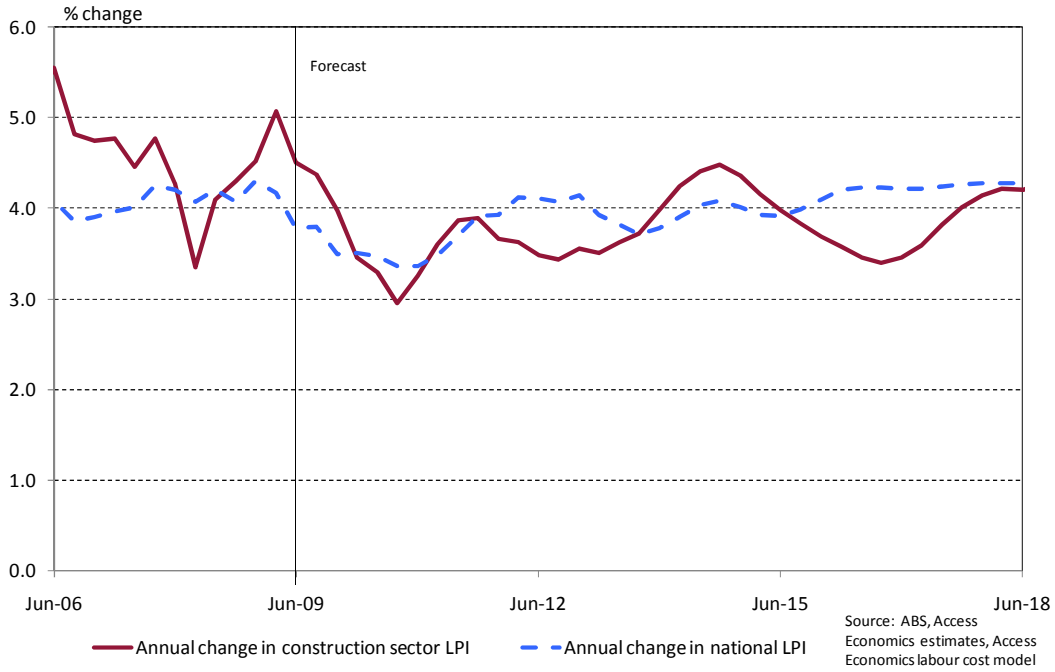
Perhaps most importantly, the cyclical drivers of wages in the mining sector are projected to turn positive once more from mid-2010.

8.2 Construction

The construction sector was another beneficiary of the long run of economic growth seen in Australia.

The flurry of construction work, including houses, renovations and office construction saw the demand for construction workers rise, and hence labour costs rose accordingly (see Chart 8.3).

Chart 8.3: Construction growth forecast



While the labour cost pressure in the sector has subsided slightly, it is not expected to fall as far as many other sectors. On the housing construction front:

- The Federal Governments Boost to the First Home Owners Grant has seen demand for houses among this group rapidly increase of late.
- Australia has not built enough houses to keep up with population growth, particularly in NSW. That will put a floor underneath construction labour prices.

The news is less good in engineering and commercial construction. The continuing Australian expansion led to tightening capacity and rising profits, while a boom in emerging economies such as China transformed the Australian investment landscape, offering potential profits to those who could increase production capability.

The China boom also uncovered the tight capacity constraints in many Australian supply chains, not merely those in resource exports. As a nation, we had underinvested in our infrastructure, and spent too little maintaining what we did have, meaning that the surge in

demand for what Australia could produce came just as our ability to supply those products fell into disrepair. The end result was a striking investment boom.

However, excluding Federal stimulus effects, approvals for engineering and commercial construction have now dropped back to levels last seen in 2004, and they aren't yet showing any signs of recovery. Moreover, profits are down 20% since their peak nine months ago and rates of capacity utilisation remain well notably below their longer term average.

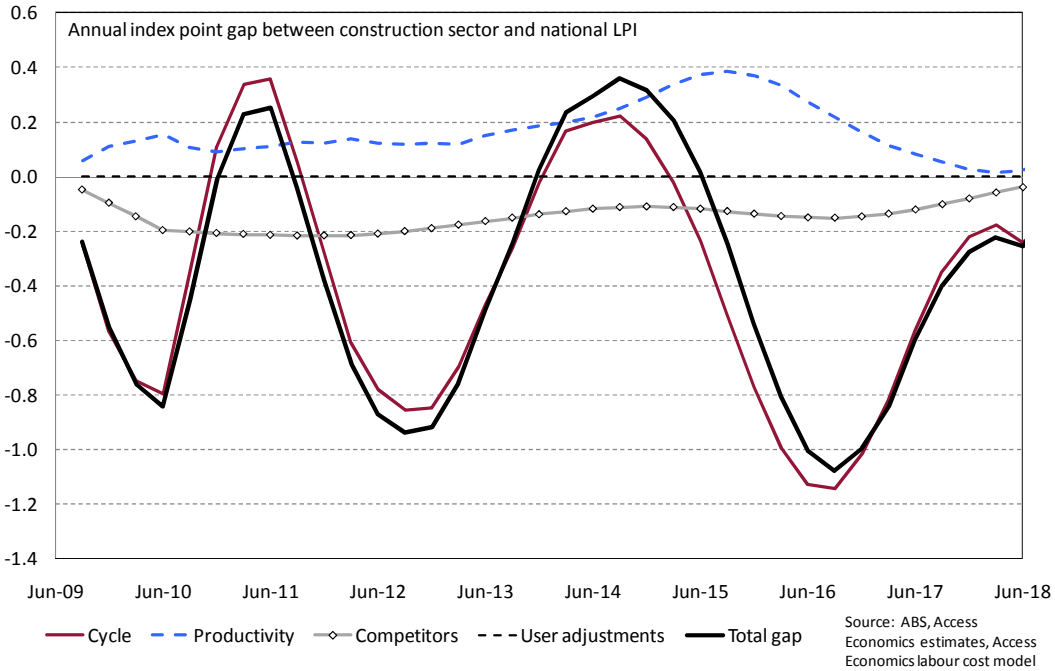
Yet, despite those negatives, the downswing in engineering and commercial construction now looks a lot less threatening than it did just six months ago:

- In part that is because business confidence – at its highest readings since 2003 – is now a clear plus rather than a negative for the outlook.
- In part it is because the Federal stimulus is large, with schools, roads, rail and ports all over Australia benefiting directly and indirectly from Federal largesse.
- Most important of all, however, is that China is once again growing at pace.

As a result, all three major surveys of Australian investment intentions – Access Economics' own *Investment Monitor*, the Bureau of Statistics capex survey, and ABARE's listing of resource projects – which had been showing signs of weakness in private sector plans ever since the crisis hit, are now showing signs that businesses are taking projects back off hold.

The construction sector is one of the most cyclical sectors in Australia, which can be seen clearly in Chart 8.4. Productivity in the sector is expected to be higher than the national average, while the competitor series is negative, as wages in the construction sector are already relatively generous when compared to competitor sectors.

Chart 8.4: Construction forecast composition



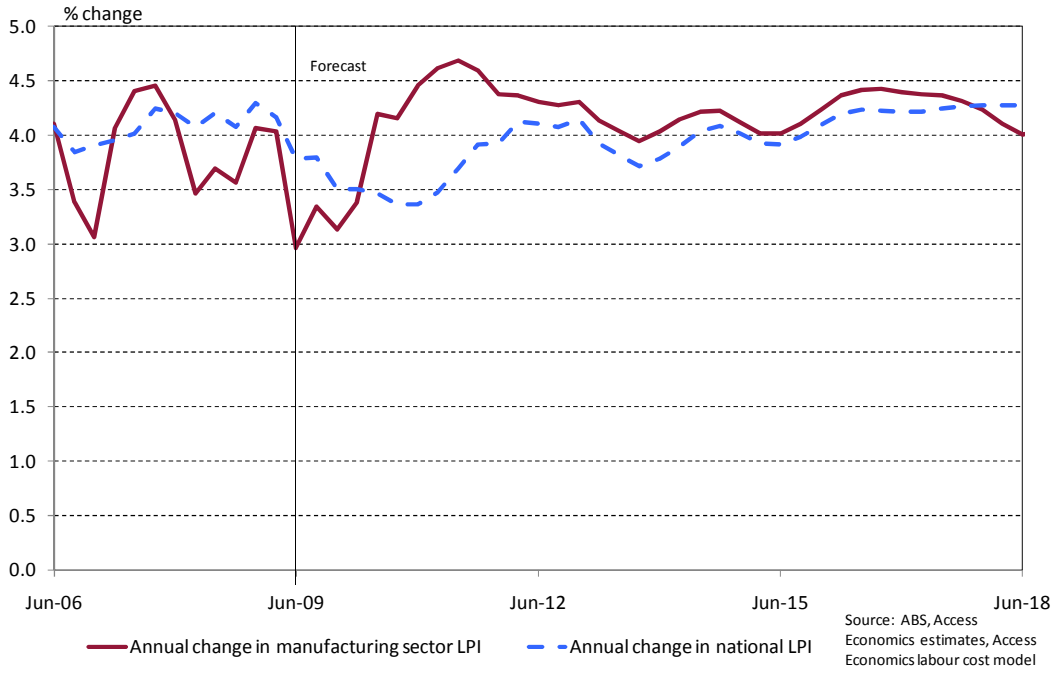
8.3 Manufacturing

The manufacturing sector as a whole has been struggling over the last decade, as:

- Cheaper labour in many other part of the world has driven many companies to take their production offshore.
- That latter factor was exacerbated by a relative lack of economies of scale in Australian manufacturing operations, especially relative to new plants being commissioned and coming online in Asia.
- The high $A associated with the China boom and the related lift in resource export prices ate into the manufacturing sector's export markets and increased import penetration ratios.
- High interest rates and high petrol prices were a particular bugbear for Australian carmakers and manufacturers of car parts.
- High petrol prices and other high industrial commodity input prices also weighed on the sector.

That combination of negatives resulted in slower growth in labour costs in manufacturing over the last decade than the national average, as shown in Chart 8.5.

Chart 8.5: Manufacturing growth forecast

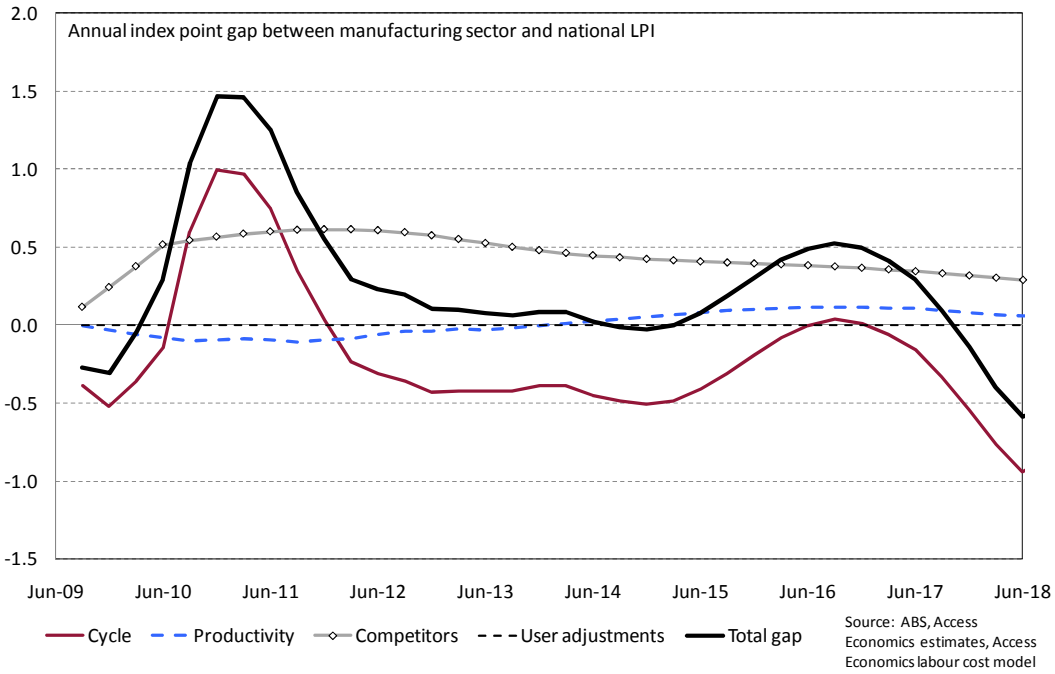


However, the parts of manufacturing that have remained in Australia tend to be in higher skill or niche areas, such as aluminium refining, whereas job losses have been largest in the lower skilled parts of this sector (such as textiles, clothing and footwear).

The growth in the relative number of skilled workers in this sector implies higher productivity growth which, as can be seen in Chart 8.6, is forecast to grow at rates above the national average from around 2014-15.

The cyclical component shows that the manufacturing LPI is forecast to grow at a weaker rate than the national for much of the forecast period, reflecting the continued decline of manufacturing as a share of the national economy, while the competitor series is putting upwards pressure on manufacturing labour costs as the sector competes for workers.

Chart 8.6: Manufacturing forecast composition



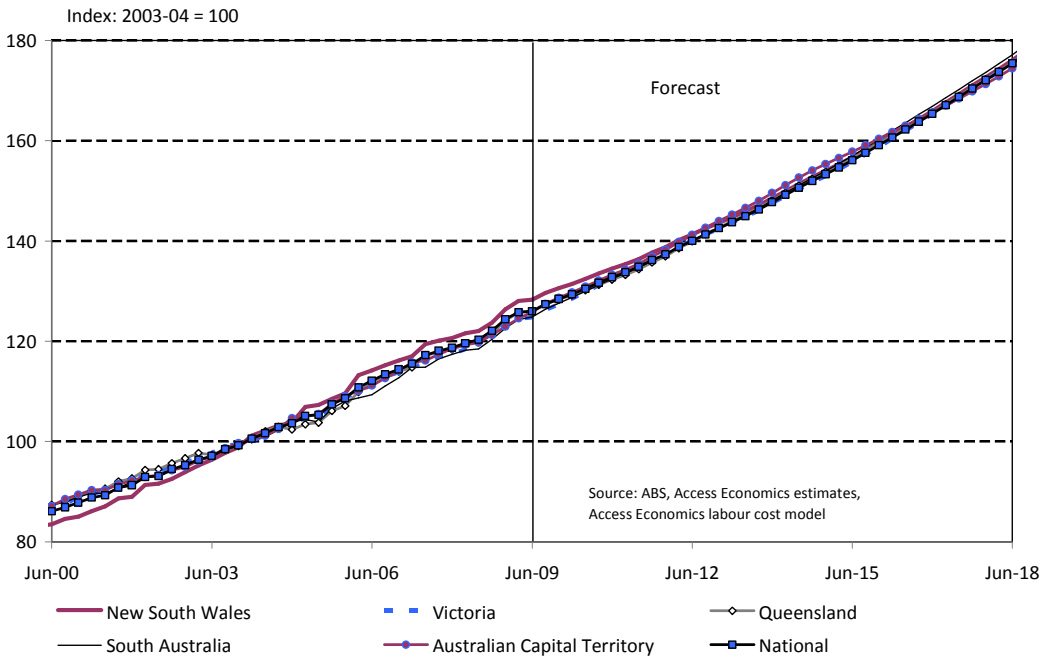
That said, it is important to note that recent macroeconomic developments – lower exchange and interest rate and lower industrial commodity prices – imply a short term cyclical upswing for the sector. That phase – also evident in Chart 8.6 – is projected to assist wage growth in manufacturing in 2010-11.

9 Utilities and competitor sector wage growth by State

9.1 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.

Chart 9.1: Utilities forecast by State



That is clear in the history shown in Chart 9.1 above, with the index levels for utilities wages by State fairly similar across States, but **with these trends easier** to see when expressed in relative terms, as they are in Chart 9.2 below.

In that chart the national utilities index at any point in time is set to a value of 100 and the index in the State is expressed relative to that value[7]. Both the volatility at the State level and the tendency for indices to revert towards the national average over time are evident. The forecasts for national and sectoral wage growth are shown in Table 9.1. Forecasted components include real and nominal LPI, and real and nominal productivity adjusted LPI.

[7] As noted elsewhere, this does not imply an ordering for wage levels, as each individual series is an index equal to 100 in 2003-04.

Table 9.1 National wage forecasts

Financial year changes in nominal Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
National LPI	4.1	3.5	3.9	3.9	3.7	3.7	3.8	3.9	4.1	4.1
Utilities	4.5	3.5	3.4	3.6	3.7	3.7	3.7	3.8	4.0	4.0
Mining	5.6	3.7	3.4	3.9	4.0	4.3	4.3	4.2	4.1	3.9
Construction	4.6	3.8	3.4	3.7	3.5	4.1	4.2	3.6	3.6	4.1
Manufacturing	3.7	3.5	4.5	4.4	4.2	4.1	4.1	4.3	4.4	4.2

Financial year changes in real Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
National LPI	0.9	1.7	0.9	0.9	1.1	1.6	1.8	1.3	1.3	1.5
Utilities	1.4	1.6	0.4	0.6	1.1	1.6	1.7	1.3	1.2	1.4
Mining	2.4	1.8	0.4	0.9	1.4	2.2	2.3	1.7	1.3	1.4
Construction	1.4	1.9	0.4	0.6	1.0	2.0	2.2	1.1	0.8	1.6
Manufacturing	0.5	1.6	1.5	1.4	1.6	2.0	2.1	1.7	1.6	1.6

Financial year changes in nominal productivity adjusted Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
National LPI	4.4	2.1	2.7	2.5	2.1	1.8	2.4	2.9	2.7	2.5
Utilities	5.2	2.1	1.9	2.2	2.1	1.7	2.3	2.8	2.6	2.3
Mining	7.0	1.1	1.7	2.4	2.3	2.1	2.6	2.8	2.6	2.4
Construction	4.7	2.7	2.0	2.4	2.1	1.9	2.5	3.0	2.6	2.5
Manufacturing	3.7	2.3	3.2	2.9	2.6	2.1	2.5	2.9	2.9	2.7

Financial year changes in real productivity adjusted Labour Price aggregates

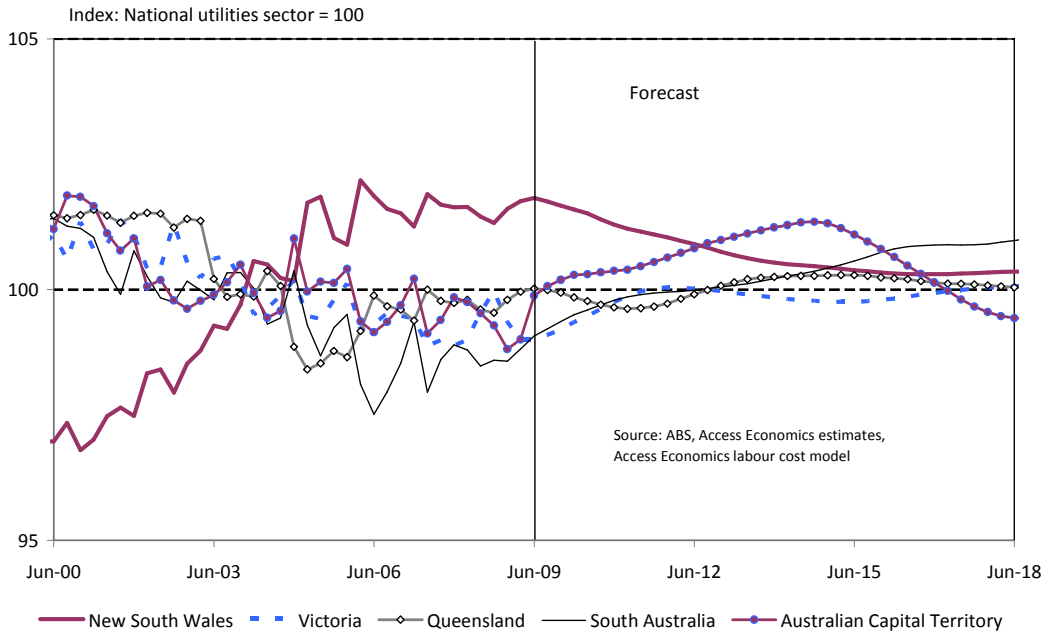
Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
National LPI	1.2	0.3	-0.3	-0.5	-0.4	-0.2	0.4	0.4	0.0	0.0
Utilities	2.1	0.2	-1.0	-0.8	-0.4	-0.4	0.3	0.3	-0.1	-0.2
Mining	3.8	-0.8	-1.2	-0.6	-0.3	0.1	0.6	0.3	-0.2	-0.1
Construction	1.5	0.8	-1.0	-0.6	-0.5	-0.1	0.5	0.5	-0.1	0.0
Manufacturing	0.6	0.5	0.2	-0.1	0.0	0.1	0.5	0.4	0.1	0.1

In brief, and although the utilities sector has seen relatively faster wage growth nationally, much of that strength has been in NSW and, at least to late 2008, in Western Australia as well (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 NSW through to 2005, and those relativities have not changed much since then.

That is why Chart 9.2 below shows a pattern across this decade to date of NSW doing better than the other jurisdictions, though that relative outperformance slowed from 2005.

Chart 9.2: Relative utilities forecast by State



Yet the fact that relative wages have diverged in recent years does not mean those moves are permanent. Short term wage growth in the sector at the State level is affected by growth in the sector and in the State, but there is also a longer term trend towards a narrowing of wage relativities.

Other things equal, that leads to a slow pegging back of NSW's gains over the coming decade, with the other jurisdictions considered in this report making relative ground on NSW.

The ACT stands out in Chart 9.2, making good relative gains in the first few forecast years thanks to the a phase of catch-up to competitor sector wages, but then with the ACT ceding relative ground further out as the Territory's economy weakens amid the sustained tightening in public sector spending required to return the Federal Budget to balance.

The volatility in the State indices implies that actual movements in State-by-industry LPI in the future are likely to be far less smooth than shown in the charts here. This makes picking point-to-point growth rates particularly hard.

The results in Chart 9.2 therefore illustrate the broad trends in movements – both relative and absolute.

9.2 New South Wales

The New South Wales economy has struggled in recent years – its output as a share of the national total has dipped sharply since 2000, falling well ahead of the State's relative losses in population compared with other States (a longer term phenomenon driven by faster growth in Queensland and Western Australia).

This underperformance weighs on State wage growth, but not notably so. Productivity growth has been more positive and should continue to be so in the future – largely counteracting the negative business cycle impact of the moment on wage setting in the State.

Moreover, although it will be in 2010 rather than before, recent shifts in exchange and interest rates and industrial commodity prices are more favourable to NSW than to most other States, opening the way for NSW to start to stage a recovery relative to its weak performance of recent years.

Table 9.2: NSW wage forecasts

Financial year changes in NSW nominal Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
NSW	3.8	3.6	4.2	4.3	3.9	3.9	4.0	4.1	4.3	4.3
Utilities	4.6	3.5	3.0	3.4	3.4	3.5	3.6	3.7	3.9	4.1
Mining	5.1	3.8	3.6	4.3	4.2	4.5	4.5	4.4	4.4	4.2
Construction	3.4	3.4	3.9	4.4	4.1	4.5	4.7	4.0	3.9	4.4
Manufacturing	3.5	3.5	4.8	4.8	4.5	4.3	4.4	4.5	4.6	4.4

Financial year changes in NSW real Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
NSW	0.7	1.8	1.2	1.4	1.4	1.9	2.0	1.6	1.6	1.8
Utilities	1.4	1.7	0.1	0.5	0.9	1.5	1.7	1.3	1.2	1.5
Mining	1.9	2.0	0.7	1.3	1.7	2.5	2.6	2.0	1.6	1.6
Construction	0.3	1.6	1.0	1.4	1.6	2.6	2.7	1.5	1.1	1.9
Manufacturing	0.4	1.7	1.8	1.9	2.0	2.4	2.4	2.0	1.8	1.8

Financial year changes in NSW nominal productivity adjusted Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
NSW	3.6	2.9	3.1	2.7	2.0	1.8	2.7	3.1	2.8	2.6
Utilities	5.3	2.4	1.7	1.8	1.6	1.3	2.2	2.8	2.6	2.2
Mining	6.7	1.2	2.0	2.6	2.3	2.2	2.8	3.0	2.7	2.6
Construction	3.4	2.6	2.6	3.0	2.5	2.2	2.8	3.5	3.0	2.7
Manufacturing	3.5	2.6	3.7	3.3	2.7	2.3	2.8	3.1	3.0	2.8

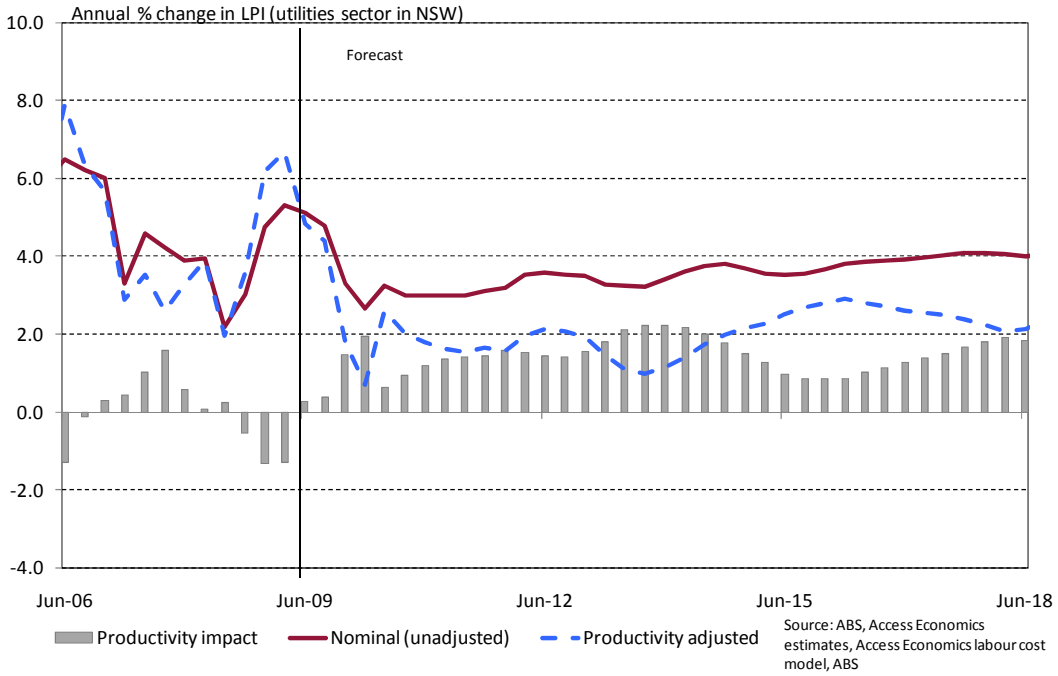
Financial year changes in NSW real productivity adjusted Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
NSW	0.5	1.2	0.2	-0.2	-0.4	-0.2	0.8	0.7	0.1	0.0
Utilities	2.2	0.6	-1.1	-1.0	-0.8	-0.6	0.3	0.4	-0.1	-0.3
Mining	3.5	-0.5	-0.8	-0.3	-0.2	0.2	0.9	0.6	0.0	0.0
Construction	0.3	0.8	-0.2	0.1	0.0	0.3	0.9	1.0	0.3	0.2
Manufacturing	0.4	0.9	0.8	0.4	0.2	0.3	0.9	0.7	0.3	0.3

9.2.2 The utilities sector

Shrugging off the effects of relatively slow employment gains in the sector, LPI growth in NSW utilities has been relatively rapid across the past three years at a time when broader State measures have remained relatively stable.

