Deloitte Access Economics

Forecast growth in labour costs: Victoria and South Australia

Report prepared for the AER

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Deloitte.

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Dear Paul,

Report for Victorian and South Australian utilities sector WPI

Our report on the Wage Price Index (WPI) for the Victorian and South Australian utilities sectors is attached.

Yours sincerely,

Chris Richardson
Director
Deloitte Access Economics Pty Ltd

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Executive Summary

Wages in the utilities sector have grown faster than the national average for wages over the past decade. That is not because productivity growth in the sector has been strong. In fact, the measured level of productivity fell in recent years. Rather, it is because a commodity boom, which first stirred back in 2003, has driven up the demand for workers in sectors such as mining and construction. As these sectors compete with the utilities sector for some types of skilled labour, that pressure from competitor sectors has been the key driver of relative wage gains in the utilities sector in Australia, including in both Victoria and South Australia.

Nor have the implications of these developments yet fully run their course. Miners can be expected to remain notable competitors for some of the same workers currently (or potentially) employed in the utilities.

Further, for the mining sector to grow fast, the construction sector has to do the same first. And the construction sector employs almost seven times the number of workers that the utilities does – thereby pointing to another key competitor for relevant skills. Finally, the utilities sector itself generated job demand for relevant skills. Although job numbers have since levelled out, the sector saw employment jump by a half in the three years to mid-2010.

Many of the above trends are linked – directly or indirectly – to the strength seen in emerging economies such as China and India over the past decade. Their good growth has underpinned demand for industrial commodities such as coal and iron ore. That sent Australian export prices to record highs relative to the prices we pay for imports, and unleashed a wave of engineering projects which have (and will) boost the demand for labour, with that increase concentrated in those sectors which compete with the utilities for some types of labour.

Yet some important changes have crept into the global outlook of late. The latest forecasts from the IMF spoke of “slumps” in trade, noted their forecasts were “gloomier”, with the major economies set to “limp”, with the global economy facing “a slow and bumpy recovery”.

And that’s just what the IMF thinks is most likely to happen. When they note the risks to that central view, they see the risk of a serious global slowdown as “alarmingly high”, while confidence is “exceptionally fragile”. Or, in other words, the IMF is perturbed, seeing not just weak global growth, but the chance that it could be even uglier still.

Deloitte Access Economics is less perturbed. However, a supply surge in commodities coincided with weaker demand from China to crunch what we thought would be two or three years of commodity price falls into two or three months of price free fall. Yet the $A hasn’t yet cycled down alongside China and commodities. And that mix – commodity prices down but the $A still riding high – means there are now headaches across many parts of the Australian industrial landscape.

For the utilities, and after what was, in relative terms, a very large surge in utilities sector employment, that sector has seen job numbers stagnate since mid-2010. That slowdown is consistent with some recent developments, including the current weakness in the housing construction cycle. It may also include a response to the uncertainty over the regulatory backdrop for the utilities sector, including carbon pricing.

Prospects for Australia

Australia's output gains in the next two years will benefit from big mining projects that got the go ahead a few years back. However, the next round of project approvals will be rather smaller than the last, meaning that the current driver of output growth – the strong bit of Australia's 'two speed economy' – won't be as strong in a couple of years.

Besides, output growth isn't how businesses and families 'feel' the economy is performing: the latter is better captured in national income growth. On that front the times are a changing. Rising world prices for iron ore and coal underwrote a lot of the gains in Australian incomes in the past decade. However, those prices have fallen through 2012, only recovering in the past month or so, and there is a risk of a pothole in economic growth in 2014-15 as the surge in mining construction finishes before rising gas export volumes hit their straps.

Prospects for Victoria

While the slowdown in China is bad for Australia as a whole, it should be relatively good for Victoria's share of the Australian economy. There have already been a number of interest rate cuts over the past year, and we expect another to come. The cumulative effect of these rate cuts will be important for Victoria – perhaps particularly so for both housing construction and retail turnover in the State. It should also help housing prices, which have fallen since 2010.

More important still will be the $A's path. The latter is still taking a toll on the competitiveness of Victoria's manufacturers, as well as its farmers and international education sector. Indeed, it is reasonable to label the $A as the main cyclical driver holding back Victorian economic growth. We forecast the $A to shed some strength in the next couple of years following the recent falls in commodity prices and interest rates. In turn, those lower exchange and interest rates are likely to help provide a significant boost to the Victorian economy.

Besides, for all the headwinds to Victorian economic growth, the latter remains reasonable. Housing construction has held up even better than expected (after some earlier weakness), while the State's population growth remains strong. The latter remains slightly ahead of national population growth rates, extending what has been an excellent run for this State.

Even so, a boost to Victorian prospects from lower exchange rates and interest rates is still needed. Although housing construction has held up better than expected , residential rental vacancy rates have lifted, suggesting that housing activity will not be the generator of growth that it has been in recent years. And an earlier bout of hospital construction (which, in turn, extended the strength in commercial construction spending that began with the Federal Government's stimulus spending) has long since run its course – though it helps the economic outlook that the State Government is looking to lift its own infrastructure spending this year. In addition, the pain from the $A is still being felt. That has left job growth weak, job vacancies shrinking, and the State's unemployment rate lifting above the national average.

That is why the pace of economic growth in Victoria is expected to ebb further in the near term, before bottoming out in early 2013. It then begins a modest and partial recovery, in part as I expect interest rates and (more importantly) the exchange rate to fall further (and that will help power the projected turnaround in Victoria's economic growth).However, while more favourable interest and exchange rates will help manufacturers, a complete turnaround in the fortunes of the State's manufacturing sector is not expected.

Prospects for South Australia

BHP Billiton recently decided that it would not be expanding its Olympic Dam mine in the near future. That decision was a disappointment. Yet Olympic Dam is still a world class resource, and sooner or later its economics will stack up. Moreover, the wider point is that the State's existing industrial make up has been on the wrong side of Australia's two speed economy (with lots of manufacturing and farming in the State, but relatively little mining and related engineering construction compared with Australia as a whole).

In that sense China's slowdown should have its eventual relative upside for this State, though to date the $A has stayed high even as commodity prices and interest rates have fallen sharply. Indeed, the key to the silver lining will be the timing of any fall in the $A. However, much of the bad news in this State in recent years has revolved around the impact of the strength in exchange and interest rates, and we project that the latter will be less of a problem in the next few years than they were in the last few. Hence although this State has lost an early boost to demand from the Olympic Dam go ahead, it is expected to gain from favourable movements in exchange and interest rates which have been weighing on some other sectors.

That said, as of today the $A is still relatively high, and the State's businesses have to deal with that. And, for the moment at least, there is little boost to the South Australian economy from the housing construction sector. In turn, weakness in housing construction is showing up as particularly weak results in the retail category of household goods: with fewer new or newly renovated homes, sales of furniture and fitting and carpets and curtains have been affected too.

On the other hand, interest rates have already been cut, and we project that the $A will stop being as big a negative as it is today. That is expected to generate a turnaround for the State. Or rather, we do see South Australia's economic growth getting worse before it gets better, but it will get better, with the lows in this business cyclical projected to come during 2013.