Chart 9.3: NSW utilities LPI forecasts



There have been some specific payments which have boosted wages in NSW, such as 'equalisation payments' to some utilities staff on awards, as well as the likes of additional Electrical Safety Rules Allowance among electricity retailers.

Moreover, although macro conditions in the State have worsened further since the global financial crisis intensified in September 2009, EBA outcomes in the utilities have been less affected (with average rates for current agreements in the sector reaching 4.8% in early 2009) and, given that some recent EBA and non-EBA decisions will have a lingering effect on wage outcomes over the next few years, there is therefore a clear floor to expected wage gains in the period ahead.

Indeed, the pace of recent EBA activity in the State may have been influenced by the attempts in the last couple of years by NSW Governments to get some form of privatisation underway in the State's utilities sector.

However, and even allowing for that, latest data suggests that the period of faster wage gains in NSW's utilities sector is ending, and that NSW's sectoral wage outcomes are projected to see a period of slower growth.

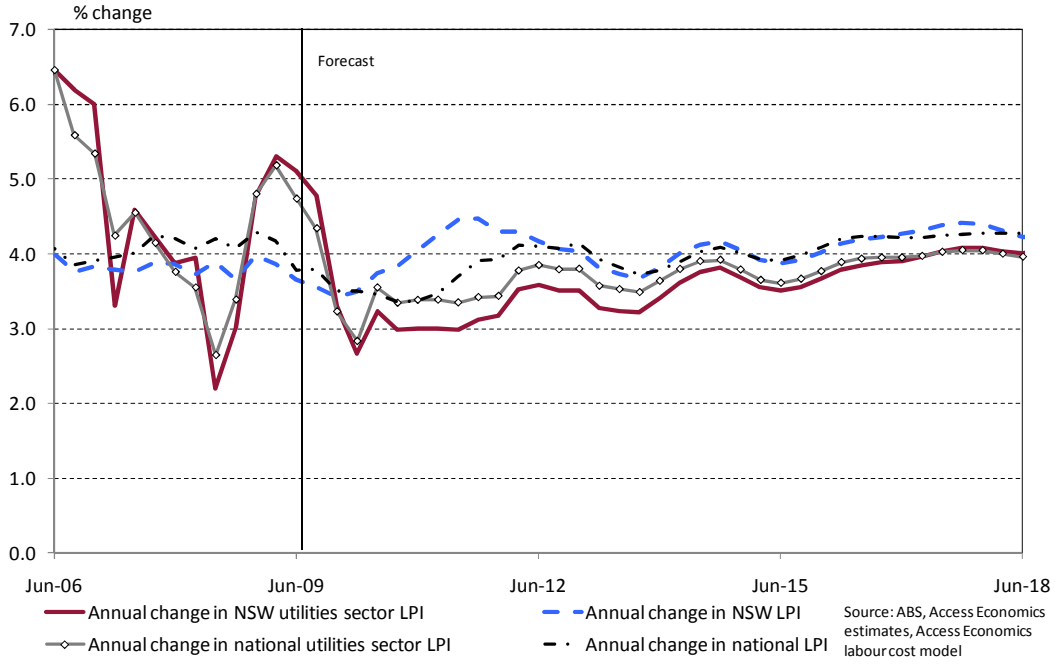
The data in Chart 9.3 above shows growth rates over the past year falling away of late.

Indeed, NSW wage growth in the utilities sector in the June quarter itself was the smallest seen in more than five years.

Moreover, the recent strong relative gains seen in the sector will of themselves make it harder to post continuing strong gains in the future. The sector feels little competitive pressure on wage rates from either the construction or mining sectors in NSW, although those same sectors in other States do pose more of a competitive challenge for utilities wages in NSW.

In addition, the NSW Government's expressed wage targets remain on a tight leash, adding another reason to expect some moderation in the sector compared with recent wage gains.[8]

Chart 9.4: NSW utilities forecast comparison



And, just as in the national forecasts, the impact of slower productivity and relatively weak output growth in the sector leaves wages growth in the utilities below the State's average throughout the forecast period.

That said, utilities wage rates in NSW are projected to grow mostly in line with their national counterparts.

9.2.3 The mining sector

As with the utilities sector, NSW mining wages have been rising sharply – growing at rates well ahead of broader NSW wage rises, but trailing the pace of gains in the national mining sector.

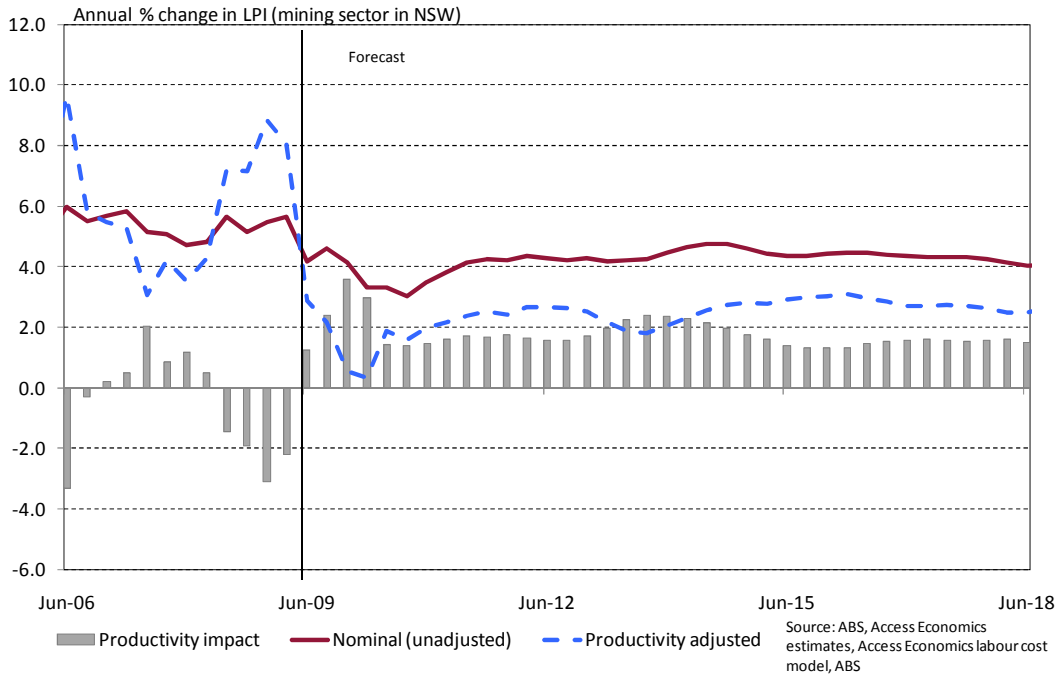
Although NSW is not one of the heavyweights of mining in Australia, thermal coal and gold are both mined in significant quantities, and a number of other minerals are also important to the State.

The forecasts here (seen in Charts 9.5 and 9.6) point to a further easing in wage growth in the mining sector in NSW – following the national average down.

[8] In brief, the NSW Government wage policy may be summarised as all increases in wages, allowances and superannuation greater than 2.5% to be funded through cash backed 'employee related savings', no backdating beyond date of final agreement, all wages and conditions negotiated together including 'no extra claim clause', all 'employee-related' savings must be detailed, NSW Government approval required for any increase greater than 2.5%.

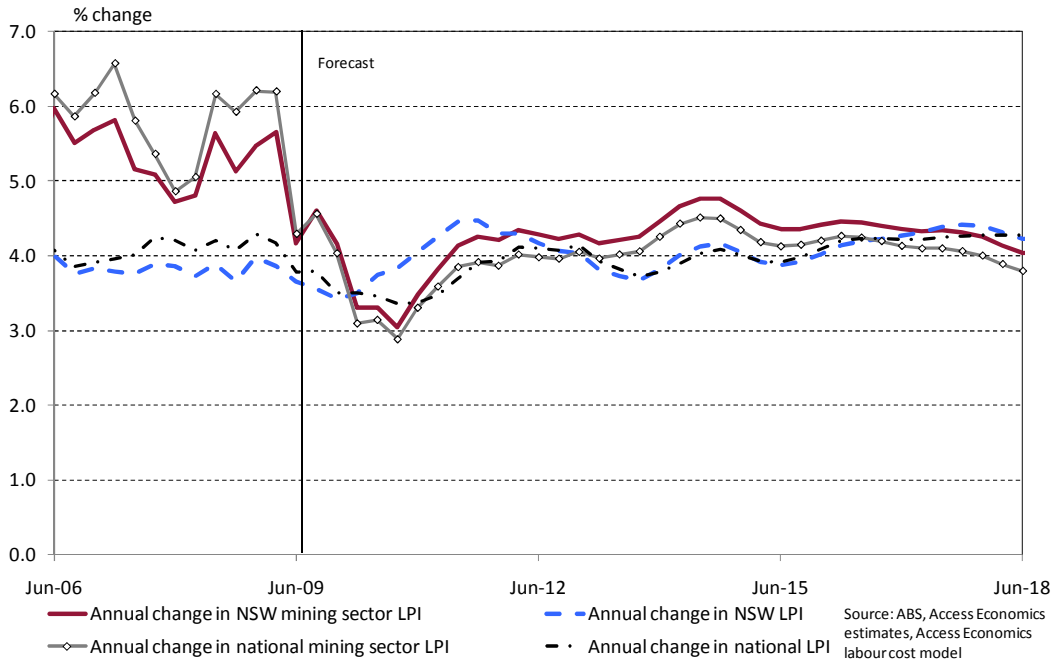
The short term trends in wages growth in the mining sector in NSW are dominated by the weaker State economy and the relatively stronger recent wage gains in Queensland, South Australia and Western Australia.

Chart 9.5: NSW mining LPI forecasts



However, the recovery phase in NSW's economy – beginning from mid-2010 – allows more slightly bargaining power for miners in NSW than those in other States, and therefore sees NSW mining wages marginally outpace their national equivalents.

Chart 9.6: NSW mining forecast comparison



Given the recent strength in the wages growth in the sector, the "downturn" in wage gains for 2009-10 is fairly modest, with the lowest year-to rates of growth hitting 3% even after rather faster rates in recent years.

9.2.4 The construction sector

With the construction sector the first to suffer in the post-2000 downturn that NSW has endured, some of the factors that are expected to weigh on wage growth in NSW sectoral wage indices are not as important in construction, where wage growth has already been travelling at a slower pace since early 2007.

However, the weakness in the State's business cycle is still likely to pull NSW's wage growth rates below the national average in the short to medium term, before the State's better productivity performance then lifts the rate of growth in the LPI.

There are bright points (improving population growth, low interest rates, Government handouts and chronic under-building leading to pent up demand), but most of NSW's leading indicators for housing have only just started to bottom out. Financing of new housing (usually the first indicator to turn) has been more buoyant. And that suggests – despite the State currently contributing one in six new houses of the national total – that the long anticipated rebound is building, even though NSW's builders might have to wait until 2010 to feel it.

Engineering construction commencements in New South Wales flattened off in 2008, and are expected to fall back even more through 2009-10. Projects underway are varied, led by the $1.9 billion desalination plant being constructed at Kurnell in Sydney's south which is due to be completed by end-2009. Other water projects include the development of the Tillegra Dam on the upper Williams River near Dungog, and upgrades to the Hawkesbury and Shellharbour sewerage treatment plants. A number of road projects are underway, with a 67 kilometre

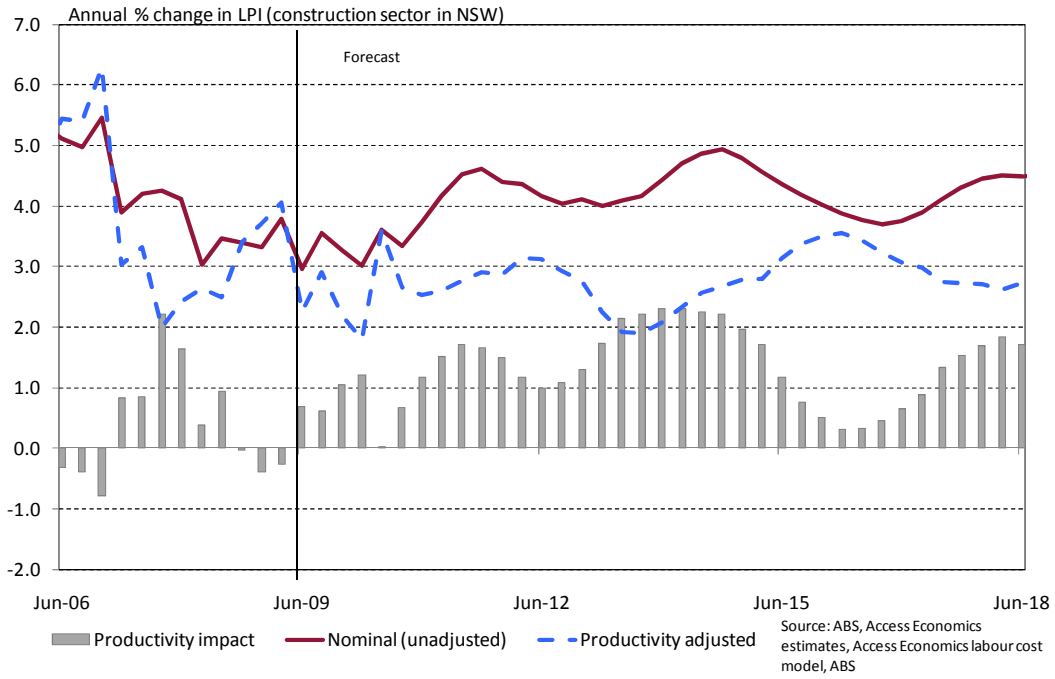
section of the Hume Highway being converted to a dual carriageway at a cost of $800 million, and with the Pacific Highway also receiving various upgrades. Projects in planning include a $2.2 billion proposal to construct a 600 turbine wind farm near Broken Hill and a $900 million revamp of the Sydney Opera House.

Commercial construction activity in NSW has also moderated, and is expected to soften further through 2009-10 given recent falls in approvals. Current projects include the new $1.7 billion Cooks Cove business park and associated facilities being constructed at Arncliffe, and the $860 million renovation of the Centrepoint, Imperial Arcade and Skygarden retail centre on Pitt Street in the CBD being undertaken by Westfield. Multiplex upgrades to the Royal North Shore and Liverpool Hospitals, while the Mater Hospital in Newcastle and the Orange Base Hospital are also receiving upgrades. Education projects include a $480 million redevelopment of the University of Sydney campus and the Building Better Schools funding initiative, which is financing an upgrade to 800 science laboratories around the State at a cost of $207 million.

So while the pace of commercial construction in the State has moderated, it hasn't fallen sharply, and the modest forward pipeline should provide a floor under the non-dwelling component of the industry as well.

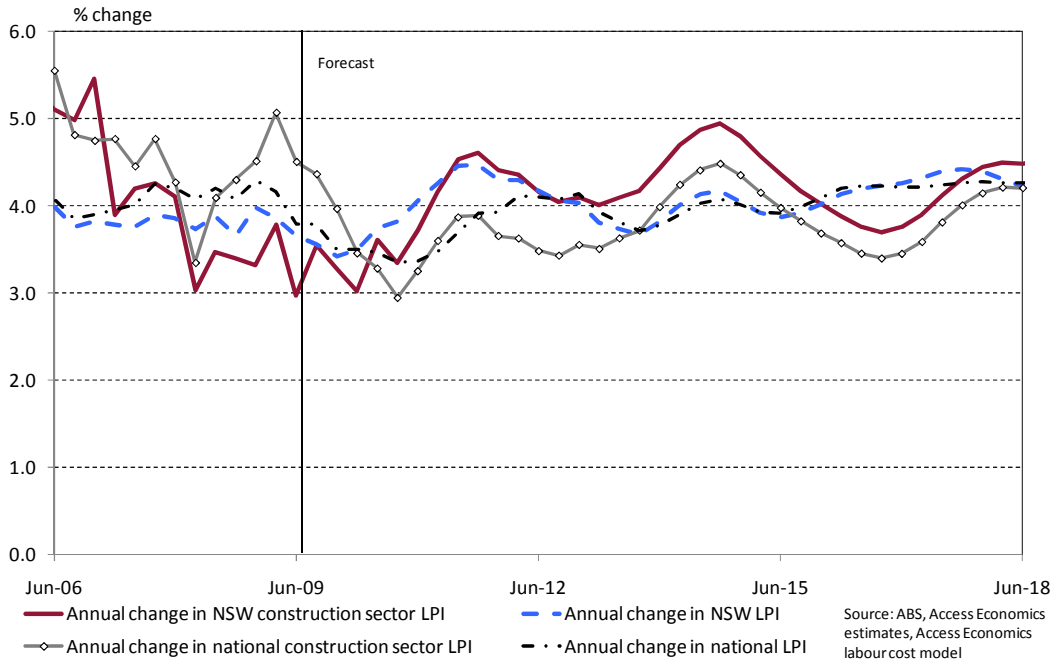
As Chart 9.7 shows, the rate of growth in labour costs (that is, adjusted for productivity, rather the unadjusted rise in labour prices) can differ sharply from the rise in labour prices in the relatively cyclical construction sector.

Chart 9.7: NSW construction LPI forecasts



As with the national indicator, NSW construction wages are also far more cyclical than in most other sectors. Recent results have been weak by the standards of the construction sector nationally, but are expected to move above the national average as the State stabilises and then sees a recovery in its relative economic performance over the next few years.

Chart 9.8: NSW construction forecast comparison



9.2.5 The manufacturing sector

NSW is losing jobs at a faster rate than anywhere else in the country, and reports of factory closures around the State have been relatively frequent. The global financial crisis hit NSW hard, and has taken the manufacturing sector with it.

Chart 9.9: NSW manufacturing LPI forecasts

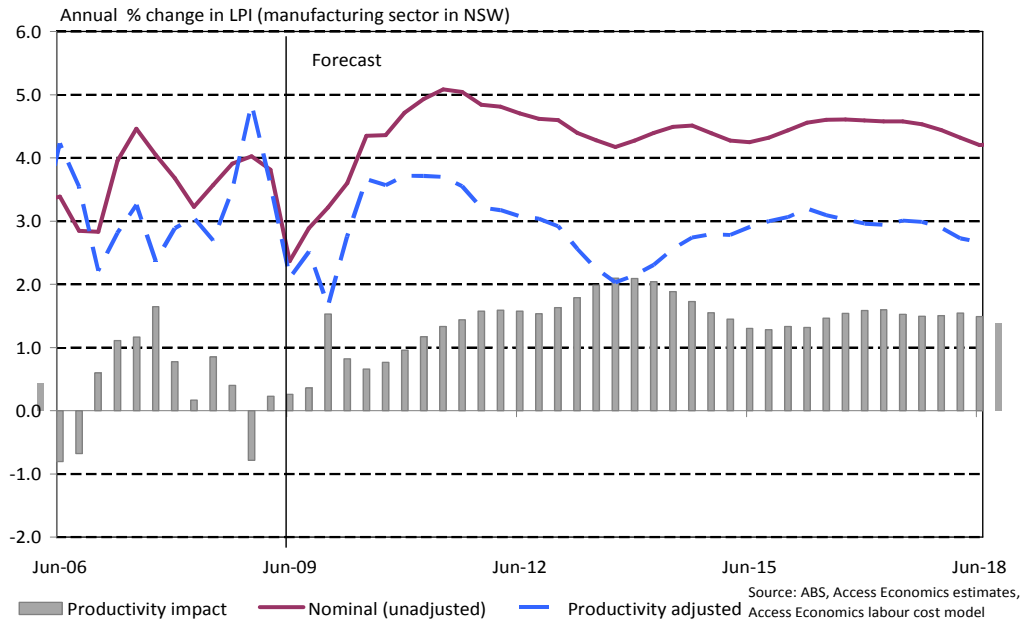
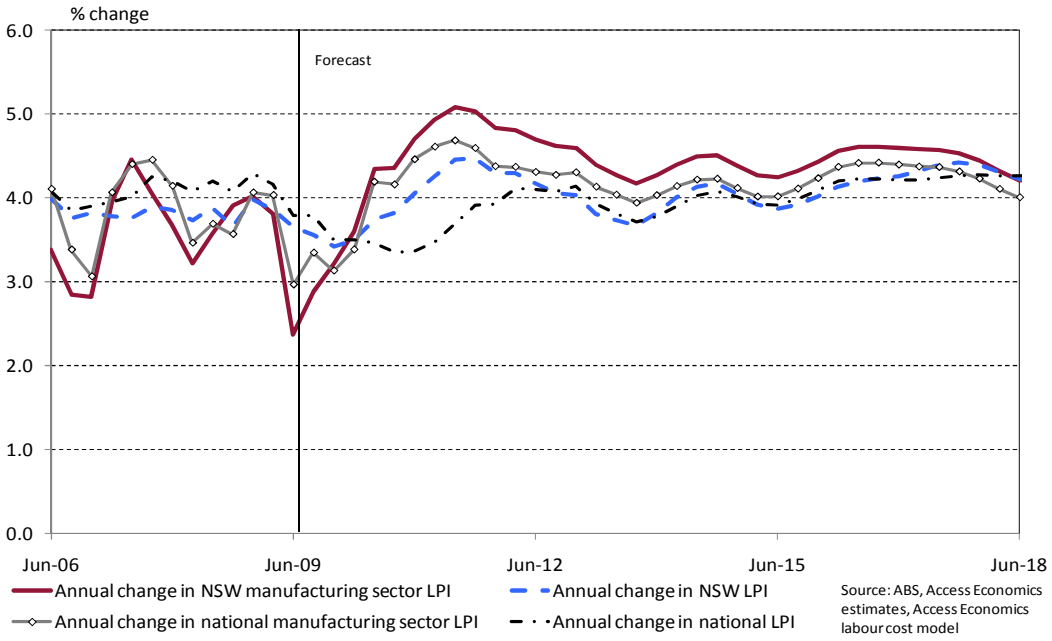


Chart 9.10 shows that wage growth in the sector over the past year has been a modest 2.4%.

Chart 9.10: NSW manufacturing forecast comparison



However, the forecasts project a relative recovery to be in store for the State. Aided by the demand impacts from lower interest rates in particular, these forecasts see quarterly growth rates in manufacturing wages in NSW recovering relatively rapidly from the slowdown of the moment.

In part that is because, while the growth in NSW's manufacturing wages has been reasonably subdued in the past year, there is scope for a moderate rebound in line with State and sector trends across the next two years amid an expected relatively strong improvement in manufacturing productivity across this period following the job losses of the past year.

9.3 Victoria

Victoria's economy performed rather better than that of NSW in recent years, but the national downturn in manufacturing has hit Victoria, with its large manufacturing base, harder than many other States.

There have been notable job losses in food, wood and paper, plastics, building products and metal manufacturing, and, more recently, in car making as well. And the pipeline of construction work to be done in the State is falling away, which has flow on effects for manufacturing sectors.

Table 9.3: Victorian wage forecasts

Financial year changes in VIC nominal Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
VIC	4.0	3.5	4.4	4.0	3.5	3.5	3.6	3.9	4.2	4.2
Utilities	4.8	3.4	3.9	3.9	3.6	3.6	3.7	3.9	4.1	4.1
Mining	5.4	4.0	3.9	4.0	3.8	4.1	4.2	4.2	4.3	4.0
Construction	4.9	5.5	3.5	3.3	2.9	3.5	3.9	3.5	3.5	4.1
Manufacturing	3.4	3.7	4.9	4.5	3.9	3.8	3.9	4.3	4.5	4.3

Financial year changes in VIC real Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
VIC	1.2	1.5	1.3	1.1	1.0	1.5	1.6	1.4	1.4	1.6
Utilities	1.9	1.4	0.9	0.9	1.1	1.6	1.7	1.4	1.3	1.5
Mining	2.5	2.0	0.8	1.1	1.3	2.1	2.2	1.7	1.4	1.4
Construction	2.0	3.5	0.5	0.4	0.4	1.5	1.9	1.0	0.7	1.5
Manufacturing	0.6	1.7	1.8	1.5	1.4	1.8	2.0	1.8	1.7	1.6

Financial year changes in VIC nominal productivity adjusted Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
VIC	4.5	1.8	2.5	3.2	2.8	2.0	1.9	2.3	2.3	2.4
Utilities	5.8	1.8	2.3	2.6	2.2	1.6	2.1	2.7	2.6	2.2
Mining	7.2	0.8	2.0	2.6	2.3	1.9	2.3	2.6	2.5	2.4
Construction	5.0	4.3	2.0	2.2	1.7	1.4	1.9	2.8	2.6	2.4
Manufacturing	3.5	2.4	3.5	3.1	2.5	2.0	2.3	2.7	2.8	2.7

Financial year changes in VIC real productivity adjusted Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
VIC	1.7	-0.2	-0.5	0.3	0.4	0.0	0.0	-0.2	-0.5	-0.2
Utilities	2.9	-0.2	-0.7	-0.3	-0.2	-0.4	0.2	0.3	-0.2	-0.3
Mining	4.3	-1.2	-1.0	-0.3	-0.2	0.0	0.3	0.2	-0.3	-0.1
Construction	2.2	2.3	-1.0	-0.7	-0.7	-0.6	-0.1	0.3	-0.2	-0.2
Manufacturing	0.7	0.4	0.5	0.2	0.1	0.0	0.3	0.2	0.0	0.1

9.3.2 The utilities sector

There are a number of structural factors in play in Victoria's utilities sector, including the impact of (an eventual) Emissions Trading Scheme, as well as a notable number of water supply projects:[9]

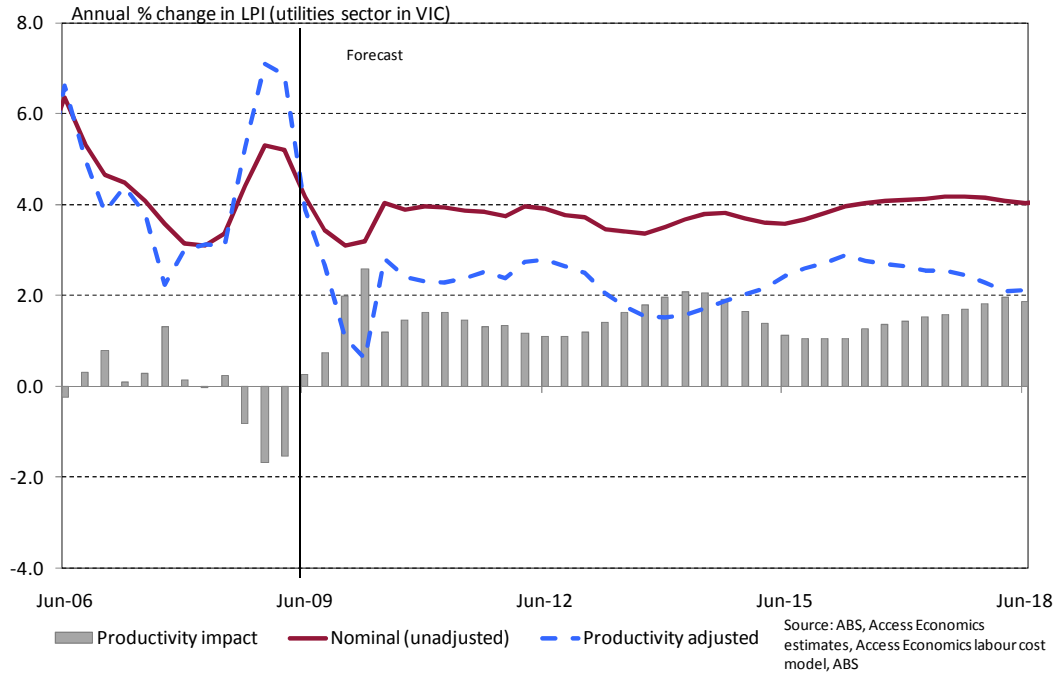
- An ETS has the potential to lower overall demand for the utilities, but also to reallocate that demand away from greenhouse gas intensive parts of the sector. Although most likely to be a longer rather than shorter term factor for the sector and its wage agreements, an ETS will both dampen wage pressures in some parts of the sector (the greenhouse gas intensive parts) and raise it in the rest of the sector.
- The water projects will, other things equal, add to the demand for workers in that part of the sector by raising supply side capacity. In turn, that will tend to (temporarily) raise wage demands as the indirect result of the stronger labour demand.

On the demand front, Victoria's utilities sector has suffered from many of the same factors afflicting the national sector, with the long running expansion nationally in mining and construction eating into the available supply of workers, resulting in persistent skill shortages

[9] These include a $3.1 billion desalination plant in the Gippsland region south east of Melbourne, the Wimmera-Mallee water pipeline (whereby 9,000 kilometres of pipes are being used to cover open irrigation channels), and a pipeline between the Waranga Channel and Lake Eppalock for Bendigo's water. Other projects under consideration include a 70 kilometre pipeline from the Goulburn River to the Sugarloaf Reservoir and the upgrade of the Eastern Treatment Plant at Carrum, the Ballarat super pipeline to provide water to Ballarat, Bendigo and Geelong, and a waste water treatment plant in Gippsland.

in a range of areas in recent years, including fitters, electricians, pressure welders, plumbers, gas trainers and assessors, and for engineers.

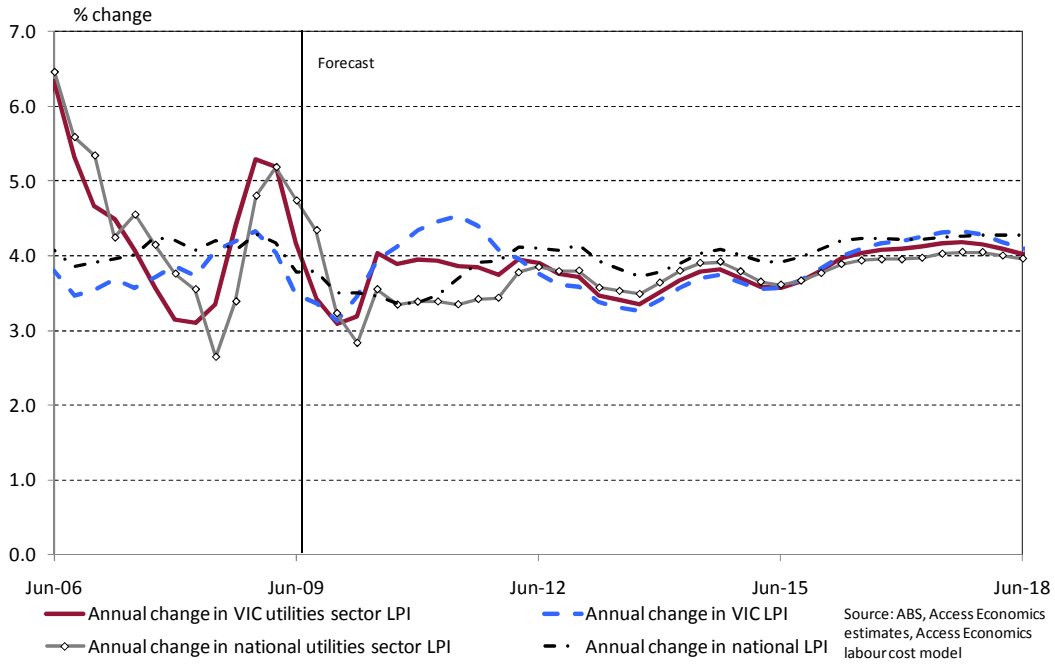
Chart 9.11: Victoria utilities LPI forecasts



Despite that, wage growth in the sector – as measured by the utilities LPI for the State – has moderated in recent quarters (a cumulative 0.9% over the first six months of 2009).

More important than developments on the demand front for what the utilities are selling are the developments on the demand front for what the sector is buying – the competition for labour with the manufacturing sector has undergone a seachange since the latter sector took such a beating of late.

Chart 9.12: Victoria utilities forecast comparison



It is this latter factor which contributes to the forecast pattern mapped out in Chart 9.12, with Victoria's utilities sector – having lead developments in the national sector – expected to see continuing moderate growth for a time.

Looking longer term, the sector may outperform its national equivalent, but mostly due to an expected pegging back of the strong relative gains made by workers in the NSW utilities sector in recent years (that is, NSW's utilities sector faces longer term wage headwinds that Victoria's doesn't, and those NSW effects will weigh on the national average).

9.3.3 The mining sector

Victoria's small mining sector is barely larger than South Australia's and – despite the relatively slow decline in Bass Strait output – has been shrinking as oil and gas reserves from Bass Strait slowly run down.

Moreover, the sector (and its relative dependence on brown coal) remains at notable risk from climate change developments to its coal sectors.

With the small scale of the sector, wage rates are likely to move in line with national trends. That said, Victoria's economy is projected to do well relative to the resource States in 2010 and 2011, and that will aid growth in mining wages. Unlike recent years, mining workers in Victoria will have relative better alternative options in Victoria than miners in WA and Queensland will have in 2010 and 2011.

Chart 9.13: Victoria mining LPI forecasts

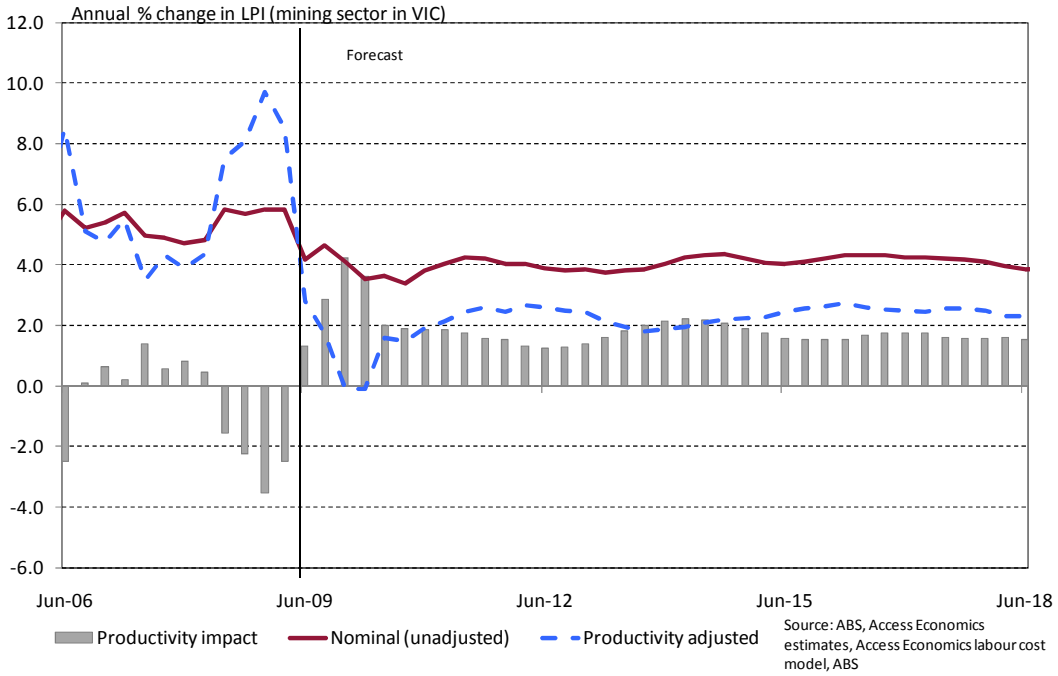
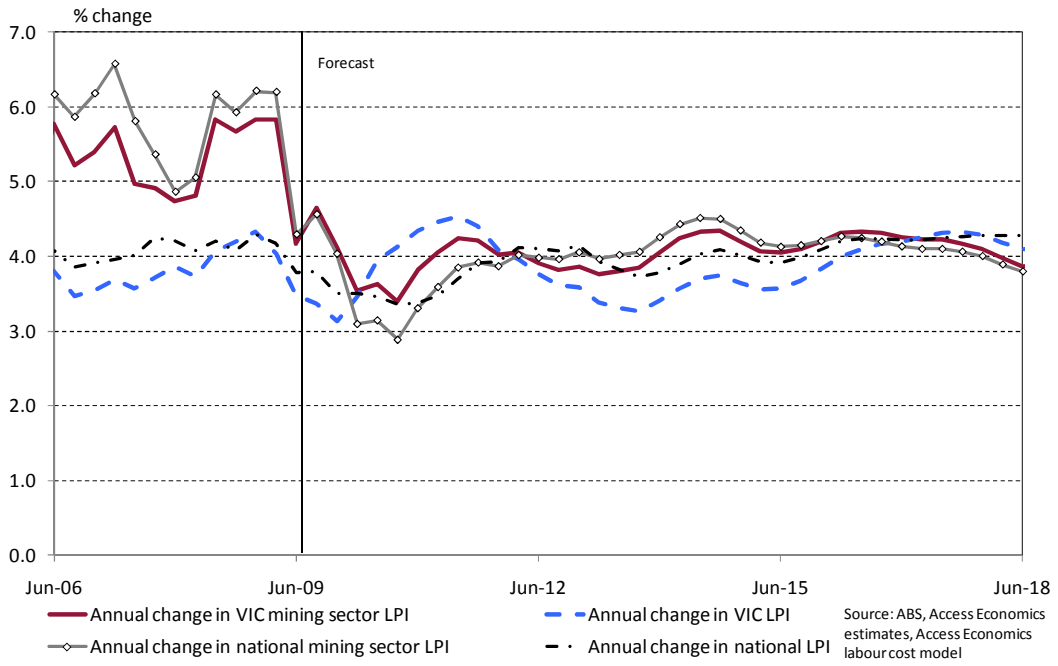


Chart 9.14: Victoria mining forecast comparison



Beyond 2011 the competitive pressures in the wider national mining sector are likely to be a key factor in driving Victoria's mining sector wages, limiting the extent and longevity of divergences across States for similar jobs.

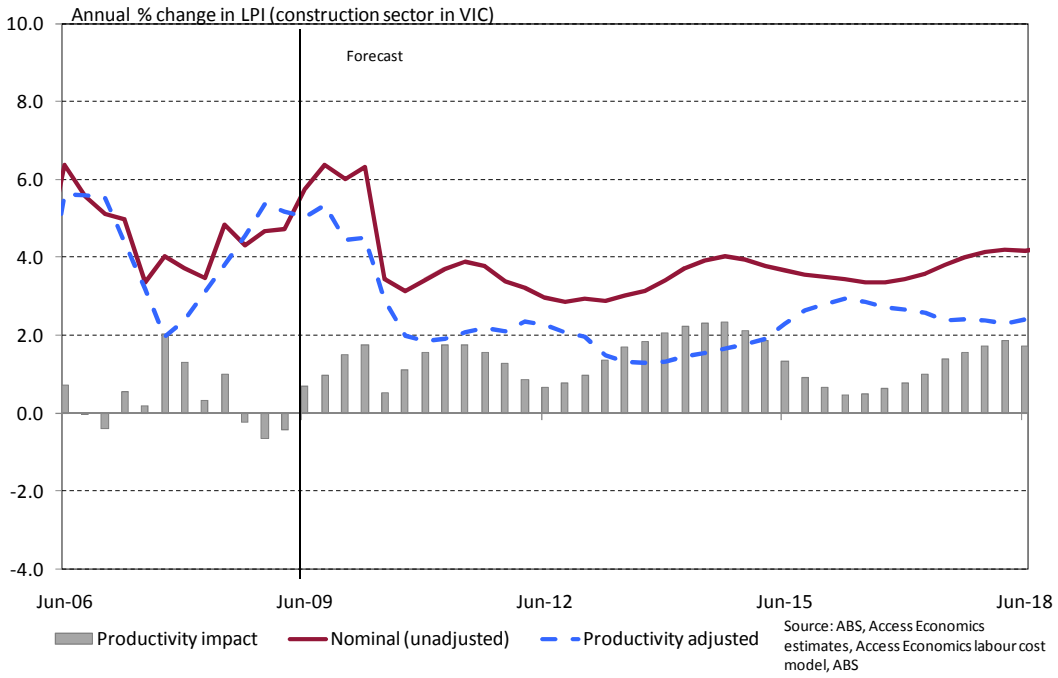
Any expansion in the Victorian mining sector – and the potential for that to add to demand pressures on the wages front – will centre around the hoped-for development of 'clean coal' and its ability to limit Australia's carbon emissions, while the expansion of Australia's LNG production will also involve Victoria's $1.4 billion Kipper gas project.

With both Victoria and the national mining sector currently losing jobs, these forecasts project moderate quarterly wage growth in late 2009 and early 2010, before a recovery in wage gains then commences in the second half of 2010.

9.3.4 The construction sector

Victoria's commercial construction sector has seen work falling away faster than its Australia-wide counterpart recently, with an even more marked fall in the pipeline of work remaining to be done.

Chart 9.15: Victoria construction LPI forecasts



Yet the biggest story from the Victorian housing sector over the last couple of years has been how stable it has been. In a falling national housing construction market that means a run up in the State's share of Australia's housing starts. Victoria now accounts for one in three new housing starts nationally – although in terms of dollars (rather than numbers) the share is far less – suggesting that constraining costs of housing has been a contributor to the local success.

Victoria's excellent population growth – currently running at the strongest growth rates seen since 1965 – may soon peak as a result of consecutive cutbacks to the official migration intake, but for now it is underpinning housing construction.

Even from its relatively solid starting point, Victoria has seen a larger-than-average boost to forward indicators of housing demand from the First Home Owners Grant (and Boost) and (even more importantly) from low interest rates, while residential vacancy rates remain well

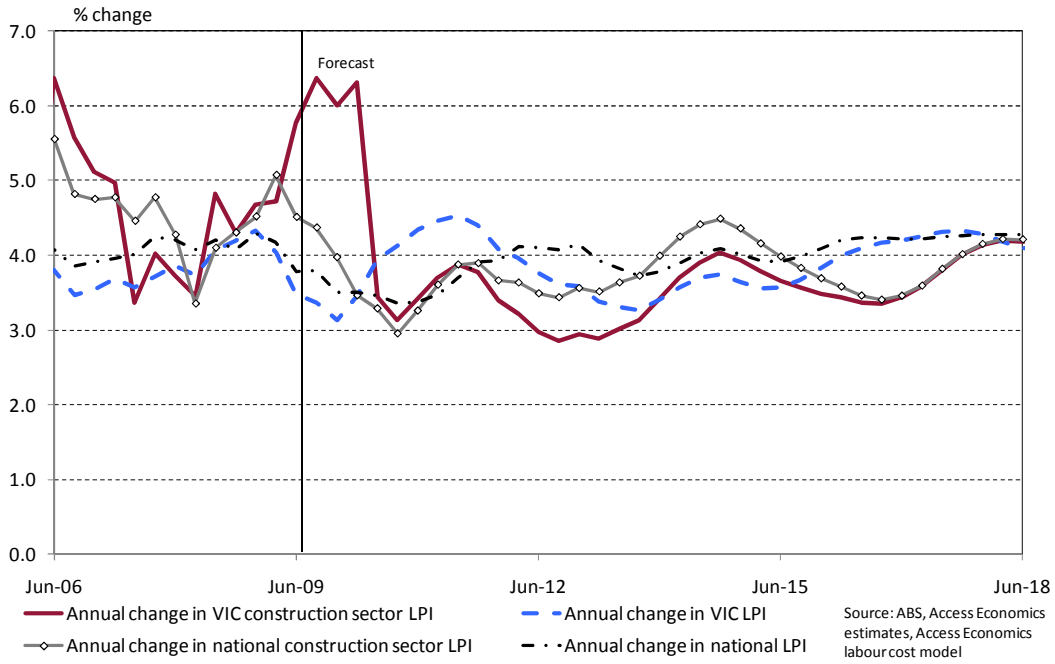
below the national average. In the short-term at least, that suggests some strong underlying support for wages in the local construction sector, and that the recent stabilisation in construction sector wages may soon pass.

However, the good news on housing construction is tempered by less good news on commercial construction. The State's more modest resource wealth (relative to WA and Queensland) meant that its engineering construction activity never reached the same heights as elsewhere, with the pipeline of work yet to be done now fading fast.

That said, Victoria's downturn is less severe than in some States. Current engineering construction projects include a $1.4 billion upgrade to a Melbourne arterial link stretching from the West Gate Bridge to the Monash Freeway, and a $1 billion base-load natural gas power plant at Mortlake in the State's west. Tullamarine Airport's international terminal is being upgraded at a cost of $330 million, and various sections of the Hume Highway are undergoing maintenance. Projects under consideration include a $2.3 billion expansion to the Western Ring Road from the Hume Highway to the West Gate Freeway.

Commercial construction has performed more strongly than its engineering counterpart, but is also likely to weaken over the next two years. Current works include the $1.1 billion redevelopment of the Royal Childrens' Hospital at Royal Park, due to be completed in 2011, along with the $960 million Waterfront City entertainment and retail precinct at Docklands. The construction of the new ANZ building on Collins Street is expected to be completed at end-2009, while the construction of the new convention centre is being finalised.

Chart 9.16: Victoria construction forecast comparison



Other office projects include a new $190 million, 21-storey facility at the Docklands, a $180 million space at 171 Collins Street, and a new $110 million office block to house The Age

newspaper opposite Southern Cross Station. Elsewhere, Edwin Flack Field is being redeveloped at a cost of $320 million and David Jones is redeveloping its Bourke Street store.

That said, Victoria's growth in construction wages looks slightly more impressive than it is – the strong increase results from the sharp rise in measured wages in the June quarter (where ABS estimated growth of 3.5% in wages in that quarter alone).[10]

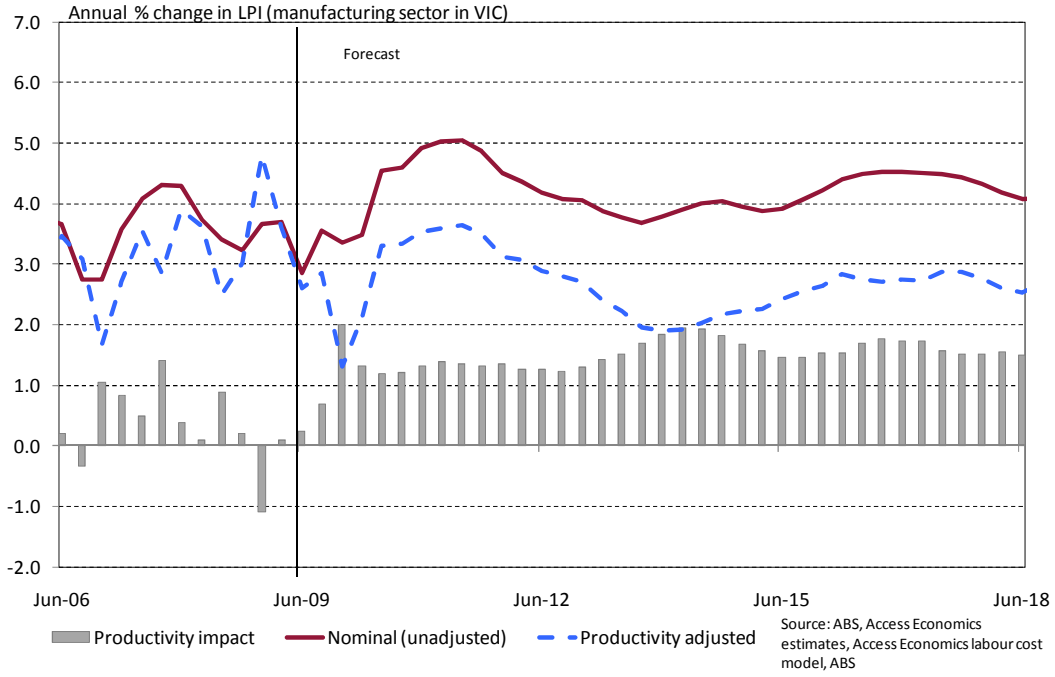
As a result, the bulk of the rise expected in the next year has already been recorded, and the quarterly pattern shows modest growth until the second half of 2010.