National wage growth

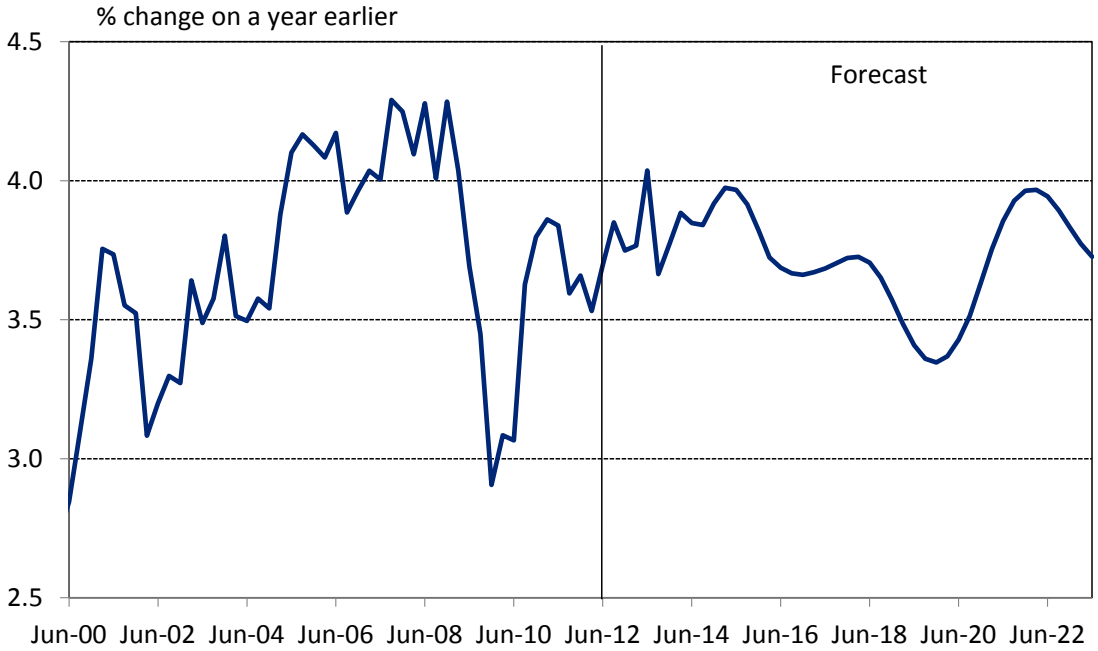
Growth in the wage price index (WPI, seen in Chart i below) recently returned close to its longer term average, with gains in the past year of 3.9% in the private sector and 3.2% in the public sector, for an overall gain of 3.7%. Pressures on State and Federal Budgets mean that it is the weakest public sector wage growth in a decade, and we project that the latter will stay low for a while.

Private sector wage growth is unlikely to gather much pace in the short term given some sectors are cutting their headcount. That remains true in manufacturing, and that sector is unlikely to be return to strength any time soon. Similarly, retailers are still shedding jobs, and remain on the defensive, while road transport is a big negative for the wider transport sector – and again likely to weigh on the short term outlook for wages. Moreover, although construction has been doing well, that is off the back of strength in engineering (a sector which is now more worried about costs than they've been for some time). Besides, the most labour intensive bit of this sector is housing construction, and housing construction activity is weak.

Finally, business surveys are suggesting that Australian employers are quite cautious on the wage front, which is not surprising amid the more modest news on profits evident of late.

Add all that together, and it's hard to see much of a sectoral spark for wage growth.

Chart i: Overall Wage Price Index forecasts



Source: ABS, Deloitte Access Economics' macroeconomic model

Yet there are some factors pointing to underlying wage pressures. In part that is because unemployment remains very low, with the pickup in the pace of baby boomer retirement generating supply side pressures on job markets even though migration has also lifted a little. In addition, some sectors are seeing more by way of industrial relations tensions.

As Chart i therefore shows, although Deloitte Access Economics sees wage growth lifting from here, we don't see it lifting by much, with the WPI projected to increase modestly from its current pace of growth to something closer to 4% in 2013-14 and 2014-15.

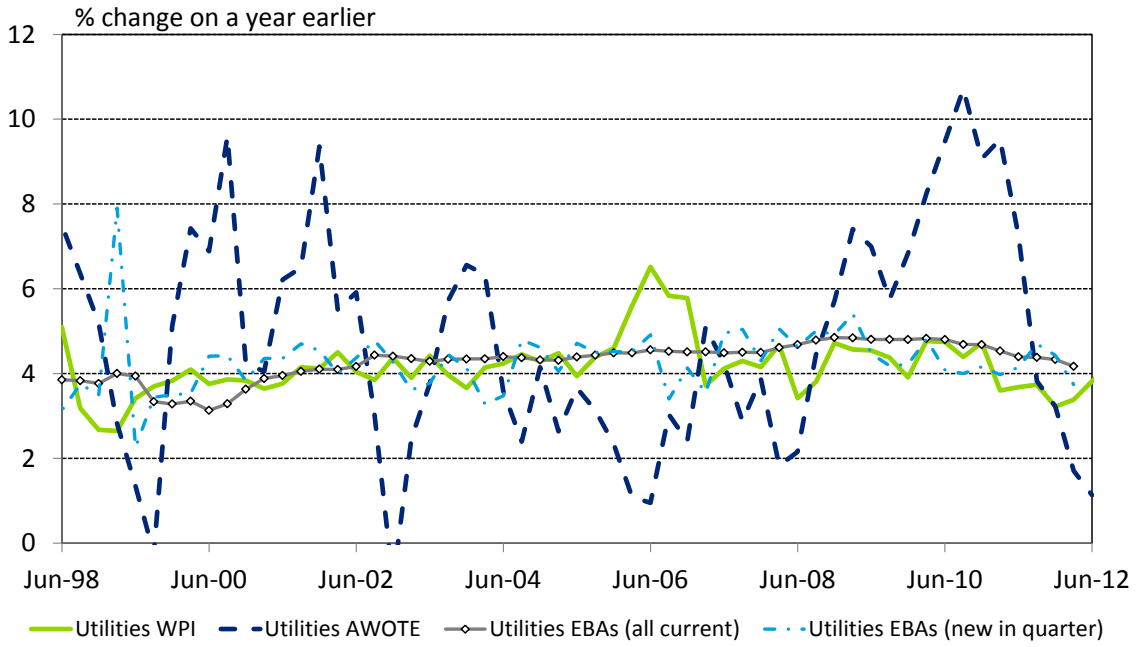
Utilities wage growth

Until recently wage gains in the utilities WPI had run consistently ahead of the national average for wage growth – or, at least, they had done so since the late 1990s, the period for which WPI data has been published. However, since March 2011, year to wage growth in the utilities has been less than that seen for the all industries average in four out of the six quarters. That said, the latest quarterly data for utilities WPI growth (for the June quarter 2012) was marginally stronger than the average, growing by 3.8% over the past year (versus 3.7% for the nation).

The easing in the relative pace of wage pressure has also been evident in enterprise bargaining agreement (EBA) wage rates in newly submitted agreements. These edged below 4% during 2012. Indeed, since 2007 neither EBA nor WPI growth has drifted much outside a range from 3%-5% annual growth, and both the EBA and WPI measures have generally trended down since a peak in early 2009, with some late 2011 strength in new EBAs now having unwound to bring that latter measure more closely in line with WPI trends (see Chart ii).

The current rate of growth in EBAs (4.2% per annum for all agreements operating at the end of March 2012, the lowest rate of increase seen for a decade, and 3.7% for new agreements lodged in the March quarter, itself the lowest increase for five years) will have an impact on utilities wage growth over the medium term – only around one in every ten agreements are re-negotiated in any given quarter, meaning a typical agreement lasts just over three years.

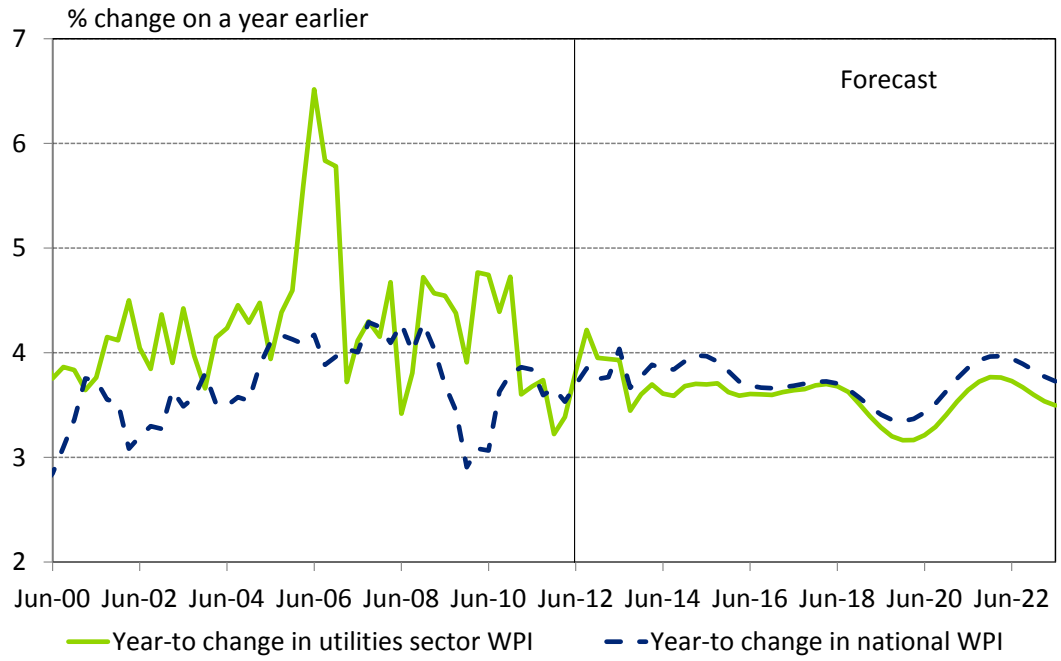
Chart ii: Measures of utilities sector wage growth



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

Looking ahead, utilities wage growth is projected to be a little above average in the short term, before marginally lagging broader national wage growth over the medium term (see Chart iv).