9.3.5 The manufacturing sector

Victoria's overall economy is still performing solidly into the slowdown, but the performance gap between it and New South Wales is starting to narrow as the sharp shakeout in manufacturing hits home hard in Australia's largest manufacturing State.

Nationally, the year to March 2009 saw manufacturing output fall by 9%, and manufacturing employment fall by an even sharper 11%. Those are large losses in a key sector. (There are now more people employed in construction than in manufacturing in Australia.) There have been huge job losses of late in each of food, wood and paper (where Victoria's early 2009 fires didn't help), plastics, building products and metal manufacturing, and now in car making too.

Chart 9.17: Victoria manufacturing LPI forecasts



[10] The ABS LPI data actually show 3.9% growth in the quarter. The modelling here uses 3.4%, as Access Economics has adjusted the coverage of the ABS LPI data so as to reflect the new sectoral groupings the ABS has adopted in its labour force data (and is about to adopt in its output data). This same caveat applies to other references in this chapter to ABS LPI results.

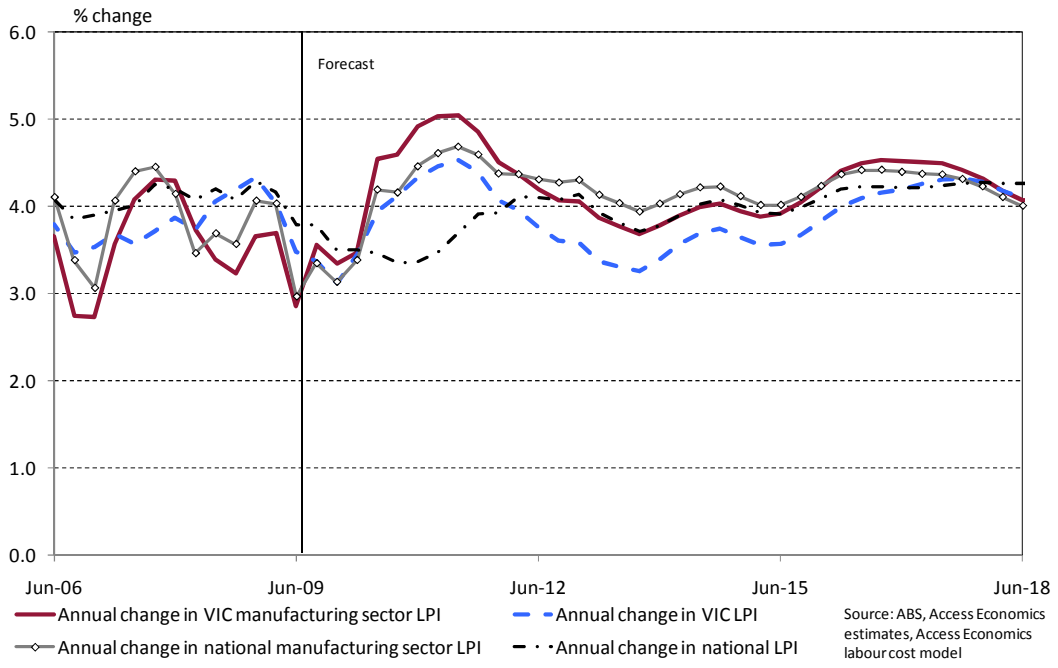
Those losses are flowing through to wage growth, with wage moderation often central to avoiding further job losses and factory closures. There has been a gradual moderation in wage growth in the sector over the past three quarters, and especially so in the June quarter itself. However, that trend has its limitations and will tend to be unwound over the next year or so as manufacturing recovers some of the ground it lost recently.

Forecast quarterly wage growth is projected to bottom in late 2009 and then rise thereafter, aided by the projected pick-up in the pace of housing construction in the State through the course of 2010.

There are reasons to be optimistic on such a turnaround in the business environment for manufacturing given the recent shifts in interest and exchange rates as well as in industrial commodity prices.

Moreover, the State's remaining manufacturing base is increasingly clustered in high-skilled niche industries.

Chart 9.18: Victoria manufacturing forecast comparison



The forecasts therefore suggest that some of the current very slow growth in Victorian manufacturing wages will be clawed back by relatively fast wage rises in 2011.

Beyond that the strength in overall wage trends in other States may well see Victorian manufacturing wages grow less rapidly than their national counterparts for a time – but still faster than broader Victorian wage rates, assisted over the longer term by a relatively strong productivity performance.

9.4 Queensland

Queensland has been a longstanding outperformer as a State economy, but it suffering the current downturn more than most.

Weakness in engineering and construction prospects has rapidly affected prospects for commercial construction in Queensland, and the weakening in housing approvals in the State suggests that further bad news lies ahead.

On the latter front, Brisbane's residential vacancy rates are now edging up rather than staying at the lows seen in recent years, while housing prices mostly remain stalled. Further, Queensland's population outperformance – traditionally a strong suit of the State – has been increasingly eroded in recent years, with the gap between State and national population growth rates eroding ever since Sydney housing prices stopped rising.

In brief then, the combination of engineering, commercial and housing construction weakness is hitting harder than the State has felt for a time. And the lags in the impacts from construction decisions to construction occurring suggests a lingering impact from the current slowdown lies ahead.

Table 9.4: Queensland wage forecasts

Financial year changes in QLD nominal Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
QLD	4.2	2.9	3.3	3.8	3.8	3.8	3.7	3.8	4.0	4.1
Utilities	4.6	3.5	3.1	3.8	4.0	3.9	3.8	3.8	3.9	3.9
Mining	6.8	4.0	2.7	3.6	3.9	4.2	4.1	4.0	3.9	3.8
Construction	5.7	3.2	3.0	3.6	3.7	4.1	4.2	3.5	3.4	4.1
Manufacturing	4.2	3.4	3.5	4.0	4.0	3.9	3.9	4.0	4.2	4.0

Financial year changes in QLD real Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
QLD	0.4	0.9	0.2	0.6	1.0	1.5	1.5	1.1	1.0	1.3
Utilities	0.9	1.5	0.1	0.6	1.2	1.6	1.5	1.1	0.9	1.2
Mining	3.0	1.9	-0.3	0.4	1.1	1.9	1.9	1.3	1.0	1.1
Construction	1.9	1.2	0.0	0.5	0.9	1.8	2.0	0.9	0.5	1.3
Manufacturing	0.4	1.4	0.5	0.8	1.2	1.6	1.6	1.4	1.2	1.3

Financial year changes in QLD nominal productivity adjusted Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
QLD	5.0	1.9	2.3	1.6	2.1	2.2	2.5	3.1	3.1	3.0
Utilities	5.7	2.1	1.8	2.1	2.3	1.8	2.4	2.9	2.7	2.3
Mining	8.8	0.9	1.0	1.8	2.1	2.0	2.4	2.6	2.4	2.4
Construction	5.9	2.3	1.6	2.2	2.2	2.0	2.4	3.2	2.8	2.5
Manufacturing	4.3	2.3	2.4	2.2	2.3	2.0	2.3	2.7	2.7	2.7

Financial year changes in QLD real productivity adjusted Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
QLD	1.2	-0.1	-0.7	-1.5	-0.7	-0.1	0.3	0.5	0.1	0.2
Utilities	1.9	0.1	-1.2	-1.0	-0.4	-0.4	0.2	0.3	-0.3	-0.4
Mining	4.9	-1.0	-2.0	-1.4	-0.7	-0.3	0.2	0.0	-0.5	-0.3
Construction	2.1	0.3	-1.3	-1.0	-0.6	-0.3	0.2	0.5	-0.2	-0.2
Manufacturing	0.6	0.3	-0.6	-0.9	-0.4	-0.3	0.1	0.1	-0.2	0.0

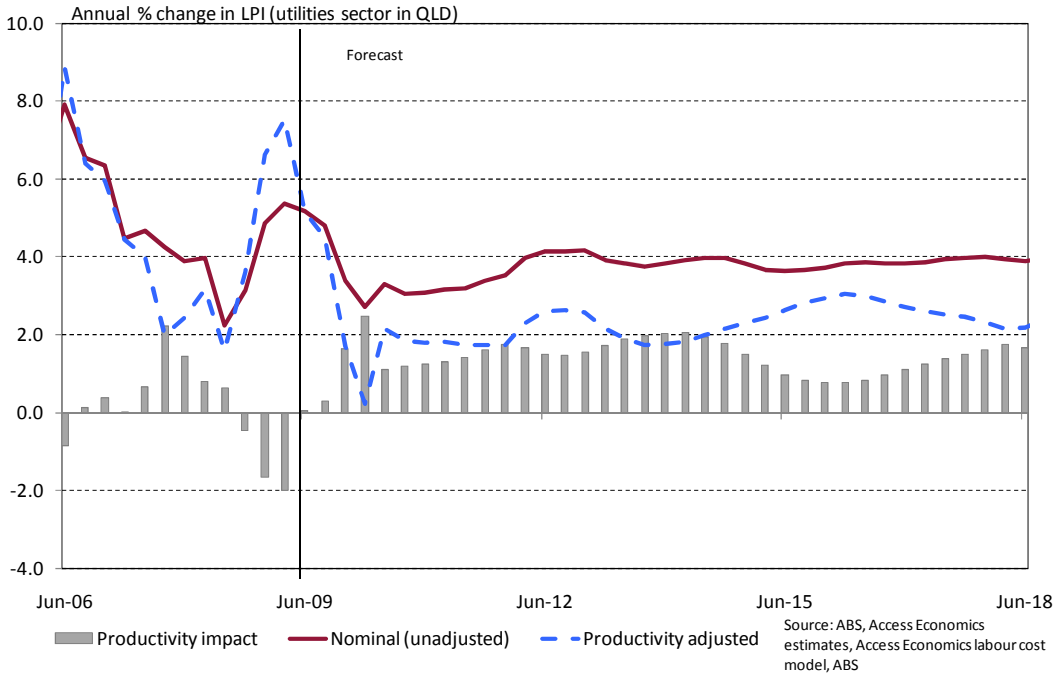
9.4.2 The utilities sector

That developing underperformance in the wider Queensland economy (and in its construction prospects in particular) isn't evident yet in movements in utilities wages.

In part that reflects the strength of the competition for scarce skills in recent years.

Competition for available workers with the cashed-up mining sector has been a problem that, at its peak in mid-2008, began to affect the broader Queensland workforce, not merely competition for utilities workers.

Chart 9.19: Queensland utilities LPI forecasts



However, it is clear that demand for the utilities is slowing (in part due to the slowdown in mining and in construction), and that the demand for the types of workers employed by the utilities sector is slowing even faster (in part due to the brewing slowdown in the construction sector). Growth in wages has slowed more recently as a result – see Charts 9.19 and 9.20 as a result.

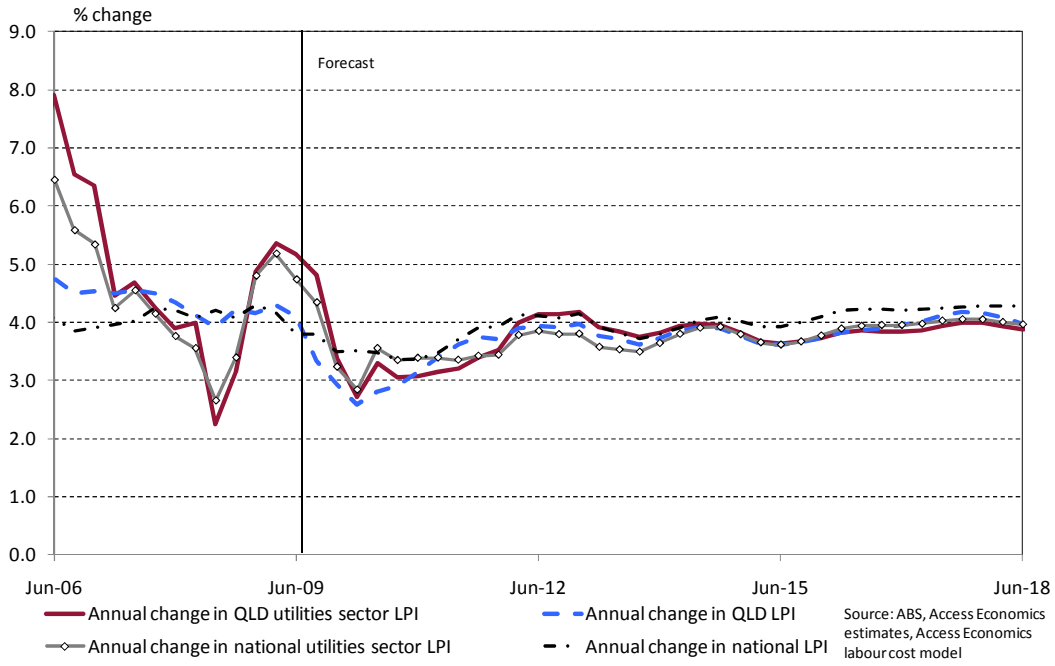
There are also some important developments on the supply side.

Current projects under construction include the $2.5 billion construction of a dam on the Mary River south of Gympie, due to be completed in 2011, and the $900 million South Regional Pipeline project linking the water sources of the Gold Coast and Brisbane, both undertaken by the Queensland Government.

The Queensland Government is also spending $333 million on the Wyaralong Dam project south-west of Brisbane.

Additionally, Origin Energy is constructing a $780 million gas-fired power plant in the Darling Downs.

Chart 9.20: Queensland utilities forecast comparison



Those supply side developments clearly point to additional demand for workers in the pipeline.

That said, and on balance, Access Economics projects that utilities sector wage growth in Queensland will see moderate quarterly growth rates until mid-2011, held back by the weakening State economy and – more particularly – due to weakening demand from competitor sectors, before then regathering pace thereafter.

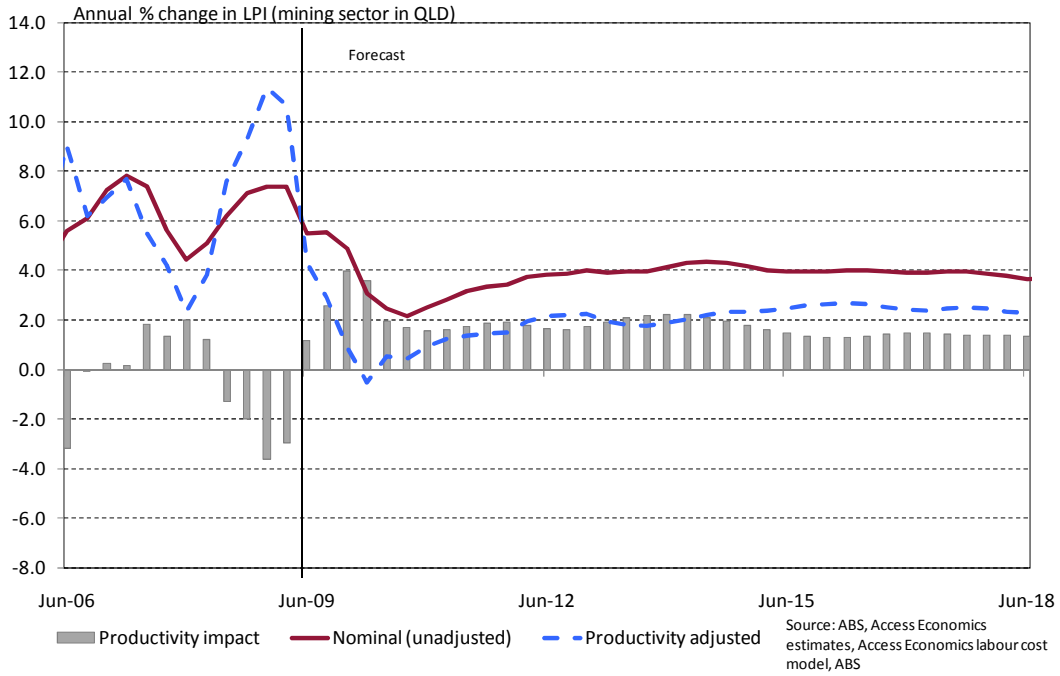
9.4.3 The mining sector

Weaker industrial commodity prices have hurt the mining sector in Queensland through 2009, with the global financial crisis contributing to April 2009 price settlements which saw coking coal prices fall by 60% and thermal coal prices by 44%.

Not surprisingly, the impact has been greater than that seen in the non-resource intensive States, but it has also been greater than that seen to date in Western Australia. That is because Queensland exports more heavily to Japan, a country which is one of the biggest casualties of the global financial crisis, whereas Western Australia has been helped by China's rapid rebound. This has lead to relatively more mine closures and staff layoffs in Queensland than in Western Australia, with a corresponding larger fall in mining output. The fall in output has been relatively larger than the falls in employment thus far – pushing down the growth in measured productivity (which shows up as a sharp fall in productivity in Chart 9.21).

That said, Japan's weakness would have affected Queensland even more sharply were it not for the impact of China's rapid rebound from the global financial crisis. China has gone from accounting for 1% of Australia's coking coal sales as recently as 2008 to more than a quarter today, a development of considerable assistance to Queensland's mining sector in general, and to developments in the Bowen Basin in particular.

Chart 9.21: Queensland mining LPI forecasts



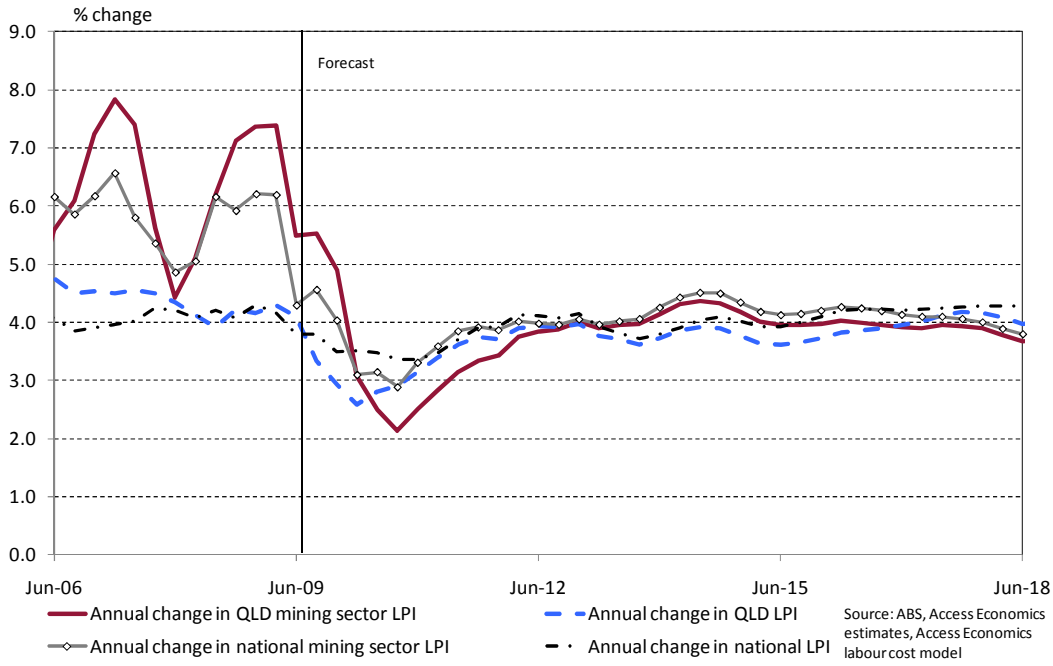
Assuming that Japan sits on the global sidelines for longer, the depth of Queensland's downturn therefore rests very heavily on China and the sustainability of its recent coal buying spree.

On balance, however, growth in the State's mining sector is expected to recover from here, assisted by a falling $A (helping both mining and manufacturing exports) over the longer term.

There is good news on the supply side, with a number of mining projects under construction, including Rio Tinto's $950 million Clermont opencut thermal coal mine development, Tarong Energy's $845 million Meandu steaming coal mine expansion and the $690 million Lake Lindsay coal mine development at Bowen Basin.

Yet recent job losses in the sector and the pace of the slowdown in the wider State economy point to developing weakness in State mining wage gains, with quarterly wage growth bottoming out in early 2010 and recovering thereafter.

Chart 9.22: Queensland mining forecast comparison



9.4.4 The construction sector

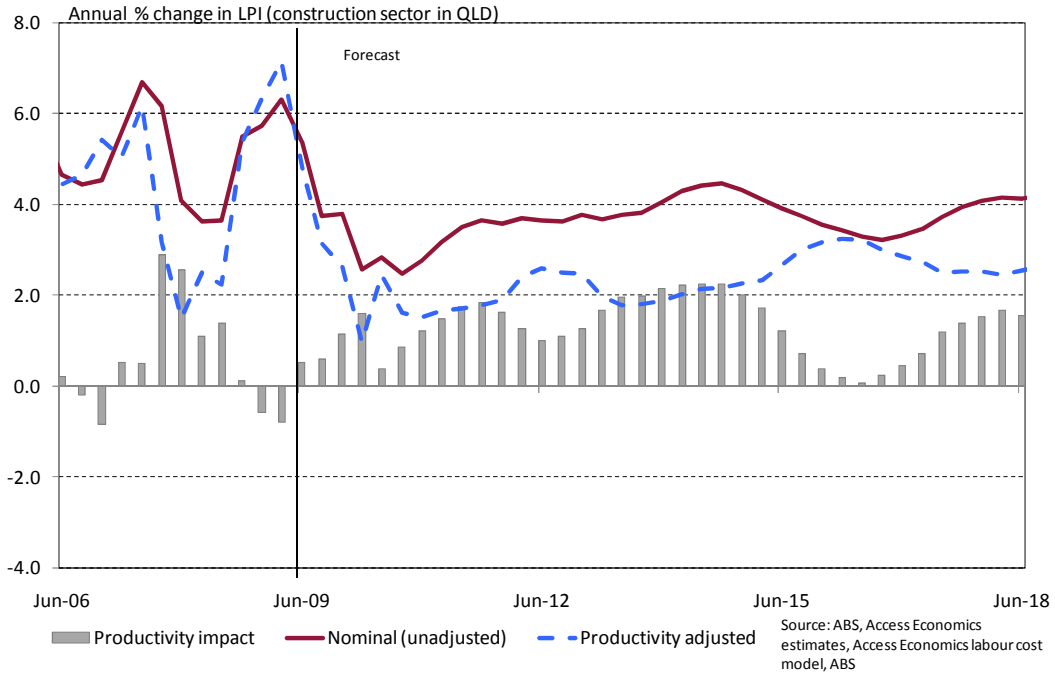
Queensland's housing sector looked very positive heading into 2008, rising solidly against relative national weakness. Since then, however, housing starts in the State have slipped dramatically, and they are now running at around half their peak levels.

Hopefully this is close to the bottom of the trough for the pace of housing construction in Queensland – housing finance has been lifting since late 2008, reversing a trend that was a harbinger of the recent declines, although it is yet to show up as new housing demand, with housing starts projected to slump 31.6% in 2009.

Underlying population increases (more than 100,000 people each year) mean that housing construction activity in the State cannot sustain such low activity for long. These forecasts suggest 2010 will be a strong year (up 33.6%), with Queensland again chasing for Victoria for the title of Australia's best builder, followed by further good growth of 10.4% in 2011.

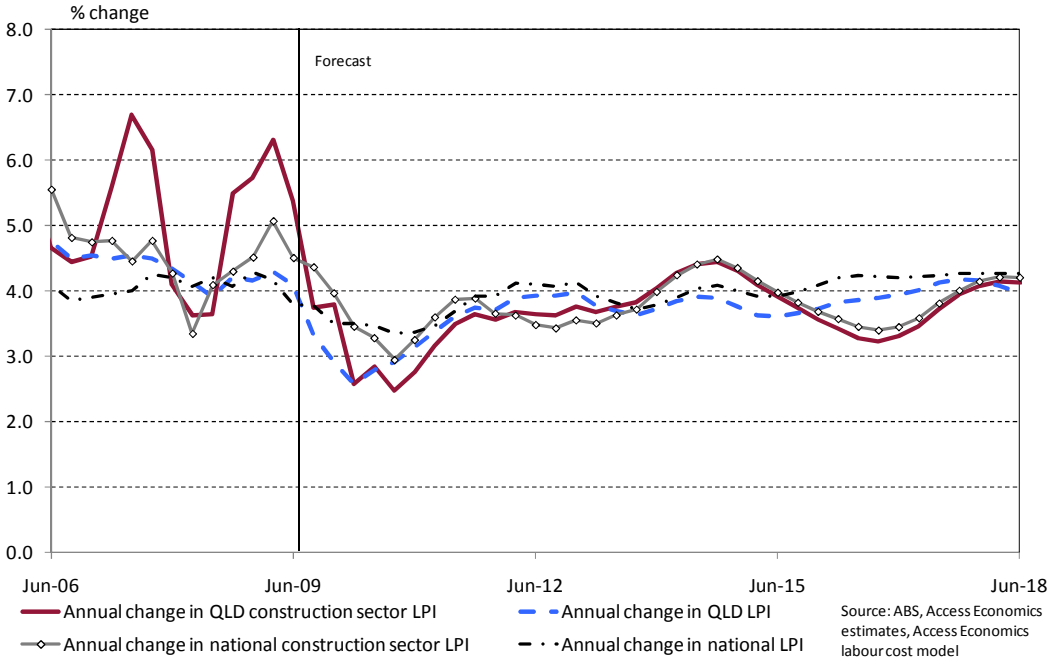
Engineering construction in Queensland has been strong in recent years, driven up by solid investment in mining and power projects in particular as the State rode higher global demand for industrial commodities, especially its coal. However, that strength is now unwinding as lower contract coal prices and the global downturn weigh on activity.