Chart iii: Utilities Wage Price Index forecasts

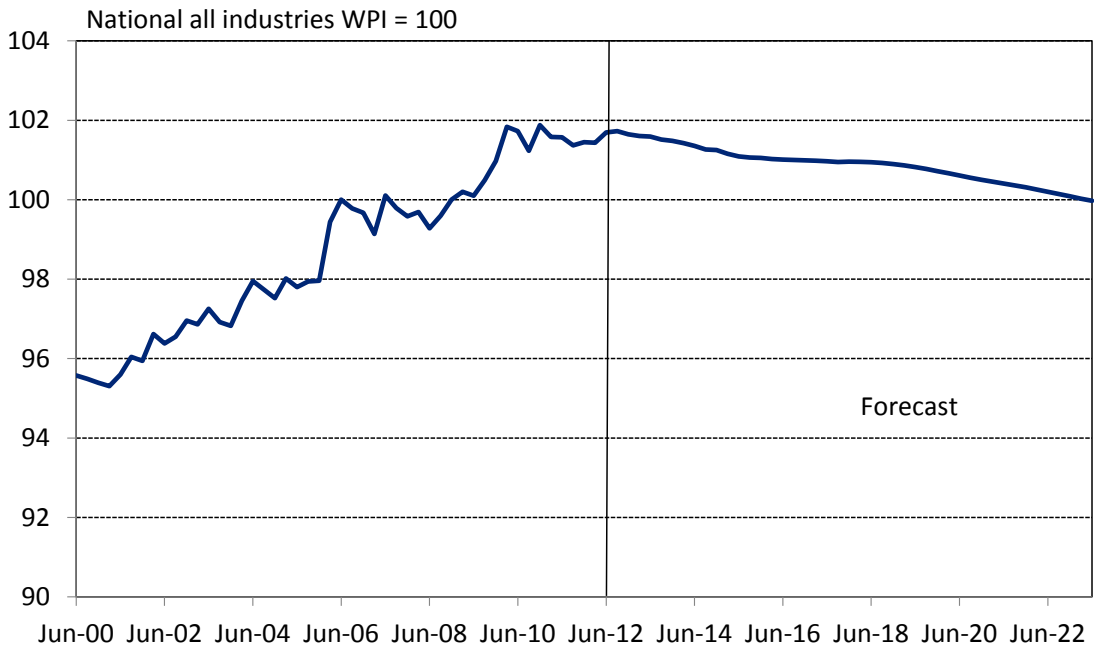


Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

As Chart iv shows, Deloitte Access Economics projects a peak in relative utilities wages. Indeed, it is arguable that the peak was reached a few years ago. This easing partly reflects a degree of unwinding of previous gains, as well as weakness in the wider utilities sector. The utilities sector itself contracted in size through 2011, though 2012 to date has seen a partial recovery. That weakness is even more notable in the electricity component of the wider utilities sector. Using trend data, the electricity sector is amid its longest and sharpest contraction in output since records began on a consistent basis in the mid-1970s. Partly in response to rapid retail price increases, electricity output levels have been falling since late 2010 – and are currently 3% below their peak – whereas the other components of the utilities sector have seen output increase over this period.

Moreover, with the outlook for some competitor sectors for workers in the utilities either still very weak (as is true of manufacturing) or at risk of easing beyond a peak in resource-related construction in mid-2014 (as is true of construction itself), some of the factors that drove a relative increase in utilities sector wages over the past decade are likely to weaken or partly unwind over the next decade.

Chart iv: The utilities WPI relative to the national WPI



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

General labour cost growth at the State level

Turning to the States, wage growth in the past year was highest in Western Australia (at 4.8%) and Queensland (on 3.8%), followed by Victoria and NSW on 3.5%; South Australia on 3.4%; and Tasmania on 3.2%.

That suggests relative movements at the industry level have been a key driver of relative movements at the State level. Growth in wages was solid across the country, but strength was more evident in the 'resource States' of Western Australia and Queensland.

Table i: State WPI forecasts

Financial year changes in nominal Wage Price Index forecasts

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
National	3.6	3.9	3.8	3.9	3.8	3.7	3.7	3.5	3.4	3.7	4.0	3.8
Victoria	3.5	3.5	3.5	3.7	3.7	3.6	3.8	3.5	3.3	3.7	4.0	3.9
South Australia	3.4	3.4	3.6	3.7	3.7	3.6	3.6	3.5	3.4	3.7	4.0	3.8

Financial year changes in real Wage Price Index forecasts

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
National	1.3	1.4	1.2	1.2	1.1	0.9	1.0	1.2	0.9	0.9	1.3	1.3
Victoria	1.1	1.2	0.9	1.0	1.1	0.9	1.1	1.1	0.9	1.0	1.3	1.4
South Australia	0.7	1.4	1.1	1.0	1.0	0.9	1.0	1.2	0.9	0.9	1.4	1.3

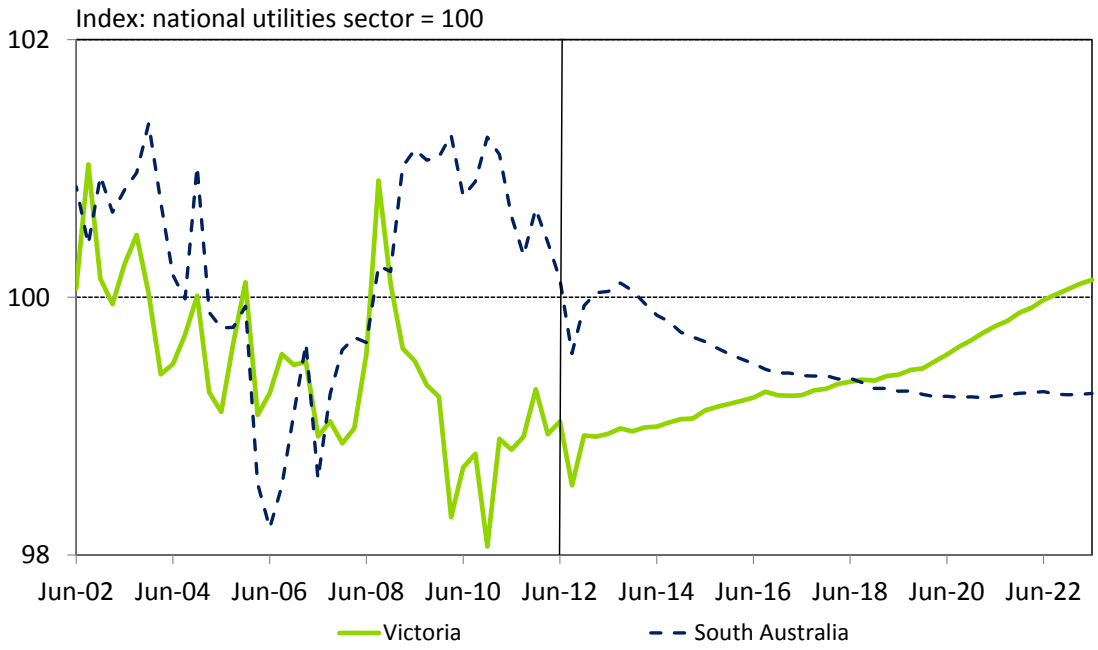
Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

At the other end of the scale, States such as Tasmania and South Australia saw their wage growth lag behind the national average consistently, caught by the relative weakness in their economies. As is true of their respective economies, wage growth in Victoria (marginally) and South Australia (more so) may lag the nation, a pattern seen in the tables of WPI forecasts above.

Utilities wage growth at the State level

There is now less information published than previously on wages by industry at the State level. **Although the ABS does release its estimates of wages in the utilities sector in Victoria, it does not do so for the matching South Australian data. Accordingly, Deloitte Access Economics has estimated wage (WPI) growth the utilities in South Australia** using a range of related data, including overall South Australia WPI wage growth, overall utilities sector wage movements, data for enterprise bargaining agreements, as well as the data published for other States. Chart v compares relative movements in State utilities sector WPIs for Victoria and South Australia.

Chart v: Relative utilities sector WPI by State



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

In this chart the national utilities index at any point in time is set to a value of 100 and the index for each State is expressed relative to that value. Both the volatility at the State level and the tendency for indices to revert towards the national average over time are evident.

In brief, the period from the late 1990s to around 2005 saw considerable strength in wage gains in the utilities in New South Wales. Wage gains among the two jurisdictions considered here were more moderate than those in NSW through to 2005, and only South Australia managed to keep pace with the mining States across the first (pre-GFC) mining boom.

In more recent times the flow-on effects from the Queensland and Western Australia mining sectors have been a more important driver of WPI growth. Utilities wages in those strong mining States has been growing rapidly, with the result that South Australia's relative utilities sector WPI has declined slightly since mid-2009. The forecast profile in Chart v shows a moderation in South Australia's relative performance across the forecast period, matching the trends seen in overall WPI measures.

By contrast, Victoria's relative utilities WPI measure rises. These patterns are partly driven by the relative strength not only of the two State economies – the general weakness in South Australia's economic growth being less conducive to maintaining the differential in wages, with the known lack of an early go ahead for the Olympic Dam expansion a new factor in this round of our forecasts – but in other States as well.

The expectation that relative WPI increases seen in Western Australia and Queensland will ebb slightly over time means that States such as Victoria will see relatively faster growth in utilities WPI than the average (even as Victoria's utilities sector WPI grows less rapidly than its overall WPI measure).

WPI/LPI

Previous reports prepared by DAE for the AER have referred to the total rates of pay, excluding bonuses series as the LPI. While this series is from the LPI publication, it is in fact a wage price index (WPI) series, and it is referred to as such in this report.

To be clear, this does not represent any change to the underlying series used in the analysis or forecasts presented in this report, but to the name of the series only.

AWOTE versus WPI

There has also been an ongoing debate as to the merits or otherwise of using AWOTE or even AWE data rather than WPI data.

The ABS has reviewed its production of AWE and AWOTE measures at the industry by State level (that is, the AWOTE for the utilities sector in Victoria). This information will now no longer be produced.

A key reason was the high standard errors for these series. In the case of the AWE/AWOTE publication, sample selection is stratified across States and across industries, but not both. That means that as the businesses in the sample change from quarter to quarter (and about 8% of the 5,000 do each time) there is no guarantee that the State by industry samples can be readily compared. This led to questionable comparability of detailed AWE/AWOTE results from quarter to quarter as the changes may be driven by changes in the sample, rather than changes in wages.

The WPI, by contrast, suffers as little as possible from this problem because its sample follows specific "jobs" over an extended period (at least five years). This limits the rotation problems that the AWE/AWOTE series suffered from.

Summary results

Summary tables of results follow.

Table ii: Summary results – key variables

Financial year changes in key variables

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Output	3.4	3.0	3.2	3.2	3.1	3.3	3.3	3.0	3.2	3.5	3.3	3.1
CPI	2.3	2.4	2.6	2.7	2.7	2.7	2.6	2.3	2.5	2.8	2.6	2.5
WPI	3.6	3.9	3.8	3.9	3.8	3.7	3.7	3.5	3.4	3.7	4.0	3.8
AWE	4.3	4.6	3.8	3.9	3.8	3.7	3.7	3.5	3.4	3.7	4.0	3.8

Source: ABS, Deloitte Access Economics macroeconomic model

Table iii: Summary results – economic variables

Financial year changes in key economic variables - Annual % change (unless noted)

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Consumption												
Private sector	3.7	3.2	2.7	2.7	2.9	3.0	3.2	3.3	3.3	3.3	3.3	3.2
Public sector	2.8	-1.5	1.1	2.8	3.1	2.5	1.9	1.8	1.7	1.5	1.5	1.5
Private sector investment												
Non-bus.housing	-3.3	-0.5	9.4	7.4	7.1	10.3	3.1	-2.7	5.9	10.5	3.6	1.7
Non-bus. real est	-0.9	1.7	9.0	6.9	6.4	9.3	2.7	-2.5	5.3	9.5	3.5	1.7
Non-res. building	13.0	6.0	2.9	3.1	-0.2	3.6	2.2	0.4	3.2	4.8	5.0	5.4
Engineering con.	53.3	10.4	1.9	1.0	-4.3	-0.7	-1.9	-3.7	-0.9	0.7	1.0	1.4
Machine/equip.	10.6	6.2	9.0	4.7	5.1	0.8	-1.0	0.9	0.6	1.7	2.1	2.4
IP and livestock	6.7	6.1	9.6	4.7	0.5	0.6	-0.9	-0.8	0.5	1.9	2.2	2.6
Public investment												
Government	-4.6	-3.2	0.6	0.7	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Public ent'prise	-5.6	31.4	5.7	1.1	0.2	0.2	-1.3	-1.2	0.0	1.4	1.7	2.1
Dom. Fin. demand	5.3	3.1	3.4	3.0	2.7	2.9	2.1	1.8	2.7	3.2	2.8	2.7
Private sector	6.7	3.9	3.9	3.2	2.7	3.0	2.2	1.8	2.9	3.6	3.1	2.9
Public sector	0.9	0.1	1.3	2.3	2.6	2.3	1.6	1.6	1.7	1.6	1.6	1.7
GNE	5.5	2.7	3.4	2.9	2.7	2.9	2.2	1.8	2.7	3.2	2.8	2.7
International trade												
Exports	3.7	8.3	6.1	4.0	3.5	8.0	9.3	8.8	7.8	7.9	8.3	8.0
Imports	11.8	7.1	6.6	2.9	1.9	5.7	3.9	3.6	5.5	6.7	6.5	6.4
Net (% add to gro	-0.7	-0.2	-0.2	0.2	0.2	0.4	1.1	0.7	0.3	0.3	0.4	0.4
Total output (GDP)	3.4	3.0	3.2	3.2	3.1	3.3	3.3	3.0	3.2	3.5	3.3	3.1
Non farm output	3.3	2.8	3.3	3.2	3.1	3.4	3.3	3.0	3.2	3.5	3.4	3.2
Employment	0.7	0.5	1.4	1.7	1.5	1.5	1.6	1.3	1.2	1.5	1.5	1.2
Unemp. rate (%)	5.2	5.3	5.4	5.2	5.2	5.2	5.1	5.0	5.0	4.9	4.7	4.7

Source: ABS, Deloitte Access Economics macroeconomic model

Table iv: Summary results – wages and prices

Financial year changes in national wage and prices variables

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
CPI	2.3	2.4	2.6	2.7	2.7	2.7	2.6	2.3	2.5	2.8	2.6	2.5
Wage price index (WPI)												
Nominal	3.6	3.9	3.8	3.9	3.8	3.7	3.7	3.5	3.4	3.7	4.0	3.8
Real	1.3	1.4	1.2	1.2	1.1	0.9	1.0	1.2	0.9	0.9	1.3	1.3
Average weekly earnings (AWE)												
Nominal	4.3	4.6	3.8	3.9	3.8	3.7	3.7	3.5	3.4	3.7	4.0	3.8
Real	2.0	2.1	1.2	1.2	1.1	0.9	1.0	1.2	0.9	0.9	1.3	1.3
Average weekly ordinary time earnings (AWOTE)												
Nominal	4.5	4.1	4.3	4.4	4.4	4.3	4.2	4.0	3.9	4.2	4.4	4.4
Real	2.2	1.6	1.7	1.7	1.7	1.5	1.5	1.7	1.4	1.4	1.7	1.8
Unit labour costs												
Nominal	2.5	1.5	2.2	2.7	2.8	2.4	2.6	2.4	1.9	1.7	2.2	2.2
Real	0.2	-0.9	-0.3	0.0	0.1	-0.3	-0.1	0.1	-0.6	-1.1	-0.4	-0.2

Source: ABS, Deloitte Access Economics macroeconomic model

Table v: Summary results – National sectoral wages

Financial year changes in nominal national industry sector WPI

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
All industries	3.6	3.9	3.8	3.9	3.8	3.7	3.7	3.5	3.4	3.7	4.0	3.8
Utilities	3.5	3.8	3.8	3.7	3.6	3.6	3.7	3.4	3.2	3.5	3.8	3.6
Construction	4.1	4.1	4.2	3.9	3.3	3.0	3.3	3.6	3.4	3.5	3.6	3.5
Administration ser	3.3	3.5	3.9	3.7	3.5	3.6	3.6	3.4	3.3	3.7	4.0	3.8

Source: ABS, Deloitte Access Economics labour cost model

Table vi: Summary results – State utilities sector

Financial year changes in nominal utilities sector WPI

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
National	3.5	3.8	3.8	3.7	3.6	3.6	3.7	3.4	3.2	3.5	3.8	3.6
Victoria	4.0	3.8	3.7	3.7	3.8	3.6	3.7	3.5	3.3	3.7	4.0	3.8
South Australia	3.0	3.4	3.7	3.4	3.4	3.5	3.6	3.3	3.1	3.5	3.8	3.6

Source: ABS, Deloitte Access Economics labour cost model

Deloitte Access Economics

15 October 2012

1 Background

The Australian Energy Regulator (AER) commissioned Deloitte Access Economics to provide forecasts for labour cost growth for the electricity, gas, water and waste services (utilities) industry to 2022-23 for Victoria and South Australia, as well as for Australia as a whole, for use in the ElectraNet and Murraylink transmission determinations.