Chart 9.23: Queensland construction LPI forecasts



Rapid population growth means the State's transport infrastructure is attracting significant investment spending – as it should.

Chart 9.24: Queensland construction forecast comparison



The Airport Link and North South Bypass Tunnel projects are ongoing at a cost of more than $5 billion, while the Cunningham Arterial is also receiving an upgrade. The Gateway Bridge in

Brisbane is being duplicated at a cost of $1.9 billion, while $1.2 billion is being spent constructing a busway from Buranda to Capalaba in Brisbane.

Commercial construction remains solid in the State, but falling approvals suggest activity levels will fall notably through 2009-10. Indeed, the value of commercial building approvals of late was the lowest in three years; a foretaste of things to come. Current works include a number of health-related projects. The new 750-bed Gold Coast University Hospital is under construction at Parklands at a cost of $1.5 billion, while a new $1.1 billion Queensland Children's Hospital in Brisbane and a $446 million redevelopment of the Cairns Base Hospital are also under construction. Projects in other sectors include a $600 million redevelopment of the Brisbane Supreme and District Courts, due to be completed in 2011, and a new $485 million correctional facility at Gatton. Leighton Properties is building a new $360 million office tower on George Street in Brisbane, while the South Bank Convention and Exhibition Centre is being expanded at a cost of $130 million.

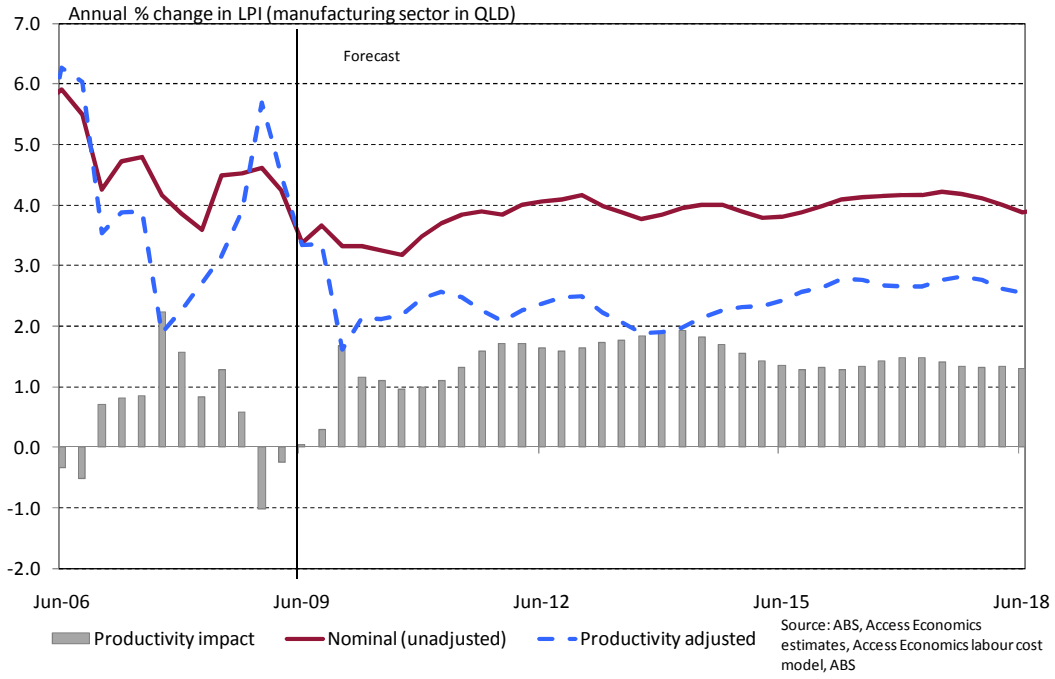
With that degree of slowdown in Queensland's construction pipeline, it is unlikely that the relatively strong growth seen in the State's construction wages in recent years – stronger still than national gains, as Chart 9.24 shows – will be sustained.

Wage growth in the June quarter itself was among the weakest in the nation, and it looks set to stay slow until well into 2010, before staging a recovery thereafter.

9.4.5 The manufacturing sector

Queensland's manufacturing sector is relatively small, but it has been developing relatively fast as the State expands its share of the national economy.

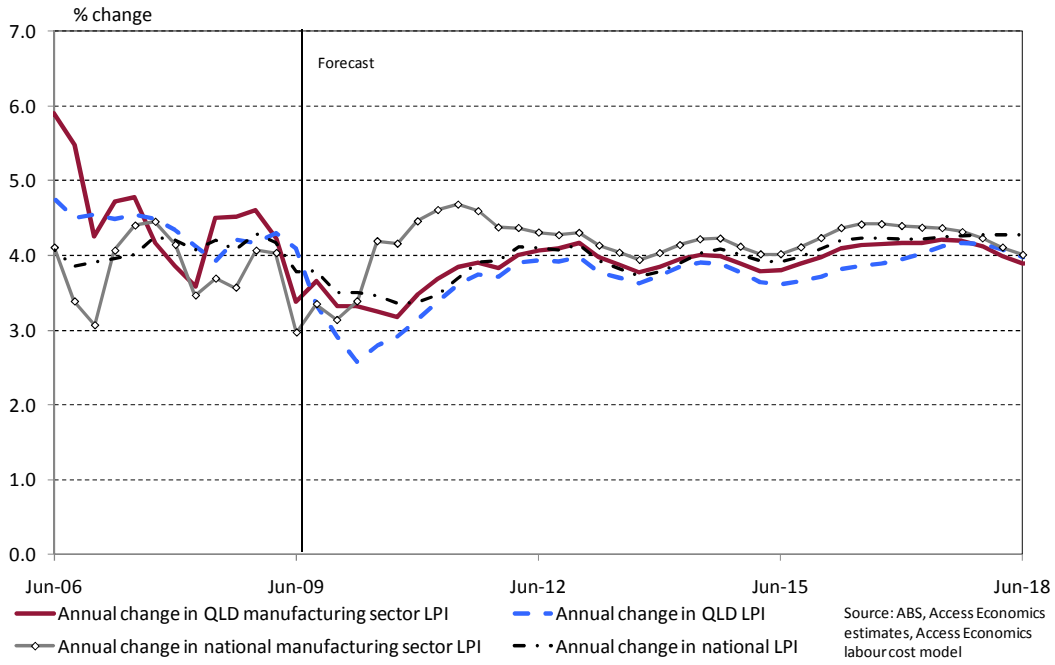
Chart 9.25: Queensland manufacturing LPI forecasts



As with the other sectors discussed in this report, manufacturers have found themselves in considerable competition with the mining sector for skilled workers – indeed at its height the problem had begun to expand to white collar sectors (even teachers and nurses) as those sectors also saw some of their workers tempted away to mining jobs.

That generally boosted wage growth in the manufacturing sector above the State average – against the national picture of relatively slow growth in manufacturing wages as the national sector struggled against imports, high interest rates and the rising $A.

Chart 9.26: Queensland manufacturing forecast comparison



Much of the future expansion in the State's manufacturing sector will be focused around downstream manufacturing from upstream primary mining industries. Current projects under construction include the $2.2 billion second stage of the Yarwun Alumina refinery development at Gladstone – a prime example of this effect.

Although June quarter wage growth in the sector edged back up to 0.9%, there has been evidence of slower gains in earnings for most of the past year, and a continuation of that trend is expected into the near future. Quarterly wage growth may not rebuild to a notably extent until late 2010.

Longer term, a more moderate mining outlook will limit the upward pressure on wages from competition between the sectors, with Queensland's strong population growth (boosting the relative supply of workers and further reducing upward pressure on wages) keeping average growth rates in the manufacturing LPI in Queensland marginally below the projected growth in the national average.

9.5 South Australia

South Australia's economy has grown more slowly than Australia as a whole in recent decades. In part that is attributable to the State's relatively heavy reliance on the manufacturing sector, which has also grown more slowly than Australia as a whole.

However, another notable contributor to slower output growth in South Australia has been the State's weaker population growth and its relatively older population.

These demographic factors are both linked to the tendency – particularly through the 1990s – for younger South Australians to move to other States.

That said, the State's performance through the economic slowdown of the moment has been relatively good, aided by South Australia's relatively modest exposure to the hard hit finance and mining sectors.

Table 9.5: SA wage forecasts

Financial year changes in SA nominal Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
SA	3.9	3.6	4.3	4.1	3.7	3.8	3.9	4.1	4.2	4.1
Utilities	4.6	4.2	3.8	3.8	3.8	3.9	4.0	4.1	4.1	4.1
Mining	5.7	4.1	3.8	4.0	4.1	4.4	4.4	4.5	4.2	3.9
Construction	3.5	3.5	4.5	4.5	4.2	4.7	4.9	4.3	4.0	4.4
Manufacturing	4.0	3.8	5.0	4.6	4.3	4.2	4.3	4.5	4.4	4.1

Financial year changes in SA real Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
SA	0.7	1.7	1.2	1.0	1.2	1.7	1.9	1.6	1.5	1.6
Utilities	1.4	2.3	0.6	0.7	1.3	1.8	2.0	1.6	1.4	1.6
Mining	2.4	2.2	0.7	1.0	1.5	2.3	2.5	1.9	1.5	1.5
Construction	0.3	1.6	1.3	1.4	1.7	2.6	2.9	1.7	1.3	2.0
Manufacturing	0.8	1.9	1.8	1.5	1.8	2.1	2.3	2.0	1.7	1.7

Financial year changes in SA nominal productivity adjusted Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
SA	4.3	2.4	3.0	3.3	2.5	1.6	1.9	2.1	2.4	2.2
Utilities	5.7	2.7	2.4	2.4	2.2	1.7	2.4	3.1	2.7	2.2
Mining	7.8	0.7	2.0	2.5	2.2	2.0	2.5	2.8	2.5	2.4
Construction	3.6	2.5	3.0	3.3	2.7	2.4	2.8	3.8	3.2	2.7
Manufacturing	4.1	2.7	3.8	3.1	2.6	2.2	2.5	2.9	2.8	2.6

Financial year changes in SA real productivity adjusted Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
SA	1.1	0.5	-0.1	0.3	0.0	-0.4	-0.1	-0.4	-0.2	-0.1
Utilities	2.4	0.8	-0.7	-0.6	-0.3	-0.4	0.5	0.5	0.1	-0.2
Mining	4.4	-1.1	-1.1	-0.6	-0.3	0.0	0.5	0.3	-0.1	0.0
Construction	0.4	0.7	-0.1	0.2	0.2	0.3	0.8	1.2	0.6	0.3
Manufacturing	0.8	0.8	0.6	0.1	0.1	0.1	0.6	0.4	0.1	0.2

9.5.2 The utilities sector

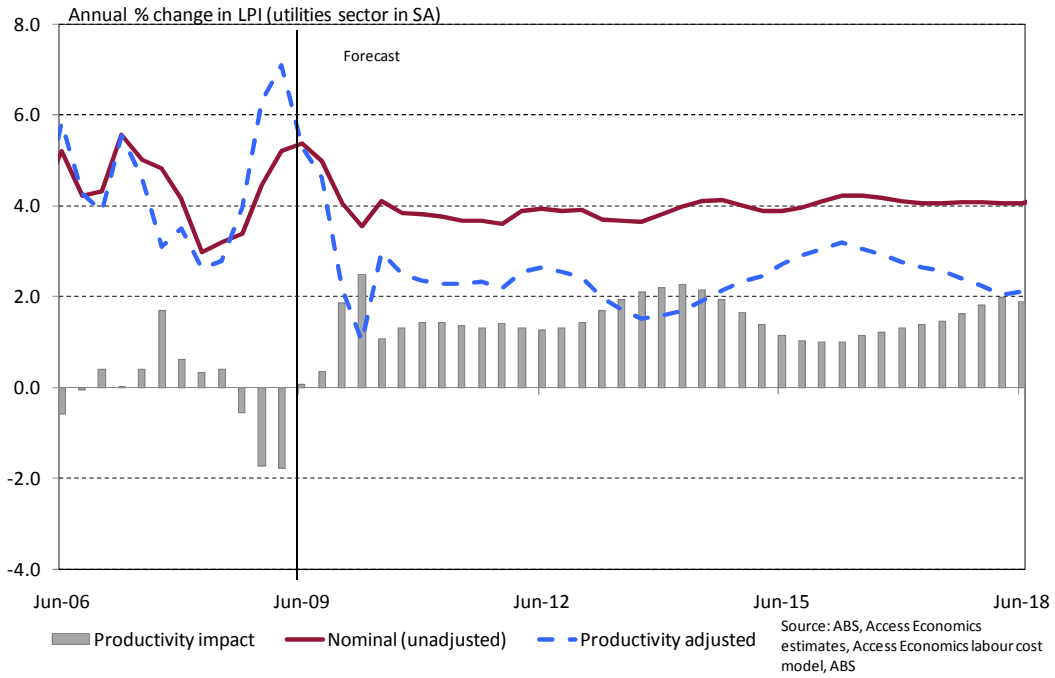
South Australia has three major electricity and gas suppliers, while water and waste management is carried out by SA Water, a government operated company.

Looking ahead, there will be a mixture of offsetting effects. A factor affecting labour demand – and hence the pace of wage settlements – will be the eventual impact on the sector of staffing for the $1.6 billion Adelaide desalination plant.

However, a key factor for the sector in South Australia will also be the pace of retirements in coming years. Nationally, the utilities sector as a whole will be facing a surge of retirements (where, according to an ABS survey, 13% of utility workers are expected to retire in the next 10 years). The age profile of the South Australian utilities sector is – as is true of the overall State workforce – likely to be older than the national average, therefore pointing to relatively greater short term pressures form staff lost to retirement.

This loss of staff and industry knowledge will have an even greater impact in SA for two reasons. The first is that South Australia is a relatively small State competing with larger States for the same workers. The second is that, as noted, SA has a relatively older population. This means that it will be facing increasing pressure to attract or retain younger workers to a State that traditionally sees net flows of young people leaving the State.

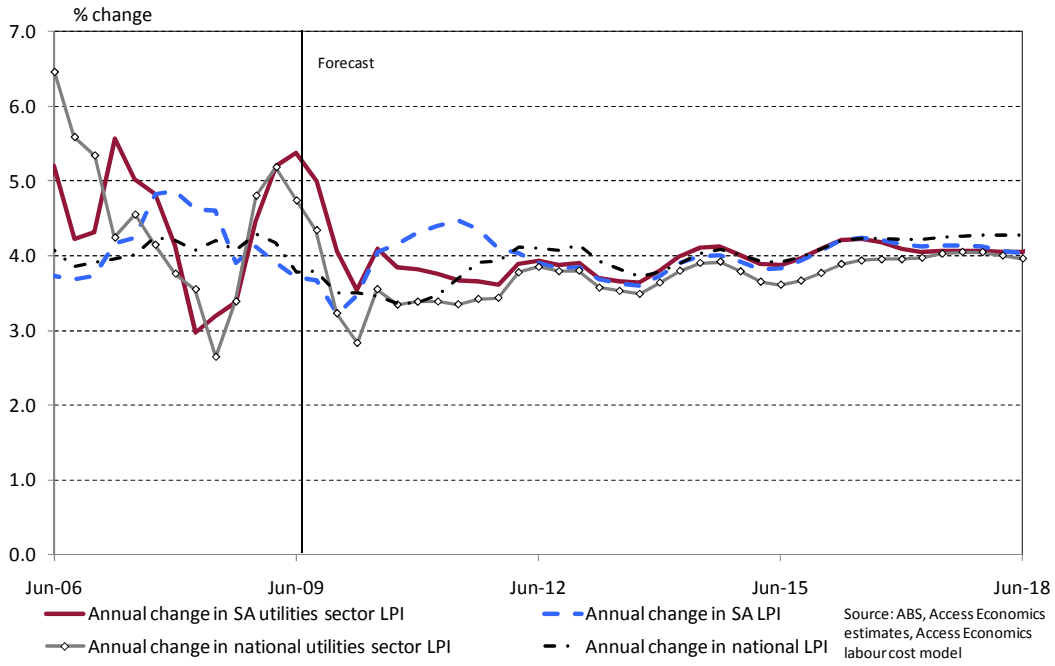
Chart 9.27: SA utilities LPI forecasts



Other things equal, this competition for workers is likely to see labour costs rise faster in South Australia than that seen nationally as the State tries to retain and attract new workers.

That said, the resultant change in the age composition of the workforce in the utilities sector in the State will – other things equal – reduce measured average wage growth.

Chart 9.28: SA utilities forecast comparison



The growth in the South Australian utilities LPI has been very close to overall SA LPI growth over the past decade, and particularly so in the last couple of years, as Chart 9.28 shows.

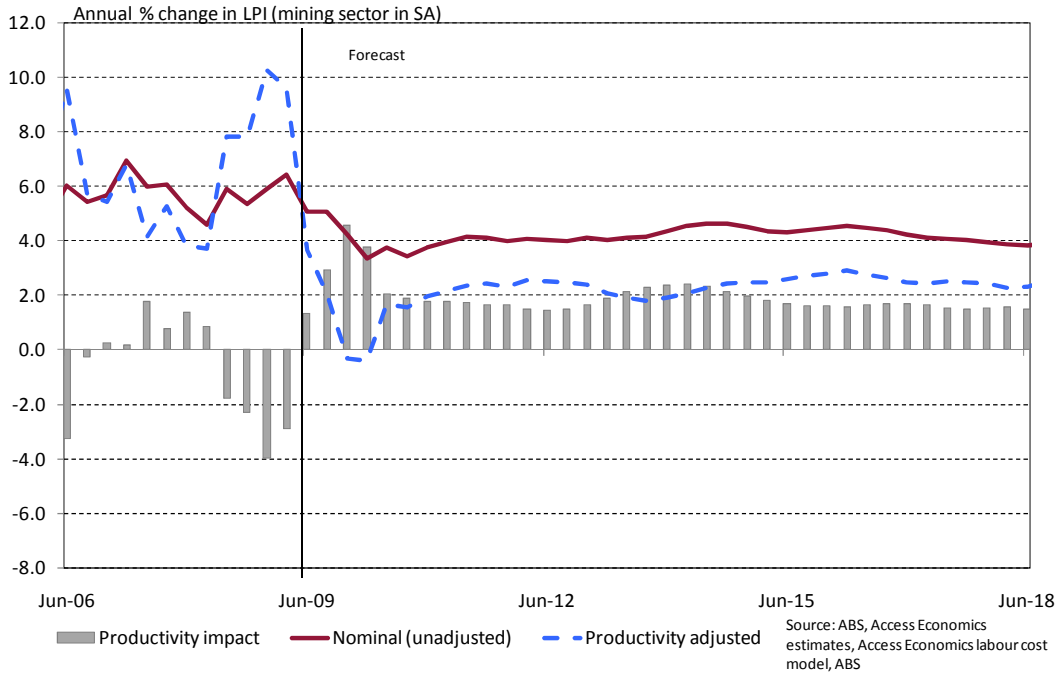
Amid solid overall growth in the wider State economy, wage gains in the utilities sector in the June quarter itself were higher in South Australia than in any other State.

9.5.3 The mining sector

Chart 9.29 shows that productivity in the mining sector in SA has slumped in the past year as output fell while employment remained steady.

That partly reflects developments related to the State's ambition to become a bigger player in the Australian and global mining sector. There is indeed good potential for that to happen, most notably via Olympic Dam. Other things equal, however, the development push has tended to create jobs without, to date, much impact on output from those jobs.

Chart 9.29: SA mining LPI forecasts

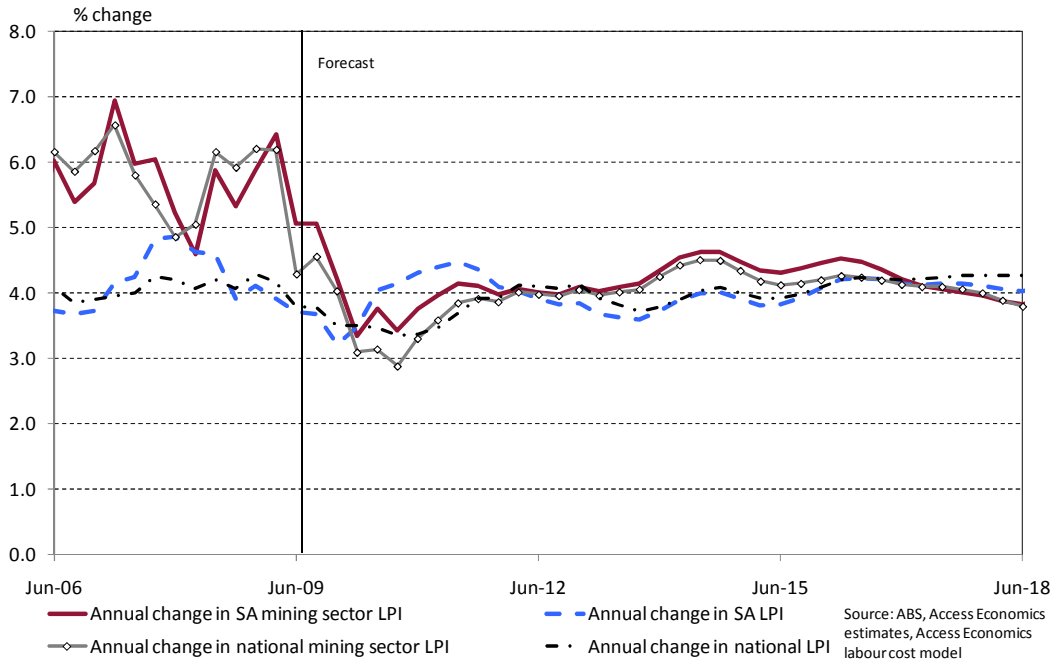


This phase has artificially pushed the productivity adjusted LPI series higher, while the nominal growth rate remained relatively steady in the 5-6% range.

Looking ahead, the rate of nominal growth in mining wages in SA is already slowing as miners reassess their expansion plans in light of the global financial crisis. Those current weaker conditions mean that a renewed acceleration in wage growth in the sector does not establish itself until the second half of 2010.

However, such a recovery in the pace of mining sector wage growth in the State is still to be expected to be evident over the forecast period as the State tries to attract the labour it will need if it wants to increase its mining presence.

Chart 9.30: SA mining forecast comparison



Indeed, the South Australian mining sector should see increased activity in the future, regardless of whether Olympic Dam proceeds or not, in the form of mineral exploration. This increased demand for skilled labour is partly why the forecasts for SA mining LPI growth are higher than the growth for national mining LPI (as well as the South Australian total LPI).

9.5.4 The construction sector

The construction sector has been quite strong in South Australia recently, which is impressive given that the State is not yet a major player in the mining sector (and so missed out on much of the increased investment during the boom).

The housing sector has also more than held its own in recent years, boosted by good population growth in the State. Housing starts are slightly below the peaks seen in 2008 (a year that saw housing starts rise by 12%, an impressive result against the backdrop of weak national trends), and leading indicators are already beginning to build again.

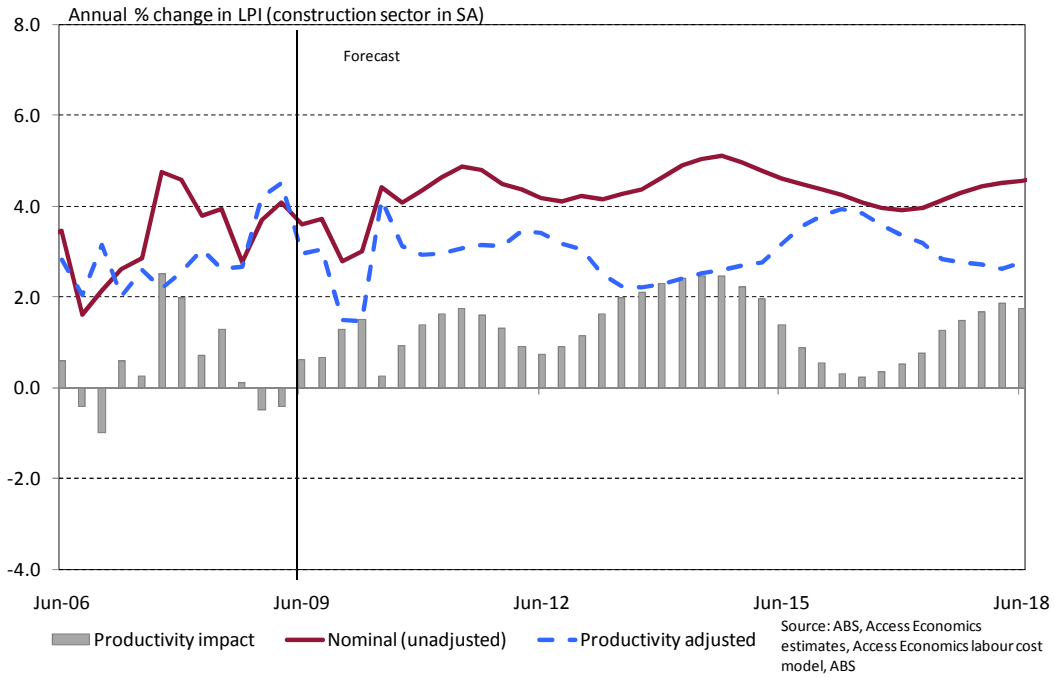
That timing could mean that home building levels may be able to maintain something like their current performance. However, that doesn't mean that SA can sustain its current 10% share of national housing construction, particularly if migration levels are cut back in the medium term (meaning that some of the good population growth experienced in SA recently will fall away).