Specifically, AER requested:

- Forecasts for both South Australia and Victoria WPI for the period 2013-14 to 2022-23, both adjusted for productivity change and unadjusted for productivity change;
- A comparative analysis of forecast labour costs for the utilities industry with other industries that compete for utilities workers (construction and administration services); and
- Responses to any AER staff commentary on the following reports provided by DAE to AER – *DAE, Forecast growth in labour costs, Report prepared for the AER, 1 August 2012* and *DAE, Responses to BIS Shrapnel Reports, Australian Energy Regulator, 20 July 2012*.

Deloitte Access Economics' report:

- **Discusses the economic outlook**, starting with Australia as a whole (see Chapter 2), then looking at Victoria and South Australia (see Chapter 3), and then at the utilities sector (see Chapter 4), as well as the outlook for sectors which compete with the utilities sector for workers (construction, administration services and mining – 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), followed by **overall rates of WPI growth at the State level** (see Chapter 7), and then an examination of wage growth in Australia's utilities sector (see Chapter 8), as well as wage growth in those sectors which compete with the utilities sector for workers (mining, construction and administration services – see Chapter 9).
- The report then discusses **detailed forecasts at the State level of wage growth in the utilities and competitor industries** (see Chapter 10).
- **The Appendices** outline the methodology used in the Deloitte Access Economics macro model and the Deloitte Access Economics wage model, a discussion of different wage measures, and a discussion of data sources and derivation.

2 The Australian economic outlook

2.1 The global backdrop

The world economy is an important backdrop to Australia's prospects.

In assessing that backdrop, it is useful to take a longer term perspective. Australia will be a longer term beneficiary of the rise of emerging Asia. Half of the world's population is undergoing an industrial revolution, which is generating a strong lift in global demand for industrial commodities. Prices of some of Australia's key exports have leapt sharply as a result.

Yet there are shorter term factors that are important here too – factors that have reduced growth in emerging economies and the globe more widely, and reduced prices for industrial commodities. The latter are now well below their 2011 peaks, though they are well above (and are expected to remain well above) where they were a decade ago.

In brief, fears for Europe have faded of late but, despite its shift to stimulus, concerns about China have intensified (while some other emerging superstars such as India and Brazil have a few problems of their own). Moreover, even if the US avoids the 'fiscal cliff', there will still be some fiscal headwinds in 2013, and those same austerity effects mean that Europe will not be recovering strongly any time soon. Add that up and it is situation normal, with global recovery continuing, but dogged by difficulties that will leave global growth below trend in 2012 and 2013.

The International Monetary Fund (IMF) released its updated forecasts on 9 October 2012.[1] In doing so, the IMF noted that its updated forecasts *"presented a gloomier picture of the global economy than a few months ago, saying prospects have deteriorated further and risks increased. Overall, the IMF's forecast for global growth was marked down to 3.3 per cent this year and a still sluggish 3.6 per cent in 2013"*.

The latter is, of course, a global view. The IMF further noted its view that *"World trade slumps, hurting emerging markets, developing countries"*, and this element of the forecasts – the risks to *"emerging markets, developing countries"* poses particular problem for the Australian economic outlook given our reliance on export earnings from products sold to China and other emerging economies.

Deloitte Access Economics' view on several key nations follows.

Job growth in the **United States** has flattened, keeping unemployment near 8%, while consumers have become a bit more cautious, joining businesses whose investment appetite is still relatively poor. Hence economic growth remains modest. On the other hand, there are positives such as cheap energy prices stemming from new gas supplies, while what looks to be a bottom in housing prices and construction activity will also help, as will another round of stimulus from the Federal Reserve. Economic growth in the United States is expected to lift in 2013 as a result, but the increase in growth may be limited by an expected fiscal contraction as

[1] See http://www.imf.org/external/pubs/ft/survey/so/2012/RES100812A.htm

earlier stimulus spending winds down, as do earlier measures such as the payroll tax cut and extended unemployment benefits.

Japan's debts and deficits are a concern. In the past two decades Japan's economy grew by an average of just 0.7% a year, and that period of stagnation saw its government debt climb fast. The latter is well above that in the rest of the rich world and, relative to the size of its economy, even well above that of Greece. The outlook for Japan's deficit is a concern because the population is ageing fast, which will mean fewer workers per retiree, while politicians have avoided much-needed reforms. To date the true cost of Japan's profligate ways has been hidden by the 'willingness' of insurance companies and families to own low yielding government bonds. However, as Japanese savings dry up relative to the size of government debt, foreigners will be needed to buy it instead. Yet foreigners may be rather less willing to get very low rates of return on their money. So over the next decade, Japan will need to reform its economy, as well as cut government spending and lift taxes.

Concerns about **Europe's** prospects have diminished recently. That is largely because of recent actions taken by the European Central Bank (ECB), such as the decision to provide Europe's banks with cheap funding. Those loans – made in late 2011 and early 2012 – notably reduced the risk of banks going bust. The ECB has also moved to keep the cost of borrowing by sovereign governments out of 'crisis pricing' territory. Additionally, businesses (especially banks), families and governments have now had more time to plan and be prepared for a crisis situation such as an exit by some nations from the Eurozone. The latter is still possible: while risks of a Eurozone crisis have receded, they still remain real. Moreover, underlying problems remain which will act as a drag on growth. In particular, troubled nations within the Eurozone may well have to face years of austerity until their wages and other costs drop back into territory which makes them relatively more competitive than they are today.

Growth in **China** has slowed, and it is not yet clear how much of that slowdown is cyclical. China's 2009 stimulus led to artificially strong growth in recent years, boosting construction in particular. China may have built 'too much' infrastructure and too many apartments as a result, and while demand will eventually catch up to recent surges in supply, there's a risk that China's slowdown will continue to linger. Chinese growth may also slow as it attempts to rebalance its economy away from export-led growth to domestic demand. In the meantime, although the new round of stimulus is smaller than that of early 2009, there's enough stimulus to put a floor under commodity prices and activity. Growth is forecast to be slightly above the official target of 7.5% in 2012, although indicators such as electricity production, train freight, factory output, oil imports and steel and related commodity prices suggest slightly weaker growth this year than the official statistics may otherwise indicate. Growth may lift closer to 8% in 2013 as infrastructure investment lifts.

Much of the rest of the emerging world is in slowdown – including **India**, **Brazil** and **Turkey**. The slowdown in China is also being felt in other Asian economies. As a result, Asian economies such as **Korea**, **Taiwan**, **Hong Kong**, **Singapore**, **Thailand**, **Malaysia**, **Indonesia** and **the Philippines** are also now seeing more modest growth prospects.

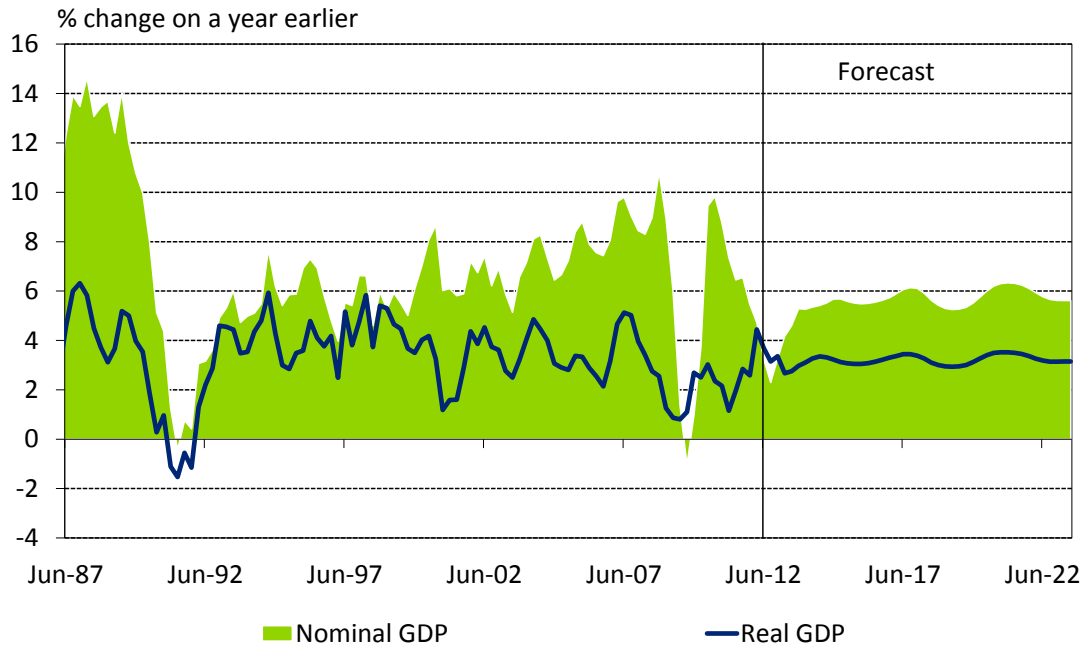
2.2 Implications for Australia

In brief, Australia's output gains in the next two years will benefit from big mining projects that got the go ahead a few years back. However, the next round of project approvals will be

rather smaller than the last, meaning that the current driver of output growth – the strong bit of Australia's 'two speed economy' – won't be as strong in a couple of years.

Yet Australia's economic growth is still good. In fact, and as Chart 2.1 shows, of late growth in Australia has been particularly strong. Moreover, that growth not only kept unemployment close to 5%, it also came with low inflation. That is very impressive, and our healthy economic performance remains the envy of many nations that we usually benchmark ourselves against.

Chart 2.1: Growth in Australia's real GDP and in nominal national income



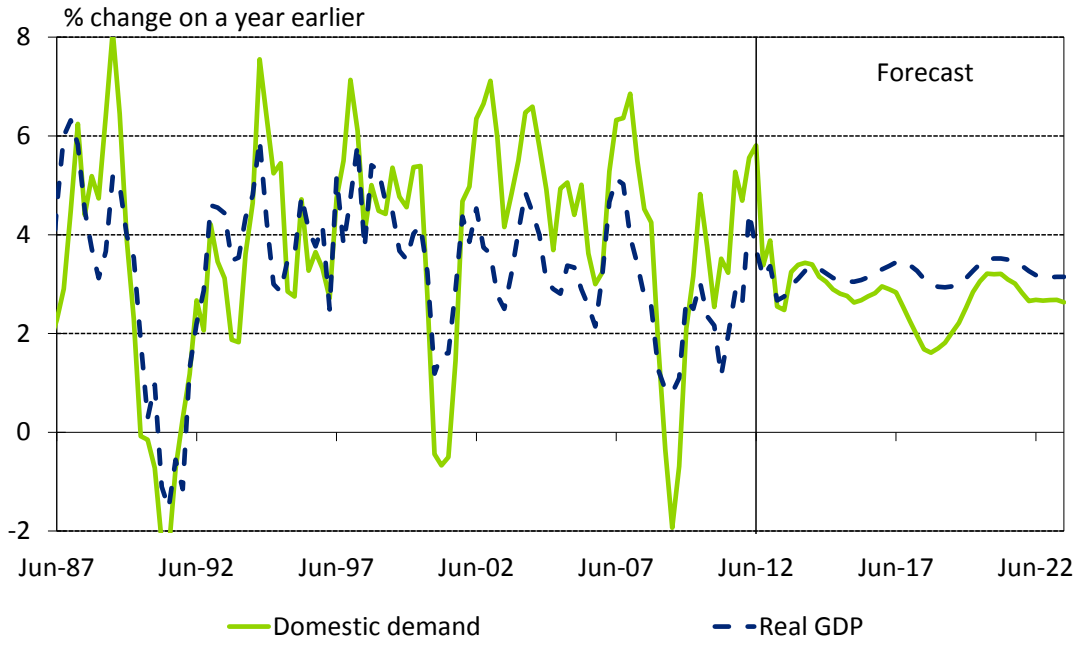
Source: ABS, Deloitte Access Economics macroeconomic model

However, the headwinds are getting stronger. As Chart 2.1 also shows, national income growth is dipping down to the rate of output gain: something it rarely does (and hasn't since the global financial crisis). That is set to occur as it's been an ugly few months.

Concerns around what could happen in Europe may have faded, but what actually has happened in China proved an even bigger problem. Australia has slipstreamed China's commodity hungry growth for years, but the combination of a faltering in the pace of Chinese demand at the same time the world's miners had finally begun to deliver a significant level of extra mineral supply has led to a fall in commodity prices.

There are only a few drivers of prosperity: more workers (via gains in population and participation), more effective workers (via improved productivity), and/or the world giving us a pay rise (via a shift in the relative price of what we export versus what we import). Recent decades saw us achieve a good productivity performance, culminating in some strong gains during the 1990s. But our performance since then has been pretty woeful. Luckily the prosperity baton got handed from poor productivity gains to rising world prices for our exports.

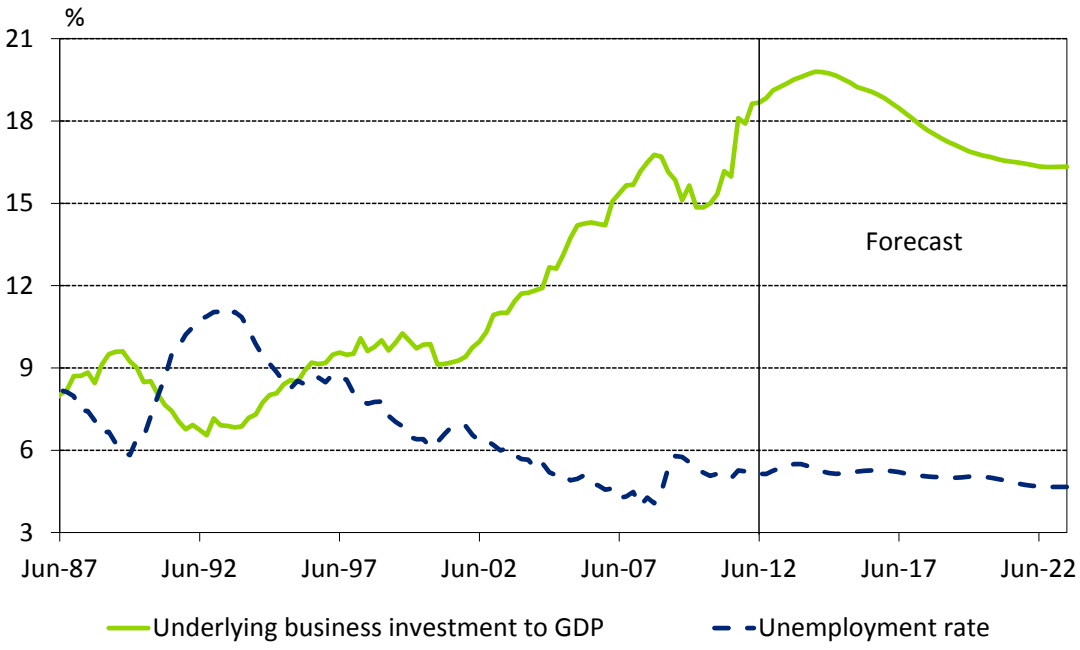
Chart 2.2: Domestic demand and supply (GDP)



Source: ABS, Deloitte Access Economics macroeconomic model

Yet now this latter source of prosperity is also entering tougher times, and that's a problem. There are also further risks ahead. Although it's not what we think is most likely to happen, it is worth noting that the consensus view of a relatively rapid rebound in China and in its insatiable demand for commodities is a bit too sanguine – it may well not turn out to be that easy.