The good news on housing is tempered by commercial building approvals. The latter have softened to two year lows, suggesting commercial construction work will slow over the medium term. Projects underway in South Australia include a $250 million upgrade to AAMI Stadium. The third stage of the Lyell McEwin Hospital redevelopment is also underway, as is the $153 million redevelopment of the Flinders medical centre. Other health projects being built include the second and third stages of the Queen Elizabeth Hospital redevelopment and the $120 million fourth stage of the Royal Adelaide Hospital redevelopment, due to be

completed in 2011. The $85 million State Aquatic Centre is under construction at Marion, while the Makris Group is finalising a refurbishment of the Hallett Cove shopping centre.

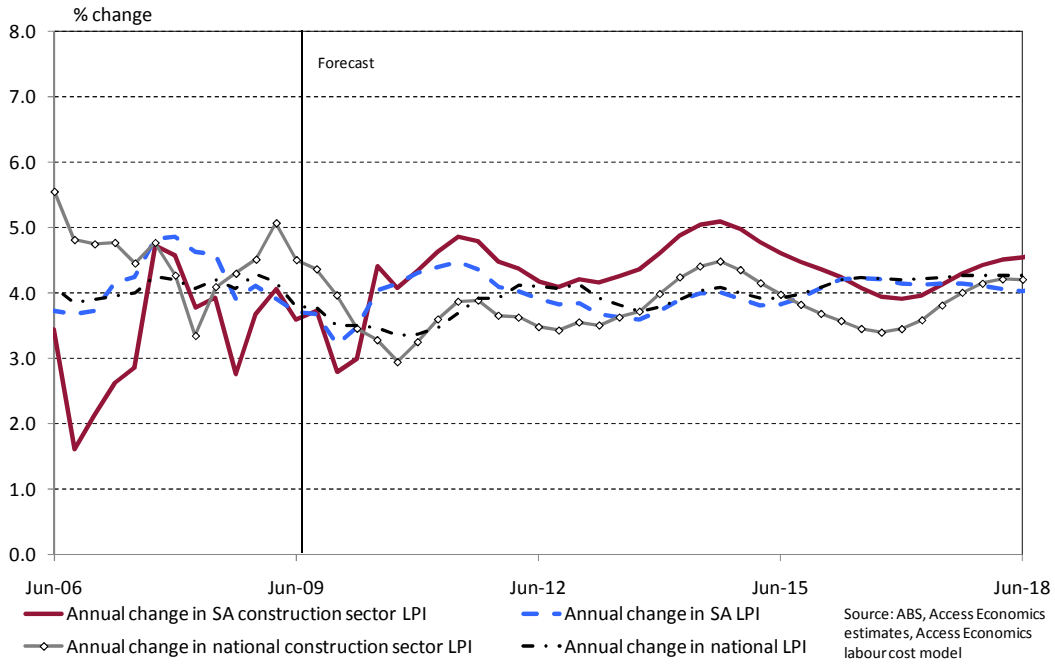
Engineering construction in South Australia has been disappointing in recent years. The boom collapsed a little too soon for the State to capitalise on its significant resource potential. That said, the huge Olympic Dam development is under consideration and has the potential to provide a big boost to the value of work underway. Current projects include the construction funding, including the upgrade of the Gawler rail line and an extension of the Noarlunga rail line to Seaford. The Adelaide Advertiser plans to undertake an upgrade of its printing presses. Meanwhile, a third stage of the upgrade to the Lake Bonney wind farm near Millicent looks like it will go ahead.

Chart 9.31: SA construction LPI forecasts



As noted, work under consideration is dominated by the $9.2 billion Olympic Dam project, with a decision due in 2010. Should it get full go ahead, this project would mean construction jobs over a period of 11 years, and include a railroad, new airport and accommodation facilities, desalinisation plant as well as additional port facilities, in both SA and the NT.

Chart 9.32: SA construction forecast comparison



As the relative strength in South Australia's construction sector in recent years has been in housing (whereas in other States – and especially the resource States – it has been in engineering and commercial construction), there has been a compositional shift in the State's construction workforce versus that in the rest of Australia.

Other things equal, that has resulted in weaker growth in construction wages in South Australia over the past five years than in any other State.

Moreover, ABS estimates that the State's construction LPI fell in the June quarter.

Access Economics doubts that the relatively slower wage growth in SA can last. The State's construction wages have drifted below those available elsewhere, yet both the State's economy and its construction sector are projected to outperform the nation over the next year or so.

Those cyclical factors drive the uptick in construction sector wage growth in the State through 2010 seen in Chart 9.32, while the need to catch up to competitor wages helps to maintain that above average outlook for much of the coming decade.

to continue their moderate growth shown over the last year (there was no change in construction wages in the State in the June quarter 2009, following on from weak March quarter growth), before then rising over the rest of the forecast period.

9.5.5 The manufacturing sector

The manufacturing sector in South Australia is dominated by automotive, wine and Defence manufacturing.

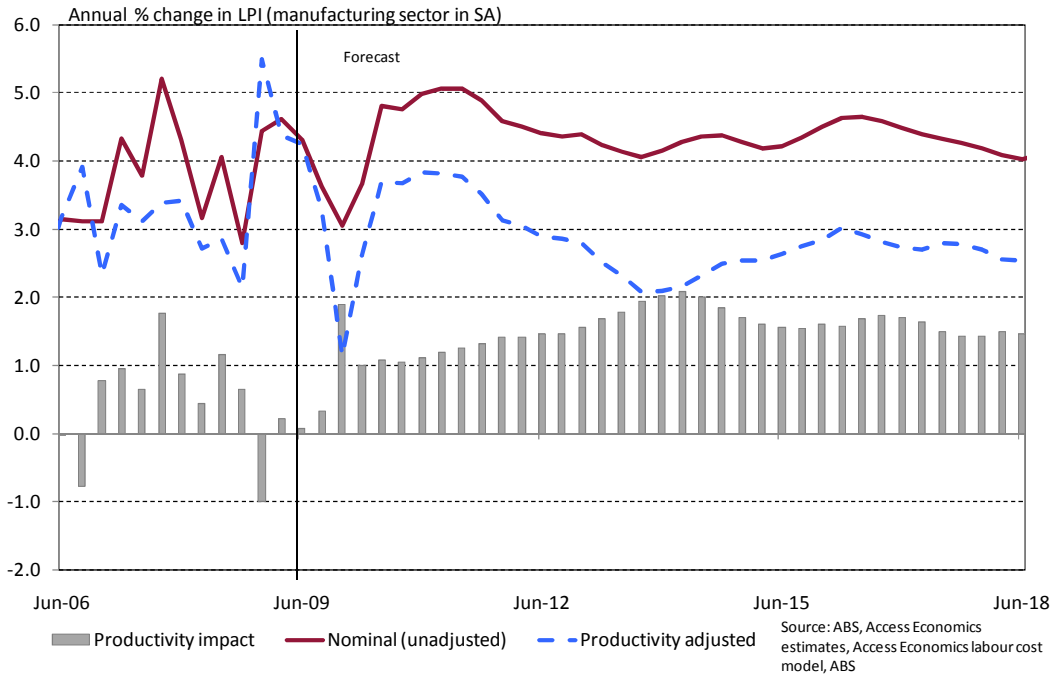
Car manufacturers around the globe have been struggling in the wake of the financial crisis, and those with their production based in South Australia are no exception. Wine manufacturers are struggling under an overproduction of grapes as well as a higher Australian dollar, which is seeing exports slump.

Those difficulties have contributed to the weakness evident in manufacturing LPI growth in the State over the past six months.

This slump in manufacturing output has resulted in low (or negative) productivity for the industry, as shown in Chart 9.33. The forecasts show SA manufacturing LPI rebounding in 2010 as the overall economy recovers, exchange rates normalise and the car industry begins to take full advantage of the Green Car Fund (a fund which will provide the car manufacturers with financial assistance to produce hybrid and other environmentally friendly cars). Productivity growth is expected to be good, as the sector sheds lower skilled workers in favour of more highly skilled defence and automotive manufacturers.

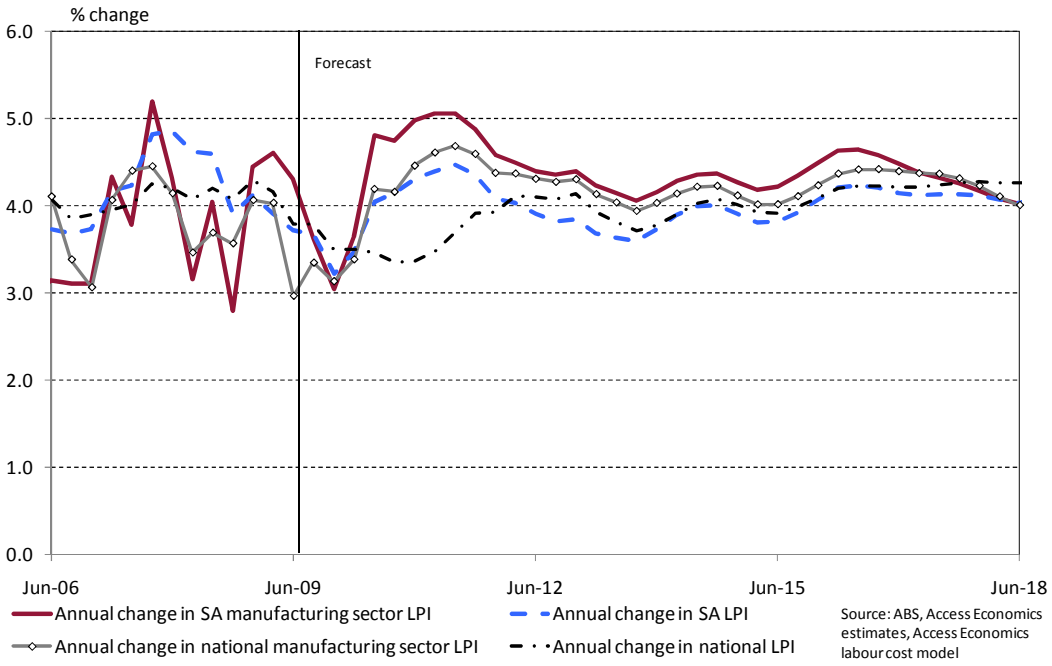
The growth in South Australia's manufacturing LPI is forecast to remain slightly higher than the national average over the course of the forecast period, ranging between 4-5%.

Chart 9.33: SA manufacturing LPI forecasts



The forecasts for growth in South Australia's manufacturing LPI remain slightly higher than the national manufacturing sector LPI over the forecast period, reflecting the competition SA faces from other States for the same workers.

Chart 9.34: SA manufacturing forecast comparison



9.6 Australian Capital Territory

The ACT is a small jurisdiction, with only a small manufacturing presence, while the mining sector is virtually non-existent. The utilities sector in the Territory is dominated by ActewAGL.

The size of these sectors is highlighted by the size of industrial production (the output from the utilities, manufacturing and mining sectors) in the Territory. In other States, industrial production accounts for around one in every six dollars of output, however the matching figure is one in 30 in the Territory. Access Economics forecasts that this ratio will widen further in the short term, as commercial construction in the Territory is expected to weaken, leaving the ratio at one in every 32 dollars by 2012.

Note that the industries discussed for the ACT are much smaller than the same industries in other States, and as such, the ACT sectoral data is subject to a great deal of volatility.

Table 9.6: ACT wage forecasts

Financial year changes in ACT nominal Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
ACT	3.9	3.3	3.4	3.9	3.9	4.0	3.9	3.6	3.7	3.6
Utilities	4.1	4.5	3.5	3.9	4.0	4.0	3.7	3.3	3.3	3.5
Mining	5.2	3.9	3.0	3.9	4.2	4.7	4.5	4.0	3.7	3.5
Construction	4.1	3.9	3.2	3.8	3.9	4.6	4.6	3.6	3.3	3.8
Manufacturing	4.1	4.1	3.9	4.2	4.2	4.3	4.2	3.9	3.9	3.6

Financial year changes in ACT real Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
ACT	0.5	1.1	0.2	0.4	1.0	1.5	1.6	0.9	0.6	0.9
Utilities	0.7	2.2	0.3	0.5	1.1	1.5	1.4	0.6	0.3	0.7
Mining	1.7	1.7	-0.2	0.5	1.4	2.2	2.2	1.3	0.7	0.7
Construction	0.7	1.6	-0.1	0.3	1.0	2.1	2.3	0.9	0.3	1.1
Manufacturing	0.6	1.8	0.6	0.7	1.4	1.8	1.9	1.2	0.8	0.9

Financial year changes in ACT nominal productivity adjusted Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
ACT	6.0	1.7	2.7	2.5	2.2	1.1	1.9	3.5	3.1	2.6
Utilities	5.4	2.9	2.2	2.5	2.3	1.7	2.2	2.4	2.0	1.7
Mining	7.6	0.4	1.2	2.2	2.3	2.2	2.6	2.5	2.1	2.0
Construction	4.3	2.9	1.8	2.5	2.4	2.1	2.6	3.3	2.7	2.2
Manufacturing	4.2	3.0	2.7	2.6	2.5	2.2	2.5	2.5	2.3	2.2

Financial year changes in ACT real productivity adjusted Labour Price aggregates

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
ACT	2.5	-0.5	-0.5	-0.9	-0.6	-1.3	-0.4	0.8	0.1	-0.1
Utilities	1.9	0.7	-1.0	-0.9	-0.5	-0.7	-0.1	-0.2	-0.9	-1.0
Mining	4.0	-1.8	-2.0	-1.2	-0.5	-0.2	0.3	-0.2	-0.8	-0.7
Construction	0.9	0.7	-1.4	-0.9	-0.4	-0.3	0.3	0.6	-0.3	-0.5
Manufacturing	0.8	0.7	-0.5	-0.8	-0.3	-0.2	0.2	-0.2	-0.7	-0.5

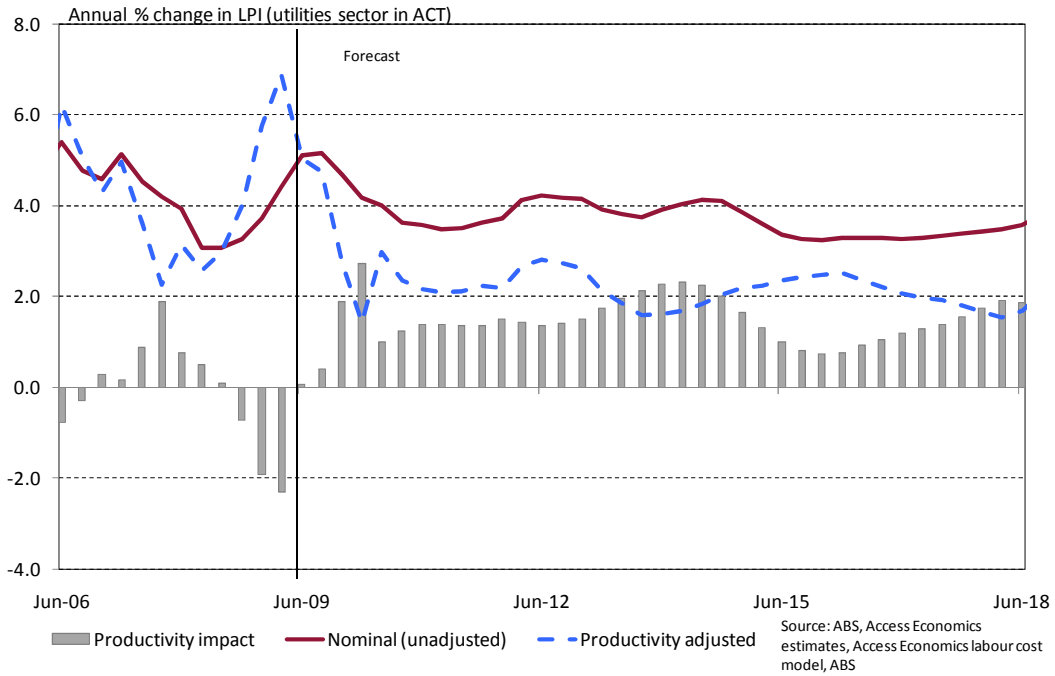
9.6.2 The utilities sector

ActewAGL provides electricity, gas, water and waste services to Canberra.

There has been an acceleration in estimated LPI growth in the ACT utilities sector to a little over 5% in the year to the June quarter. That lift in growth broadly mirrors a matching move in ACT construction wages, with the lift in the pace of commercial construction – especially office space – across the years 2006 to 2008 adding to the demand for workers for that sector.

However, the ACT economy is now growing relatively slowly, and the commercial construction sector has seen the pace of activity decelerate notably.

Chart 9.35: ACT utilities LPI forecasts

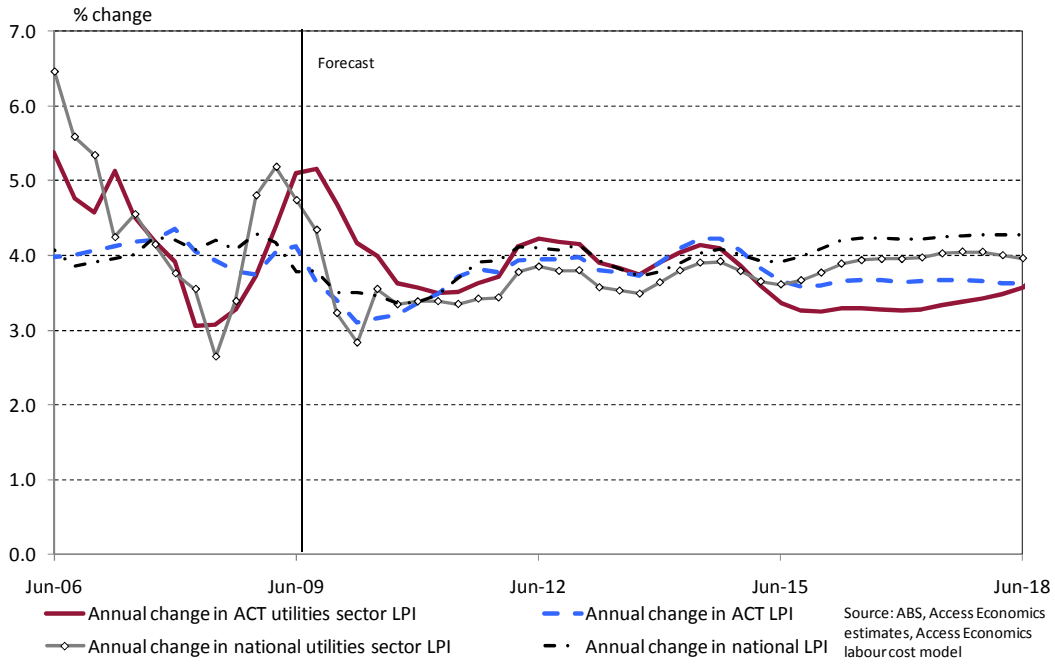


Those two factors are reducing the competition for workers from other sectors, and Charts 9.35 and 9.36 point to a slowing in the pace of wage gains in the ACT utilities sector over the next year and a half.

Chart 9.36 compares the ACT utilities and total LPI with their national equivalents. As is true across the ACT as a whole and most of the ACT sectors analysed in this report, the period after 2014 is projected to be marked by slower economic growth, with that weighing on the expected growth in wages as well.

This phase is predicated on the expected need to repair the Federal Budget in coming years. To the extent that occurs by cutting spending rather than raising taxes, it implies a relatively weaker ACT economy at that time.

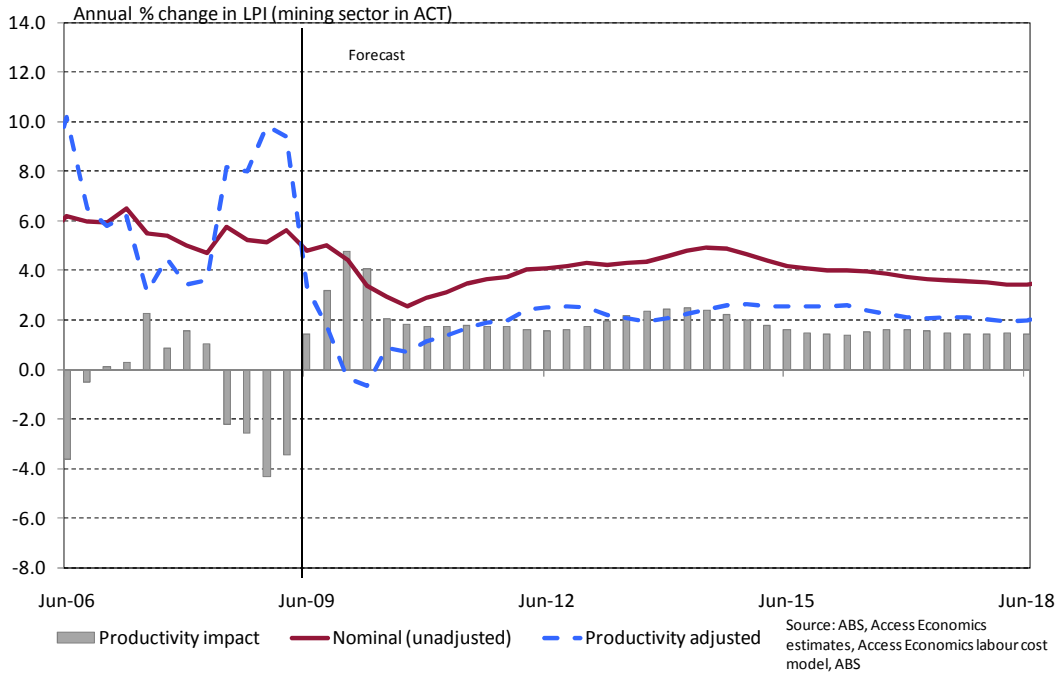
Chart 9.36: ACT utilities forecast comparison



9.6.3 The mining sector

The mining sector in the ACT is very small, with a quarry and a couple of mining exploration companies making up the bulk of the sector.

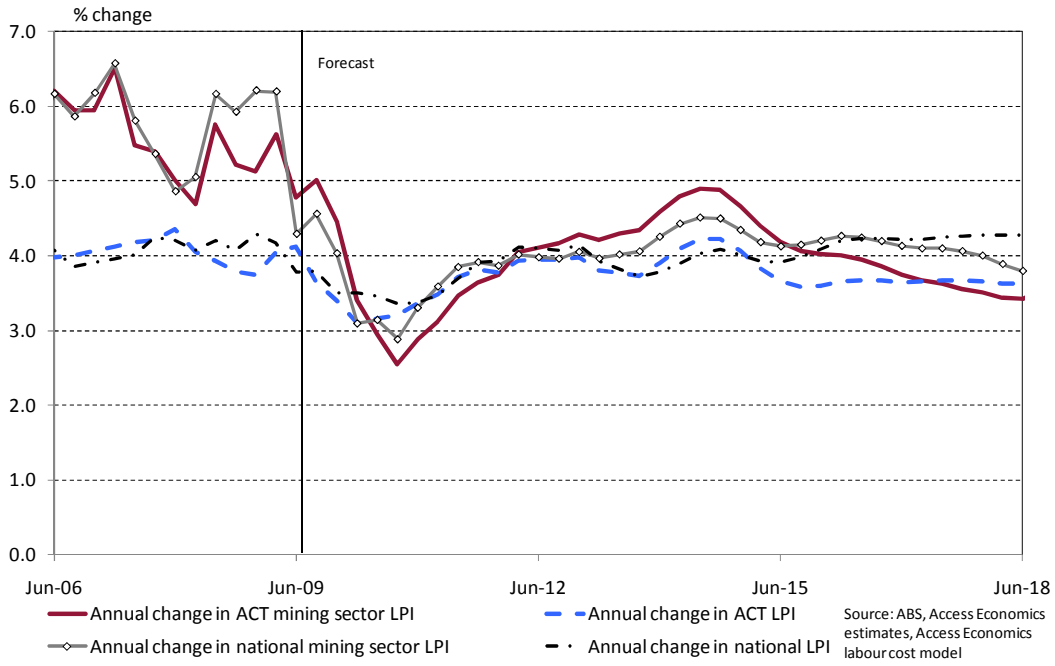
Chart 9.37: ACT mining LPI forecasts



The ACT is competing with mining heavyweights such as WA and Queensland for labour, which keeps pressure on labour costs, while average incomes in the Territory are the highest in the nation, adding additional pressure. These factors are projected to underpin faster growth in the ACT mining LPI in the medium term – as seen in Chart 9.37 above.

Chart 9.38 shows that the ACT mining LPI follows the national mining LPI sharply down in the short term, before rebounding in the medium term. LPI growth in the sector is forecast to be higher than the national average through to 2014, driven by a rebound in the mining sector nationally. However, the forecasts remain well below the growth rates seen in recent history.

Chart 9.38: ACT mining forecast comparison



9.6.4 The construction sector

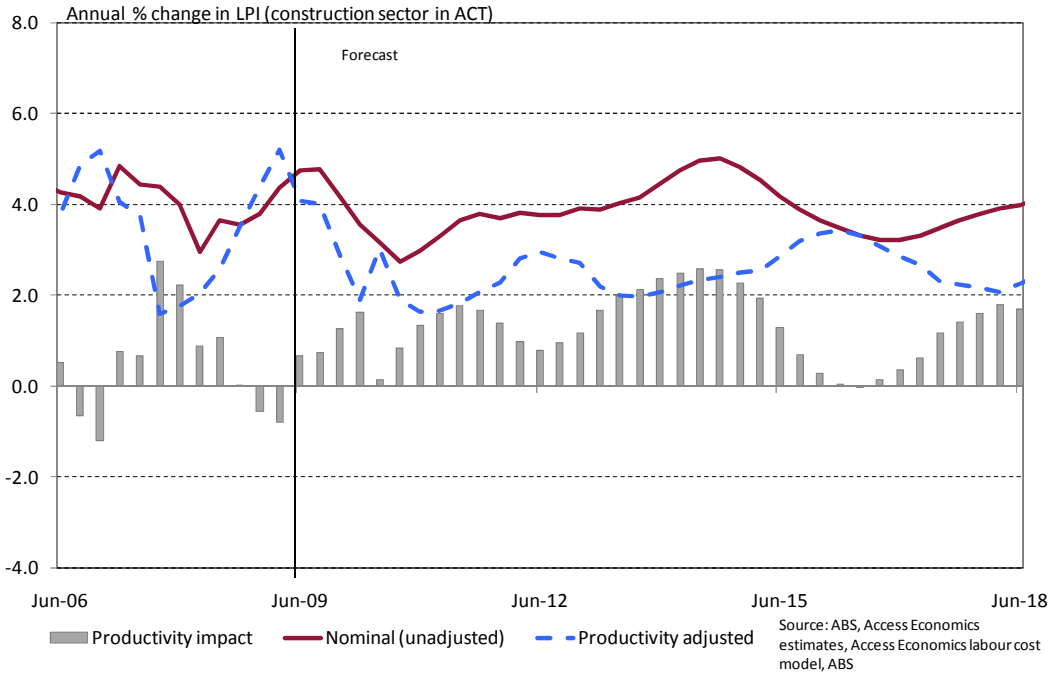
The construction sector in the ACT surged in recent years as a burst in Federal spending resulted in increased office and retail construction. This increased activity saw labour cost growth also lift notably – maintaining 6-10% annual growth rates over the last three years.

However this level of new construction was never sustainable, and Chart 9.39 shows that growth in the construction LPI is similarly expected to moderate in the short term.

That said, and unlike most other States examined in this report, LPI growth in the ACT construction sector is expected to remain moderate over the medium term as well. The ACT depends very much on the Federal Government for much of its economic activity, and in the same way that the stimulus packages were good for the ACT economy, the tightening in coming years in order to get the Federal Budget out of deficit will weigh on the ACT economy in general, but perhaps on its construction sector in particular.

That is because the winding back of spending by the Federal Government in the medium term will – other things equal – decrease the demand for new office space and the demand for housing in the ACT, although new local government initiatives, such as the revived land rent scheme, may assist in sustaining housing demand somewhat. However if the Federal Government is trying to cut spending, then the growth in public servants is likely to be smaller than otherwise, which will reduce housing demand in the Territory.

Chart 9.39: ACT construction LPI forecasts

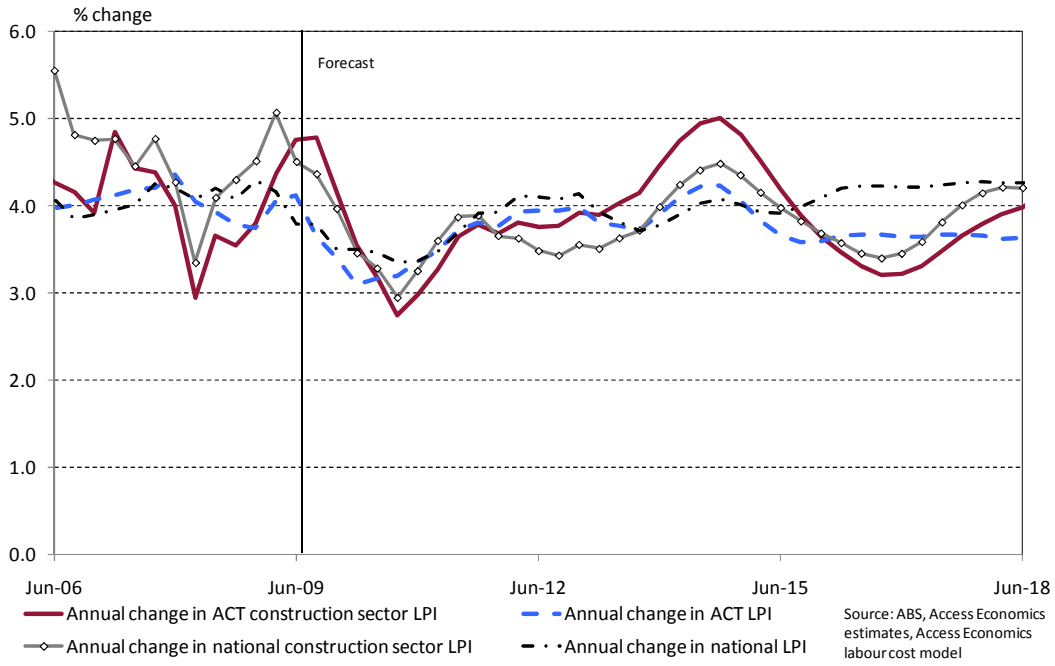


Engineering work remains modest. The $300 million upgrade to Canberra Airport is underway, with the project to eventually provide a new passenger terminal and extended runway. Meanwhile, Cotter Dam is being expanded at a cost of $145 million to secure long term water supplies, while a $155 million pipeline from the Murrumbidgee River to the Googong Dam is also planned. A number of minor road projects are underway, while Actew plans a $650 million technology city which would involve the construction of up to 20 data centres within the ACT.

Some recently completed office projects mean commercial construction activity has slowed. New office space for the Federal Attorney-General's Department, the Department of Prime Minister and Cabinet and the ATO have all been completed, as has a considerable amount of commercial space, such as in the Realm building in Barton. Current projects include a $93 million refurbishment of the National Gallery of Australia and a redevelopment of the Royal Australian Mint buildings, as well as new buildings in the Realm complex, while the Rex Hotel is being redeveloped. Health-related projects include a new Women's and Children's Hospital, the first phase of a refurbishment of the Canberra Hospital. Projects in planning include a $100 million renovation of the Belconnen shopping centre proposed by Westfield.

Chart 9.40 shows the extent of the wage cycle expected in this sector. Wage gains are projected to weaken further in response to the slowdown in commercial construction now underway, though a peak in the ACT housing construction cycle in 2013-14 aids gains at that time.

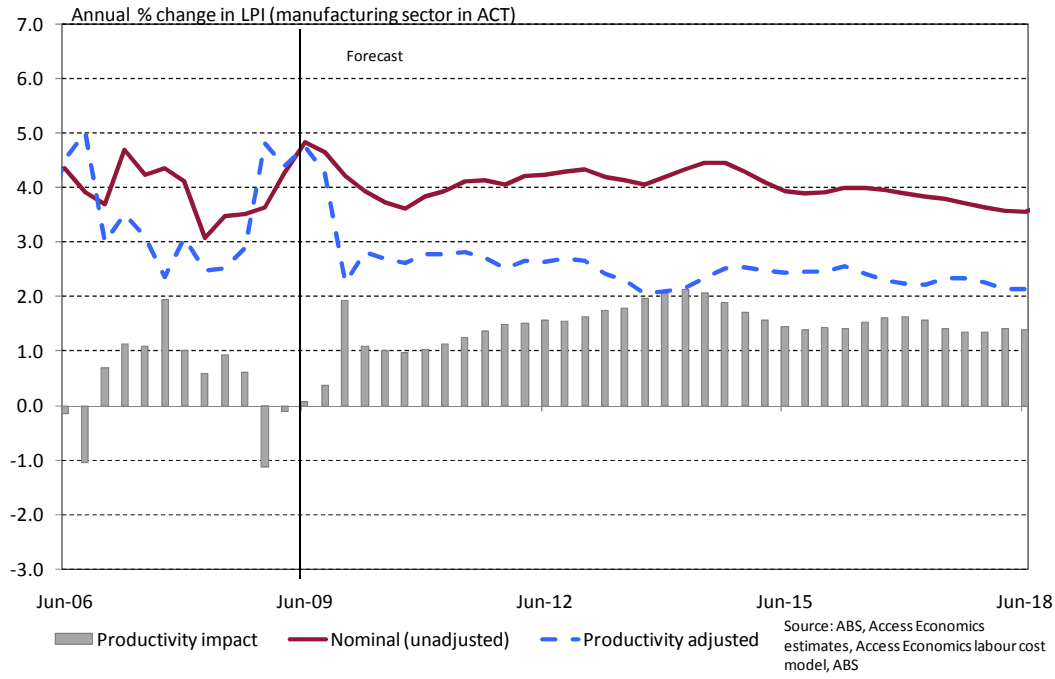
Chart 9.40: ACT construction forecast comparison



9.6.5 The manufacturing sector

The manufacturing sector in the ACT is also small. Growth in the manufacturing LPI is estimated to have lifted recently, but to rates that may not be sustainable amid the slowdown in the national manufacturing sector currently underway.

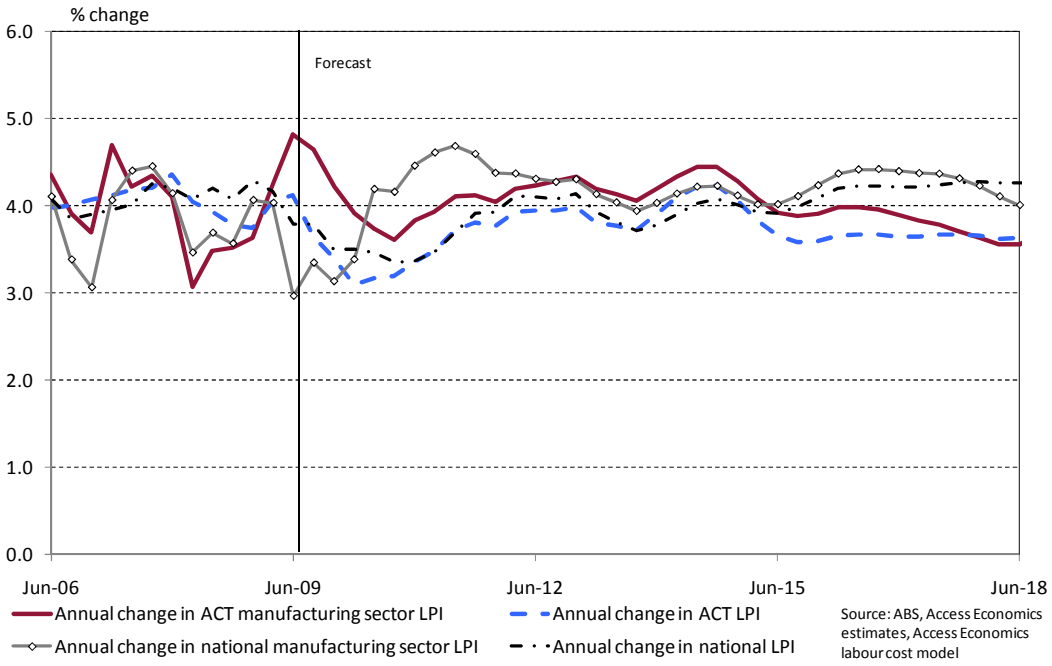
Chart 9.41: ACT manufacturing LPI forecasts



Charts 9.41 and 9.42 show that ACT manufacturing LPI growth is expected to fall to a cyclical low of 3.6%% over the year to the September quarter 2010.

That said, it is not projected to stay that low, averaging closer to 4% over the rest of the forecast horizon. Once again the post-2014 period is marked by relatively slower wage growth in the sector as the ACT's economy is pressured by consolidation in the Federal Budget and its spending for several years.

Chart 9.42: ACT manufacturing forecast comparison



10 General labour cost growth across States

This chapter provides labour cost forecasts by State as well as a discussion surrounding labour costs in each State. Table 10.1 provides a summary of State LPI forecasts to 2017-18 in real and nominal terms.

Table 10.1: State LPI forecasts

Financial year changes in nominal State LPI forecasts

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
NSW	3.8	3.6	4.2	4.3	3.9	3.9	4.0	4.1	4.3	4.3
VIC	4.0	3.5	4.4	4.0	3.5	3.5	3.6	3.9	4.2	4.2
QLD	4.2	2.9	3.3	3.8	3.8	3.8	3.7	3.8	4.0	4.1
SA	3.9	3.6	4.3	4.1	3.7	3.8	3.9	4.1	4.2	4.1
ACT	3.9	3.3	3.4	3.9	3.9	4.0	3.9	3.6	3.7	3.6

Financial year changes in real State LPI forecasts

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
NSW	0.7	1.8	1.2	1.4	1.4	1.9	2.0	1.6	1.6	1.8
VIC	1.2	1.5	1.3	1.1	1.0	1.5	1.6	1.4	1.4	1.6
QLD	0.4	0.9	0.2	0.6	1.0	1.5	1.5	1.1	1.0	1.3
SA	0.7	1.7	1.2	1.0	1.2	1.7	1.9	1.6	1.5	1.6
ACT	0.5	1.1	0.2	0.4	1.0	1.5	1.6	0.9	0.6	0.9

Financial year changes in State nominal productivity adjusted LPI

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
NSW	3.6	2.9	3.1	2.7	2.0	1.8	2.7	3.1	2.8	2.6
VIC	4.5	1.8	2.5	3.2	2.8	2.0	1.9	2.3	2.3	2.4
QLD	5.0	1.9	2.3	1.6	2.1	2.2	2.5	3.1	3.1	3.0
SA	4.3	2.4	3.0	3.3	2.5	1.6	1.9	2.1	2.4	2.2
ACT	6.0	1.7	2.7	2.5	2.2	1.1	1.9	3.5	3.1	2.6

Financial year changes in State real productivity adjusted LPI

Annual % change	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
NSW	0.5	1.2	0.2	-0.2	-0.4	-0.2	0.8	0.7	0.1	0.0
VIC	1.7	-0.2	-0.5	0.3	0.4	0.0	0.0	-0.2	-0.5	-0.2
QLD	1.2	-0.1	-0.7	-1.5	-0.7	-0.1	0.3	0.5	0.1	0.2
SA	1.1	0.5	-0.1	0.3	0.0	-0.4	-0.1	-0.4	-0.2	-0.1
ACT	2.5	-0.5	-0.5	-0.9	-0.6	-1.3	-0.4	0.8	0.1	-0.1

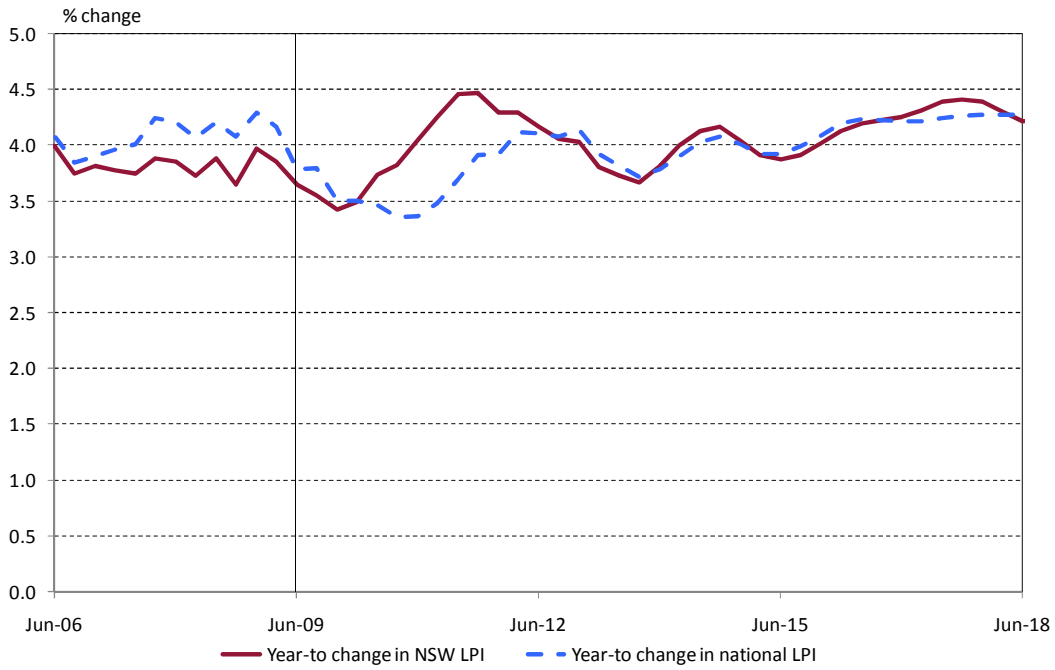
10.2 New South Wales

As detailed in Chapter 3, 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 been mostly lagging the national average since 2003.

That relative economic underperformance is anticipated to continue over the next 12 months. However from mid-2010 New South Wales' economy may recover relatively quickly – as the tonic of lower interest rates eventually has its effect on the State. Labour cost growth in the State is therefore expected to outpace the national average from late 2010 onwards as a result.

Chart 10.1 shows that Access Economics is projecting general labour cost growth in New South Wales to lift notably through 2011 in particular.

Chart 10.1: New South Wales general labour cost growth



However, it won't just be a relative recovery in the NSW economy driving faster wage growth in NSW. It will also be a degree of catch up to the weakness in wage gains evident over the past six years – wage gains in other States have been faster, and (other things equal) that will add to the pace of growth in wages in the State as well.

Year-to growth rates in the labour price index are projected to peak at close to 4.5% in NSW in mid-2011; earlier and higher than the peak in national labour cost growth in the cycle.

Beyond 2012, Access Economics expects NSW labour costs to grow broadly in line with the national average.

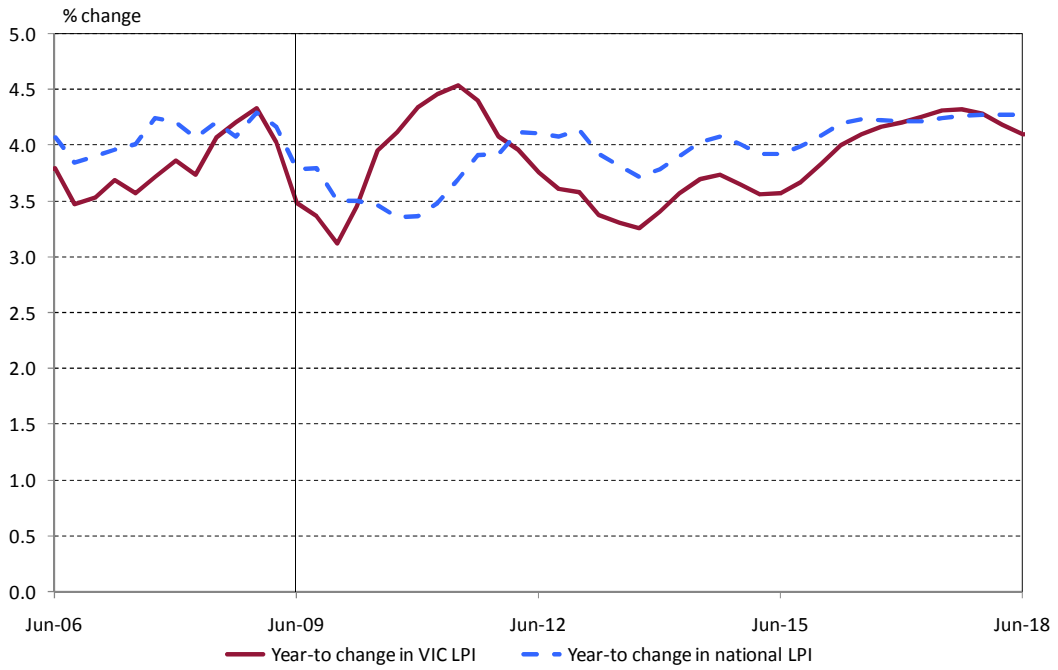
10.3 Victoria

As is true of New South Wales, the Victorian economy was not a major beneficiary of the commodity boom. However, unlike its northern neighbour, Victoria managed to broadly maintain its share of the national economy over the past decade – a considerable feat given the strong gains achieved in the likes of Western Australia and Queensland.

Consistent with that performance, the strength in the Victorian economy has meant that general labour cost growth has largely kept pace with the national average in recent years.

Indeed, Chart 10.2 shows that growth in the Victorian labour price index was slightly above the national average in the latter half of 2008 – albeit marginally so.

Chart 10.2: Victoria general labour cost growth



During 2009, growth in Victorian labour costs has fallen away relatively quickly, with the June quarter 2009 recording LPI growth of just 0.5%, weighed down by developments in the manufacturing sector in particular.

Although Access Economics expects quarterly growth rates for the Victorian LPI to now lift from that June quarter low, overall LPI growth in the State may not accelerate more markedly until 2010-11.

That recovery in labour cost growth corresponds with a projected recovery in State output, as shown Chart 3.3. General labour cost growth is projected to peak in mid-2011 at around 4.5%.

Further ahead, the unwinding of that phase of strong growth may see labour cost growth in Victoria lag the national average over the subsequent few years.

10.4 Queensland

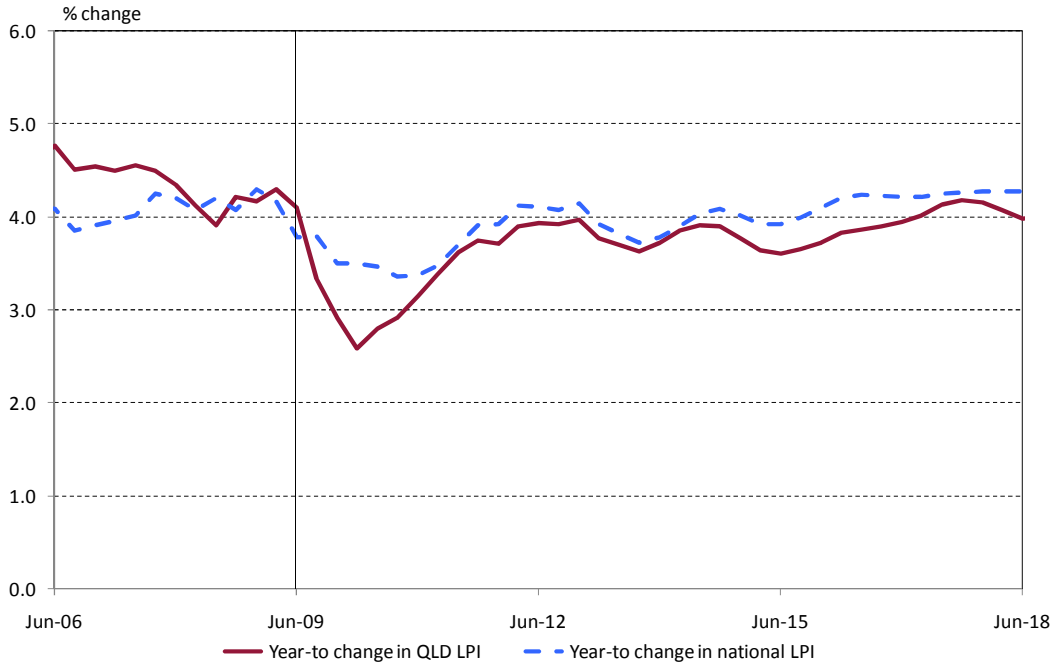
The Queensland economy has been a key driver of national economic growth over the past decade. As a result, labour cost growth in the State has generally been above that seen nationally.

Queensland's exposure to the global commodity boom has been of considerable benefit over recent years.

However, the past year has seen a cyclical shift which has hit harder in Queensland than in Australia as a whole, with the State's mining and tourism sectors suffering slowdown, and Queensland's exposure to global markets (via minerals and tourism) is now a notable drag on the State's economy.

Those developments have already pegged labour cost growth in the State back to the national average in recent quarters, as seen in Chart 10.3.

Chart 10.3: Queensland general labour cost growth



Economic growth in Queensland is projected to be notably slower over the next 18 months to what has been achieved since 2002, with the focus of the slowdown shifting as the State suffers an anticipated fall in engineering and commercial construction activity.

Access Economics expects that reduction in output growth to have implications for labour cost growth in the State.