Chart 2.3: Business investment and the unemployment rate



Source: ABS, Deloitte Access Economics macroeconomic model

Or, as the Treasurer recently put it, the "easy yards" in benefiting from China's boom may already be behind us. Australia needs a new driver of its prosperity. In particular, Australia needs a new driver of economic growth. The resource-related construction boom is likely to peak in 2014, and the last few months have seen the top of the coming upswing being trimmed even further back (though it is worth noting that it really is just a 'trimming back' and not a more severe downward revision).

Australia could never have managed to do all these projects at once anyway. And although some key projects have disappeared out of the likely pipeline, much of the surge in resource construction spend underpinning the gains in business investment in Chart 2.3 above will be going ahead almost regardless of developments in commodity markets. That is because the big dollar impact here is via gas projects, and the latter are founded on 20 or 25 year price contracts linked to the oil price. That should allow the gas developers to look through the ups and downs of the moment.

Business investment spending on increasing future production capacity may have generated all of the economic growth in Australia last financial year, but as the climbing spend mapped out in Chart 2.3 switches to a less vertical rate of advance, we see business investment spending providing 'only' half of Australia's economic growth this financial year. By 2013-14 this will be pretty neutral, and thereafter what is currently the biggest single driver of economic growth in Australia will actually be acting as a brake on Australia's future growth.

Hence, the strong bit of Australia's two speed economy won't stay as strong as it is today. Moreover, the nation risks something of a "2014-15 gap in growth", a period when resource-related construction is already tapering off but the full force of the surge in export volumes is yet to be felt. That's not the end of the world: chances are that growth will be backfilled by a weakening $A. There may also be better news in some parts of retail spending at that time too.

There's a silver lining. The more careful miners here and around the world are with their capital, the slower mineral supply will grow in coming years. Other things equal, that means the higher commodity prices will be. Although we don't believe commodity prices will be surging, a slowing pace of mining development globally will actually assist with the longevity of national prosperity. This is indeed a case where 'less is more'.

After all, Australia has enjoyed the sweet spot of high prices for our commodities ever since emerging Asia got its act together the better part of a decade ago. The slower that Australia and other mining provinces around the world increase mining capacity, the greater the lingering price benefit of the lift in demand from Asia will be. Or, in other words, the supply surge that's already underway was always at risk of ending the boost from high commodity prices that's benefited Australian businesses and families in recent years. So slower mining development is arguably actually more good news than bad, even if chances are that it will never be recognised as such on the front pages.

2.3 Is the mining boom over?

The longevity of Australia's mining boom is one of the most topical issues related to Australia's economic outlook. As it is an important backdrop to the AER's deliberations, it is worth considering here.

In brief, the mining 'boom' can be measured in three ways: via commodity prices, via the strength of resource-related construction, or via resource-related export volumes.

On industrial commodity prices, it is unlikely that the world will ever see anything like the prices seen in 2011 ever again – or at least not for a very long time. They were the product of a mix of factors (demand kept being stronger for longer, while supply kept being delayed or disrupted). But prices have already passed their peak. The good news is China's stimulus spending has been boosted by central bank action in the US, Europe and Japan, helping commodity prices stabilise. Yet the bigger picture has already changed. Industrial commodity supply is now rising faster than the matching demand, and the underlying price trends will now be downward. That still leaves industrial commodity prices looking very strong compared to where they were as recently as a decade ago, but it won't see them return to anything like their 2011 peaks.

On the second measure – the impact of the 'boom' **on resource-related construction** – the best is yet to come. Yet that's due to decisions that were made a couple of years ago, and is also aided by the fact that much of the coming boom in the construction spend is tied to gas developments (which in turn are linked to prices that have been cemented in with 20 or 25 year contracts – and hence are at little or no risk of being spooked by a slowdown in China). The peak of the resource-related construction may occur earlier than we have forecast. There are some good forecasters – including the Reserve Bank itself – who expect the peak in resource-related construction to come as early as next year. Either way, although this measure of the boom gets better before it gets worse, you can now clearly see the peak, and that means that Australia's largest single engine of growth is throttling back already, and will start to be applying brakes to Australian prosperity within two years. And although construction won't fall too far or fast, it too is unlikely to return to the highs currently forecast for 2014.

Finally, as construction eases, **gains in export volumes** will help provide an offsetting effect. But much of the surge in export volumes is projected to come in 2015 and beyond, which means Australia may still face a tricky change in growth gears in a couple of years. Many people believe that rising export volumes will easily fill the hole left by retreating commodity prices (which of themselves will knock one percentage point off national income growth this year alone) and slowing resource-related construction. That isn't right – the coming gains in export volumes will offset investment (that is, construction) losses. However, that means the losses in export prices aren't being offset. That is important because, just as the soaring commodity prices of the past decade have boosted Australia's national income, their recent falls will cause a degree of economic pain via losses in national income.

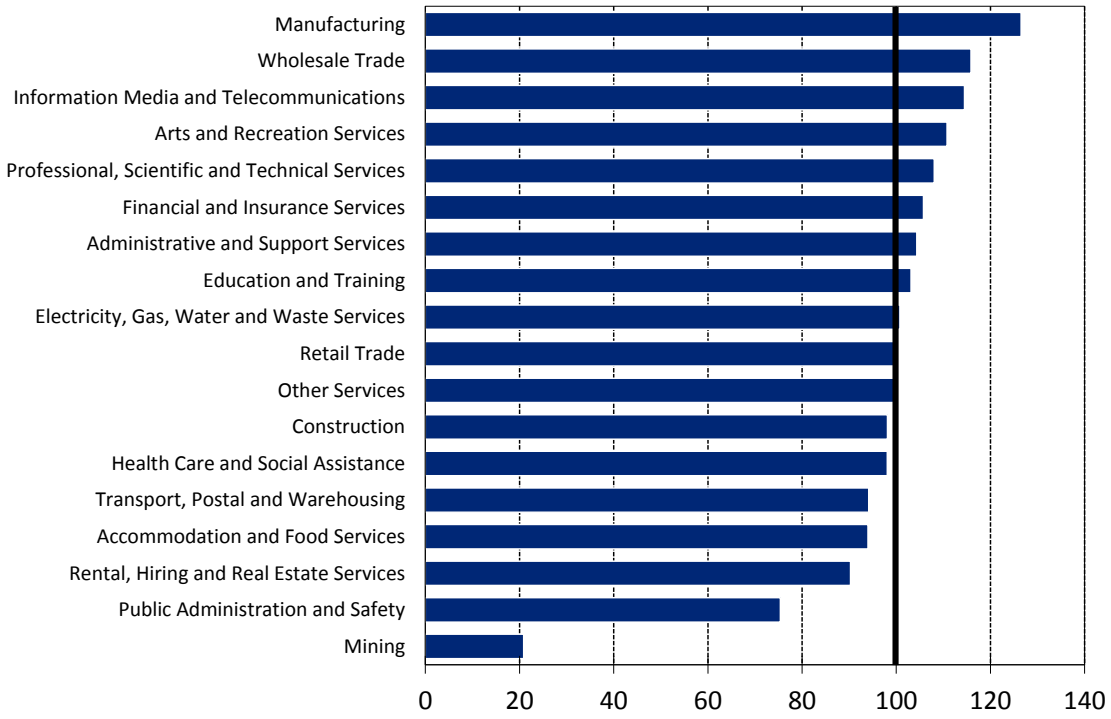
To summarise, the best part of the mining boom – the rise in commodity prices – has already passed its peak, and the key driver of Australian growth at the moment – resource-related construction – is less than two years from a similar peak. That doesn't mean the boom is 'over', but it does mean the boom is already less of a positive, and that it has embarked on a trajectory that will see those gains further eroded in the next few years. Australia will still be much better off than those rich nations without a big mining sector, but the story is changing.

3 State economic outlooks

3.1 Victoria's economic backdrop

Chart 3.1 ranks the relative intensity of employment in Victorian industries against that seen nationally.[2] If an industry ranks above the 100% line, it accounts for a relatively higher share of the State employment base compared to nationally.