Chart 10.3 also shows that – consequent on that slowdown in State output growth relative to Australian growth – Access Economics projects labour cost growth to slow to below 3% in Queensland over the next year. Labour costs in Queensland are then expected to grow broadly in line with the projected national average from mid-2011.

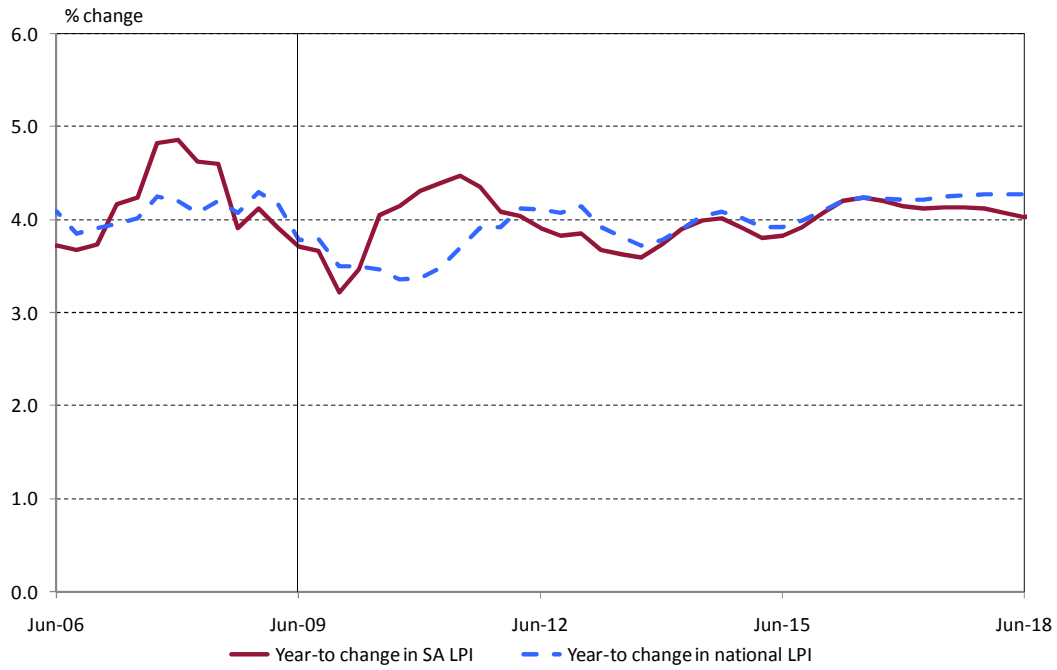
10.5 South Australia

South Australia has typically grown more slowly than Australia as a whole, held back by its slow growing manufacturing base, as well as by its slow growing (and ageing) population.

That said, the State's economy did not grow as fast as Australia during the long economic expansion since the early 1990s, and equally has not been as affected by the slowdown as other States. For example, South Australia's economy has relatively small mining and financial sectors, and hence has missed some of the negatives of the moment.

Aided by that, the South Australian economy is expected to record a solid recovery through 2010, helping the State carve out a larger share of the national economy – a break from the usual pattern.

Chart 10.4: South Australia general labour cost growth



With the State less affected by slowdown than is Australia as a whole, Chart 10.4 shows that Access Economics projects that its relative economic strength may see general labour cost growth in South Australia step ahead of the national average through to the second half of 2011, with the national average dragged down by easing LPI growth in the likes of Queensland and Western Australia.

As is true of both New South Wales and Victoria, labour cost growth in South Australia is projected to peak in mid-2011 at close to 4.5%.

Labour cost gains are then expected to return to growing broadly in line with the national average – as has generally been the historic trend.

10.6 Australian Capital Territory

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.

However, as that burst of commercial construction has slowed, so too has the ACT's economy. Yet that slowdown has not translated into an equivalent slowdown in overall LPI growth in the Territory.

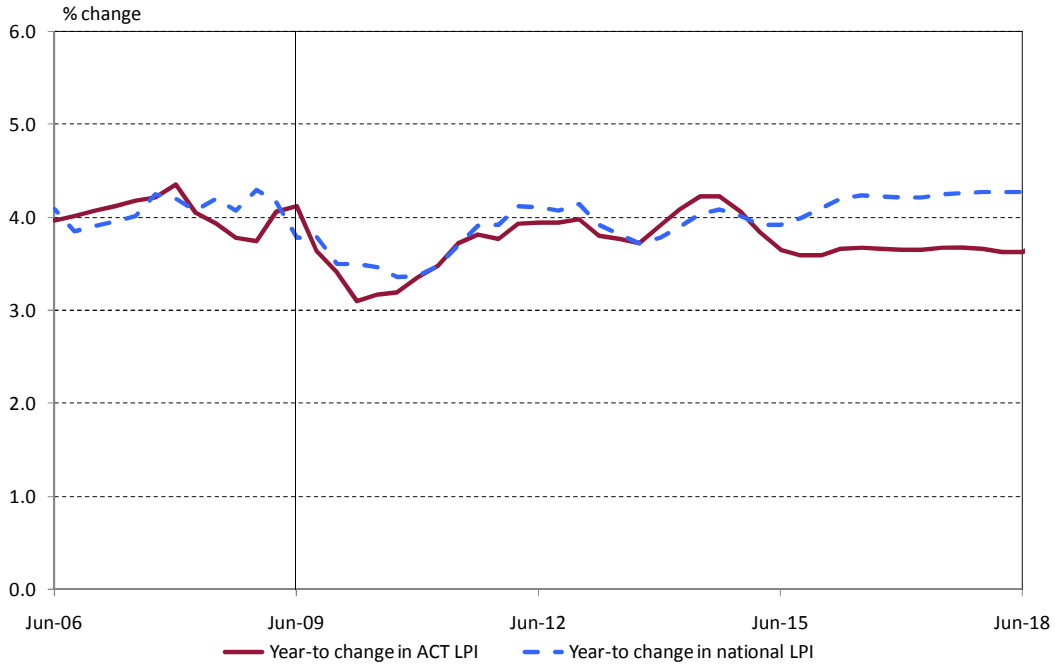
In part that is because swings in the business cycle tend to have a more muted impact on wage outcomes in the ACT than in much of the rest of Australia: general labour cost growth in the ACT tends to be reasonably steady given that a large proportion of the workforce are employed in the Federal public service.

Even so, the size of the economic downturn currently underway in the ACT – see Chart 3.9 – will have an effect on labour cost growth, with the 2009-10 Federal Budget indicating a continued desire to keep Federal labour costs under control.

Chart 10.5 shows that Access Economics expects general labour cost growth in the ACT to fall below the national average in the short term.

Labour cost growth may fall to as low as 3.1% in the ACT during 2009-10 before recovering to grow in line with that seen in the broader Australian economy in 2011.

Chart 10.5: ACT general labour cost growth



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:

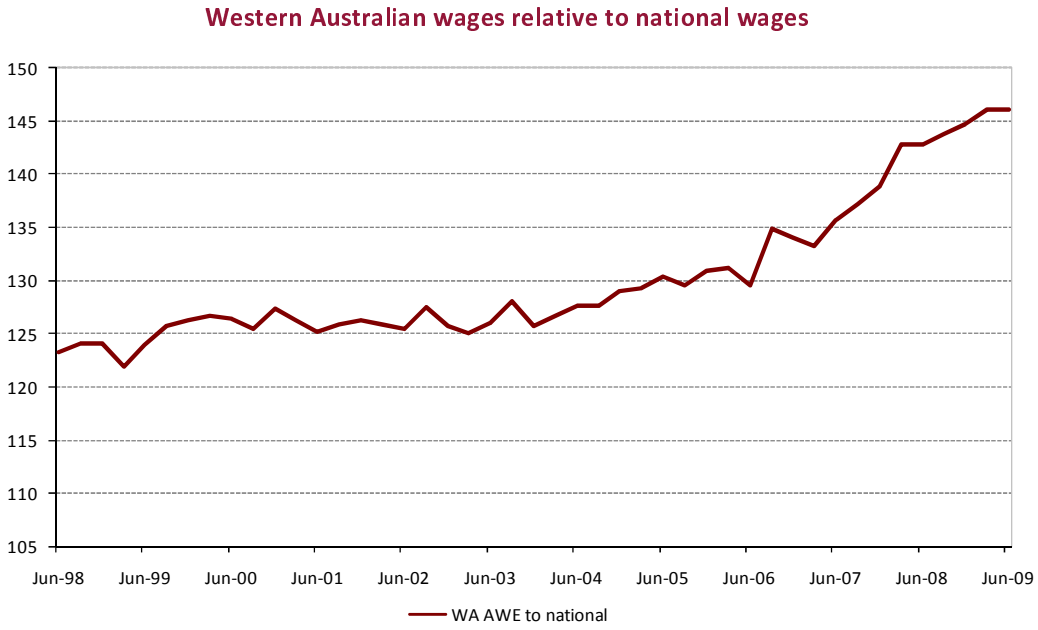
- Workers can move between and within States ("we'll leave Adelaide and try our luck in Perth").
- Workers can move to Australia from other nations:
- Permanent and temporary (visa 457) migration may be bureaucratically slow to move, but has the potential to ease a transition period.
- As do shifts by 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 less 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.


Western Australian wages relative to national wages
150
145
140
135
130
125
120
115
110
105
Jun-98
Jun-99
Jun-00
Jun-01
Jun-02
Jun-03
Jun-04
Jun-05
Jun-06
Jun-07
Jun-08
Jun-09
WA AWE to national

Appendix C: Macro economic and wage forecasting methodology

Macroeconomic forecasting

The macroeconomic forecasts presented in this report are taken from the Access Economics macro model (September 2009). The following are **excepts** from the full model documentation, which can be provided to AER on request.

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.

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:

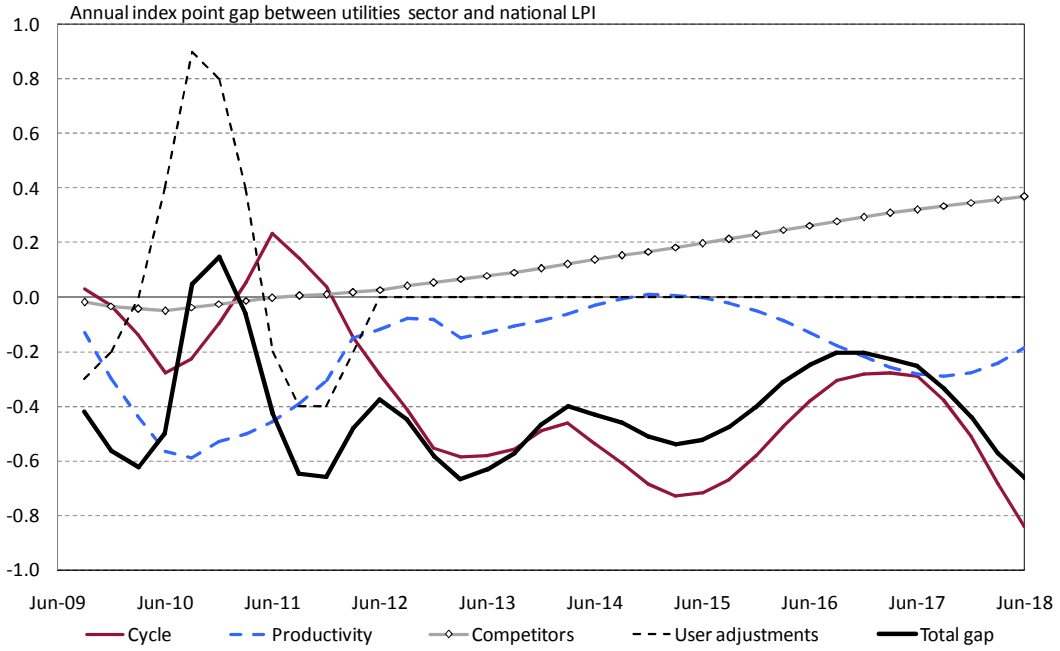
- **Business cycle factors**. Deviations in industry (or State) performance from the national average. Faster growing industries and States will tend to see faster growth in wages and vice versa. In this model, the key factor is how fast the industry (or State) is growing relative both to the national 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 that has been seen in recent years, this is view 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 factor 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 is all the low-paid workers left the industry all together – shifting the average wage towards the higher level.

Sample composition chart of sectoral wage drivers



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.

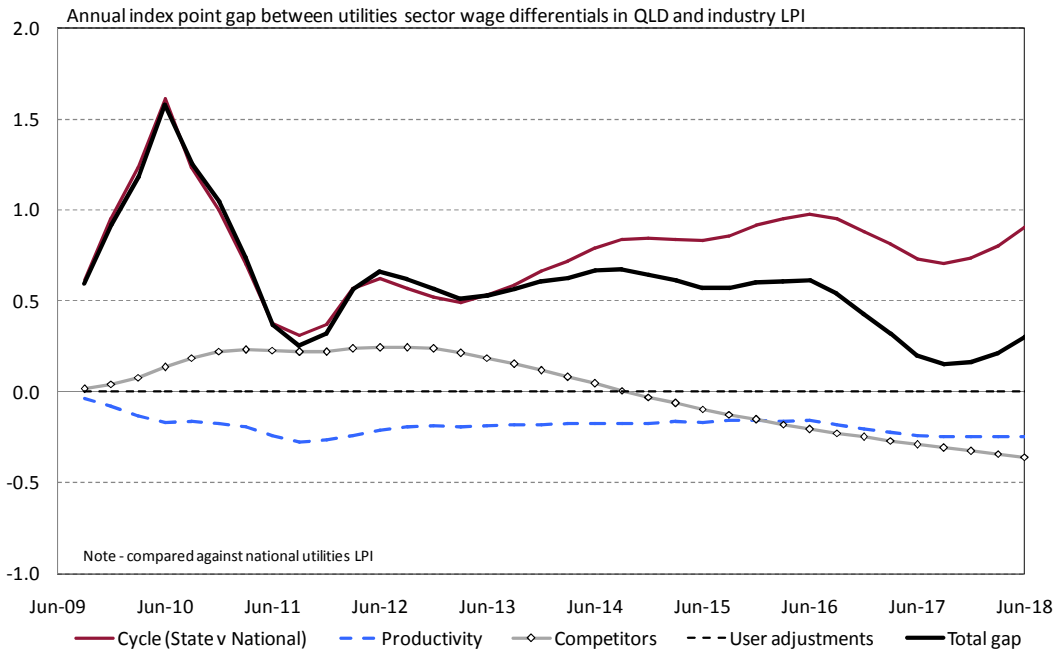
In the case of the utilities sector chart above, this indicates the following:

- Relatively slow growth in the utilities sector will result in downward pressure on sectoral wages (represented by the **Cycle** line) with that downward pressure be broadly prevalent across the forecast period; and
- A relatively weak forecast for productivity growth in the utilities sector will also put downward pressure on the LPI for utilities in the first two years, before having a slightly less negative impact in later years (the **Productivity** line); but
- The relatively slow growth in utilities sector wages implied by these first two trends means the sector will face countervailing upward wage pressure as rises in competitor sectors (mining, construction and manufacturing) tempt workers to move (the **Competitors** line);
- Because we feel that the "headline" output and productivity measures for the utilities sector will disguise some further underlying trends (such as the make up of the sector's employment base) and reflect other factors not relevant to the determination of the LPI (industry rationalisation and the like), we have also adjusted the model's initial forecast upwards in the early part of the forecast before subtracting it back later. There is also an additional downward movement in the **index**. Because this chart is a measure of annual impacts, these adjustments accumulate and disappear over four quarters giving the pyramid-like pattern shown above.

The final result of all of these effects is utilities sector LPI growth roughly in line with the national average early on, but lagging in later years.

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

- Grow relative fast as the Queensland economy outperforms the national average;
- See a marginal offset due to slower productivity growth; and
- Will initially be boosted as the Queensland LPI is currently low by historical standards, but will be constrained in the longer run as the LPI soon grows ahead of the national rate (in other words, the full advantage of the stronger Queensland economy will not be evident in the LPI as competition from other States will increase over time).

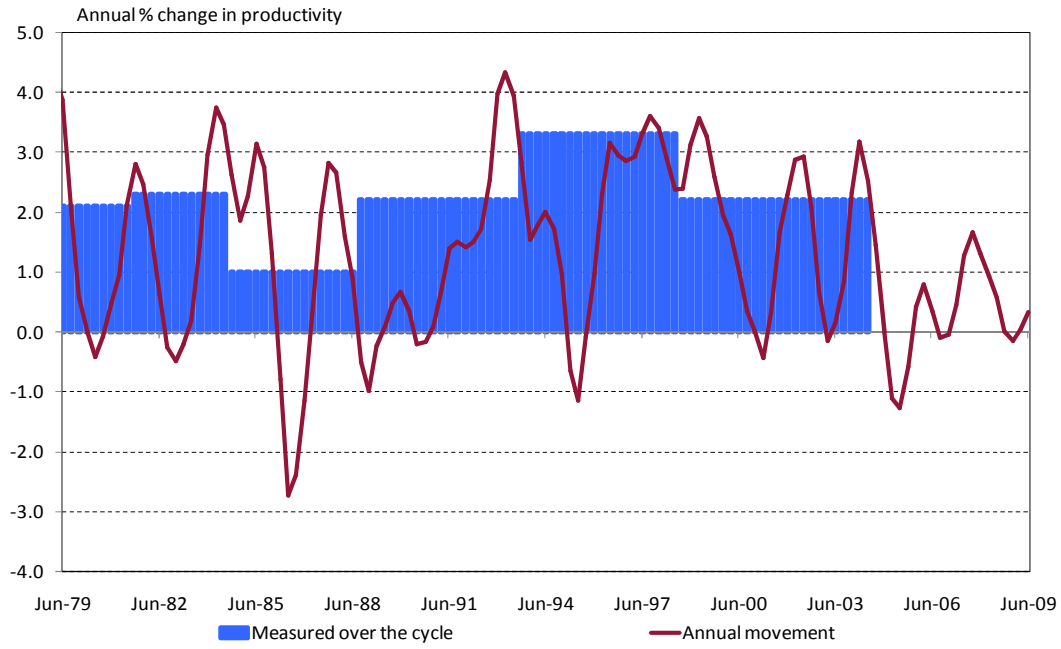


Labour prices versus labour costs

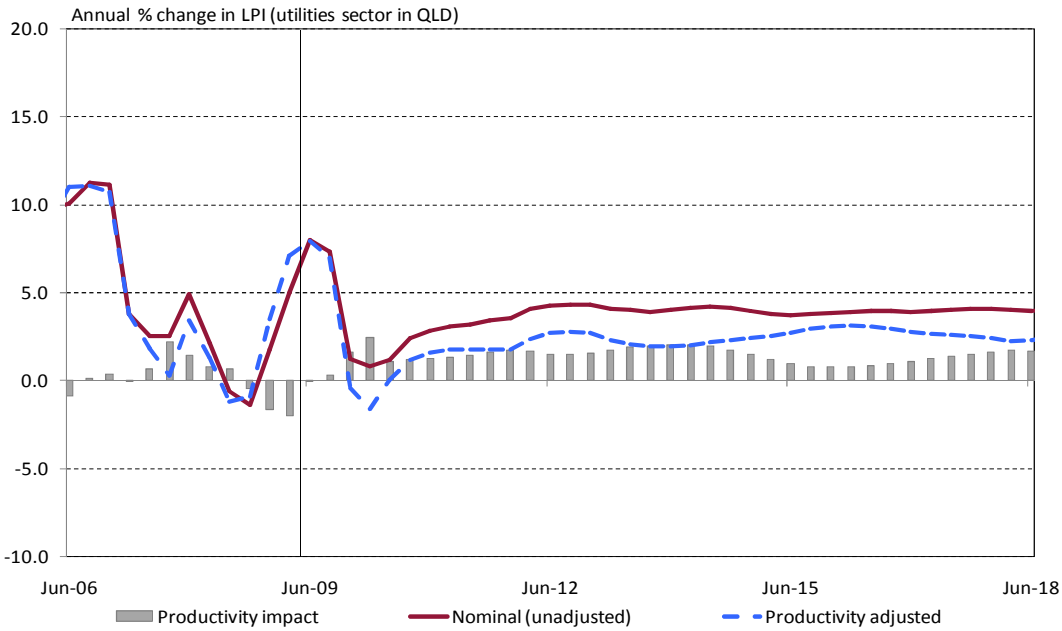
The methodology above estimates movements in labour prices – the cost of employing the average employee, whether broadly in the Australian economy, or in a specific industry in a specific State.

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 that 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 has 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).



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.



In the example above, the cyclical impact of productivity becomes more clear. Across the latter part of the forecast (from June 2012 to June 2018), the nominal (or unadjusted) LPI rises by 3.9% per year, while the rate of increase adjusted for productivity improvements is just 2.5% per year – the gap implying productivity improvements of 1.4% 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.[11] 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;

[11] 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.

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.

SUMMARY OF THE SURVEYS AND THEIR KEY SERIES

The following table 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.

	AWE Survey	EEH Survey	EEBTUM	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	Quarterly business survey.	Two-yearly business survey.	Annual household survey.	Quarterly business survey.	Quarterly national accounts series based on quarterly business surveys.
Benefits	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	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	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)

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,
- 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 Bargaining reports at www.workplace.gov.au/TrendsInFederalEnterpriseBargaining, and takes account of these in its short term forecasting if they appear likely to have a material impact.

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.

However, for the large States (NSW, Victoria and Queensland) there are only one or two sectoral series missing, which makes it possible to estimate, or 'back out', the missing sectoral indices.

For example, Victorian LPI history is provided for all sectors except the mining and communication sectors. Using these sectors' shares of employment, and the total LPI for Victoria, it is possible to obtain a reasonable estimate of the LPI for both these sectors.

In achieving this, Access Economics has placed a restriction on the estimates – if the estimated missing value results in a change greater than (or less than) 105% of the national sector change, then the national sectoral change is used in its place. This results in a much less volatile series.

Such a method of 'backing out' the missing series is not possible when there are numerous missing series, as is the case for the smaller States. However, starting values for the LPI index are provided for each State and sector. This gives relativities from which to begin the estimation.

Smaller State LPI by sector are estimated using the starting point provided by the ABS, and a combination of the State and sector LPI movements. A restriction was placed on these estimates as well. For example, the NSW mining sector started at a higher base than that for Queensland, while overall LPI in NSW has grown at a faster rate than in Queensland. This would mean that using the above methodology NSW mining LPI would also grow at a faster rate than that seen in Queensland over the last 12 years. This is thought to be incorrect, given the mining boom, and so the growth rates for NSW were restricted to not be more than the mining States growth over the same timeframe.

In some cases, estimates are unavailable for only a short period of time. In these cases (for example the LPI for construction in SA is unavailable from December 1997 to March 2000) then the missing values have also been estimated using the method described above.

ANZSIC 2006

The ABS is currently in the middle of the process of converting all the publications they produce 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.

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.

	ANZSIC93	B Mining	C Manufacturing	D Electricity, Gas and Water Supply	E Construction	F Wholesale Trade	G Retail Trade	H Accommodation, Cafes and Restaurants	I Transport and Storage	J Communication Services	K Finance and Insurance	L Property and Business Services	M Government Administration and Defence	N Education	O Health and Community Services	P Cultural and Recreational Services	Q Personal and Other Services
ANZSIC06	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
A																	
B	B Mining	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
C	C Manufacturing	0.0%	97.3%	0.0%	0.0%	0.3%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
D	D Electricity, Gas, Water and Waste Services	0.0%	0.0%	80.5%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.2%
E	E Construction	0.0%	0.6%	0.0%	92.1%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%
F	F Wholesale Trade	0.0%	0.0%	0.0%	0.0%	97.7%	1.3%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%
G	G Retail Trade	0.0%	0.0%	0.0%	0.0%	3.0%	97.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
H	H Accommodation,and Food Services	0.0%	0.0%	0.0%	0.0%	0.0%	26.3%	73.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
I	I Transport Postal and Warehousing	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	81.0%	15.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.9%
J	J Information Media and Telecommunications	0.0%	19.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	42.3%	0.0%	11.9%	0.0%	0.0%	0.0%	25.7%	1.2%
K	K Financial and Insurance Services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
L	L Rental, Hiring and Real Estate Services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%	0.0%	0.0%	0.0%	81.0%	0.0%	0.0%	0.0%	0.0%	12.1%
M	M Professional, Scientific and Technical Services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	95.9%	1.4%	0.0%	2.1%	0.3%	0.3%
N	N Administrative and Support Services	0.0%	1.3%	0.0%	4.9%	0.3%	1.8%	0.0%	9.2%	0.0%	0.9%	61.7%	0.0%	0.0%	0.0%	2.3%	17.7%
O	O Public Administration and Safety	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	5.2%	79.2%	0.0%	2.5%	0.0%	12.4%
P	P Education and Training	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	1.0%	0.0%	95.6%	0.0%	2.9%	0.0%
Q	Q Health Care and Social Assistance	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
R	R Arts and Recreation Services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	96.5%	0.0%
S	S Other Services	0.0%	4.2%	0.0%	3.9%	8.1%	31.5%	0.0%	2.1%	0.0%	0.0%	3.3%	0.0%	0.0%	1.8%	1.3%	43.9%

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.