Chart 3.1: Ratio of Victorian employment shares to national industry shares – 2011-12



Source: ABS, Deloitte Access Economics

Sectors which stand out for their relatively strong representation in Victoria include:

- **Manufacturing**, in particular transport equipment manufacturing and paper manufacturing. Both of these sectors have struggled in recent years – automotive manufacturing has shed around 40% of jobs since 2005.
- **Wholesale trade**, partly a result of the State's agricultural production, partly due to the downstream wholesaling of the State's motor vehicle production and also due to imports via the Port of Melbourne.
- **Information services**, with the State accounting for a high share of telecommunications sector workers thanks in part to the location of Telstra's headquarters.
- **Arts and recreation services**, helped by Melbourne's reputation as Australia's cultural and sporting capital, but also due to Crown Casino.

[2] These figures, like the WPI, exclude agriculture from the measure of employment

It is worth noting that while Victoria has a similar share of financial services employment to that of the nation as a whole, Melbourne has made considerable gains in market share at Sydney's expense over the past decade.

Sectors which stand out for their relative lack of representation in Victorian employment include:

- The **mining** sector. That does not mean Victoria hasn't benefited from the mining boom – just that those benefits do not show up in direct employment in that sector; and
- **Public administration**, primarily due to the concentration of this sector in Canberra.

This industrial structure is an important backdrop to these proceedings. Other things equal, it says that Victoria's economy has been relatively more exposed to the 'two speed economy' pressures of recent years than has been true of the Australian economy as a whole.

In brief, the discussion above implies that **Victoria is relatively over-represented in sectors on the wrong side of 'two speed economy' pressures** exerted through strength in the $A and in interest rates (or, more correctly, interest rates here versus those in other developed nations). Victoria's particular strength in manufacturing is a good example.

Equally, **Victoria is relatively under-represented in sectors on the right side of 'two speed economy' – in effect those for whom China has been a bigger customer than it has been a competitor**. Victoria's notable weakness in mining is a good example.

In particular, the continuing strength of the $A (even though industrial commodity prices and interest rates have fallen) places the State's key industries under pressure. The $A's strength poses problems for manufacturers (food, clothes, wood and paper, plastics and chemicals), as well as for tourism operators and education providers, and for farmers.

Victoria has an above-average share of industries adversely affected by a strong $A (manufacturing, agriculture, higher education) and by relative strength in interest rates (housing construction and the retail sector).

Indeed, the $A has been at or near parity with the $US for close to eighteen months now. If the jump to parity was expected to be just a short-lived phenomenon, then many manufacturers could simply consider it as short term profit pain rather than a longer term threat to business viability. However, the $A's stay in and around parity with the $US has lasted a while, and more and more manufacturers are wondering whether they can keep going with the struggle against keenly priced import competitors.

This issue has been labelled by some commentators as a 'two speed economy' effect or 'the Dutch disease'. This says that in an economy with limited supplies of labour and capital, a surging resources sector pushes up the $A and makes life hard for manufacturers and other trade exposed sectors – those sectors must shrink (at least in relative terms) in order to allow the resources sector to expand. Other assorted side effects of the resources boom – including higher than otherwise interest rates, and higher than otherwise input prices – also weigh on the outlook for these sectors.

Structural adjustment driven by the resources boom has already been occurring over the last few years. Mining has expanded its share of the national economy relative to other industries, with recent analysis by the Reserve Bank and the Federal Treasury showing that the pace of

structural change has picked up in recent years (although structural change has always been occurring, and isn't a new phenomenon). Their analysis finds that this is especially true in terms of nominal output and investment.

That said, industrial commodity prices have already fallen notably in recent months, and they may ease further over the longer term as global supply catches up to demand. The $A is also expected to decline closer to more historically normal levels over time. This would provide relief for some trade exposed sectors, but is not projected to be imminent.

While the resources boom has some clear negative effects for non-resource rich States such as Victoria, it also brings benefits to the State. By making imported goods cheaper, the higher $A has significantly boosted the real income of households and businesses across Australia, including in non-resource States such as Victoria. This allows for increased spending (or saving) by households and businesses. Meanwhile, some business services provided to the mining industry are provided from outside the mining States, and the expansion of the mining industry increases the demand for those services; this is especially true for Victoria, as the head offices of several large mining companies are located in Melbourne. The profits of mining companies are distributed to resident shareholders across Australia (who also see a boost to their wealth from expectations of future profitability which increase mining company share prices); mining company profits are also taxed by the Federal Government, which spends across Australia.

These beneficial effects of the resources boom for the non-resource States have been observed over the past few years. While resource rich States such as Western Australia have outperformed in terms of output and population growth, non-resource rich States such as Victoria have experienced solid economic growth.

In particular, since the resources boom commenced in 2003, Victoria has experienced solid real household income growth, and employment growth, while its unemployment rate has declined. Indeed, Federal Treasury analysis shows that the spread of unemployment rates across States declined during the first phase of the current resources boom.

3.2 The outlook for Victoria's economy

This two speed split in Australia's economy has been evident for some time. However, the speed and extent of the slowdown in China will have differing impacts across States. While it is unambiguously bad for Australia as a whole, it should be relatively good for Victoria's share of the Australian economy.

There have already been a number of interest rate cuts over the past year, and we expect one more interest rate cut to come. The cumulative effect of these rate cuts will be important for Victoria – perhaps particularly so for both housing construction and retail turnover. It should also help housing prices, which have fallen since 2010.

More important still will be the path of the $A. The latter is still taking a toll on the competitiveness of Victoria's manufacturers, as well as its farmers and international education sector.

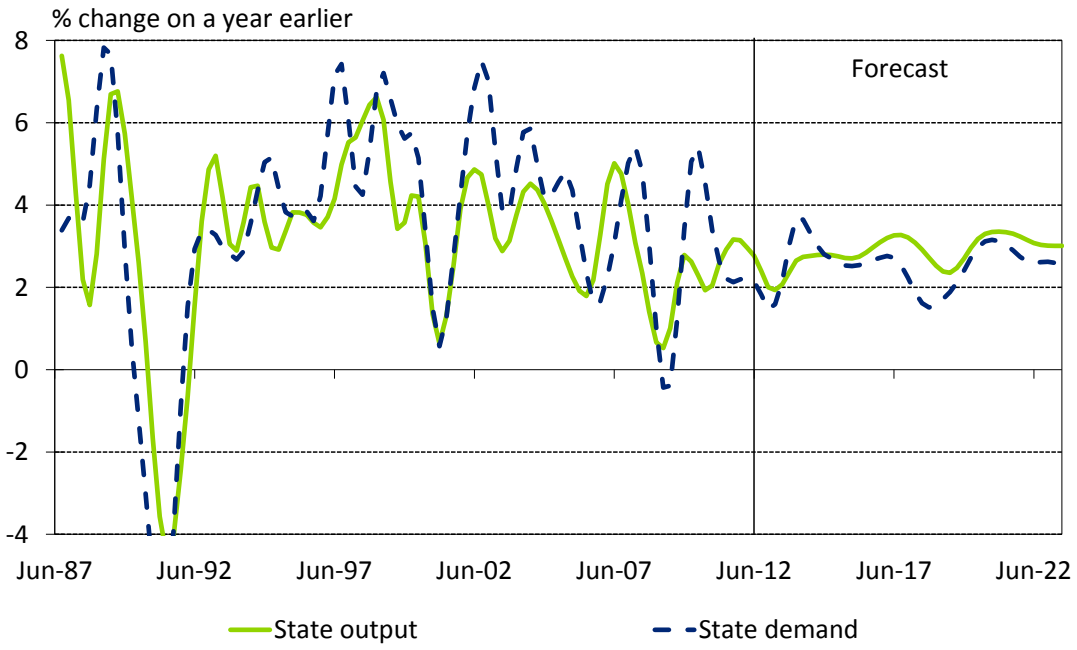
Indeed, it is reasonable to label the $A as the main cyclical driver holding back Victorian economic growth.

We forecast the $A to shed some strength in the next couple of years following the recent falls in commodity prices and interest rates.

In turn, those lower exchange and interest rates are likely to help provide a significant boost to the Victorian economy.

That said, for all the headwinds to Victorian economic growth, the latter remains reasonable (see Chart 3.2 below). Housing construction has held up even better than expected (after some earlier weakness), while the State's population growth remains strong. The latter remains slightly ahead of national population growth rates, extending what has been a truly remarkable run for this State. Even inbound tourist numbers have been reasonable, helping to underpin good occupancy rates in Melbourne's hotels.

Chart 3.2: Victorian State output and demand (change on year earlier)



Source: ABS, Deloitte Access Economics macroeconomic model

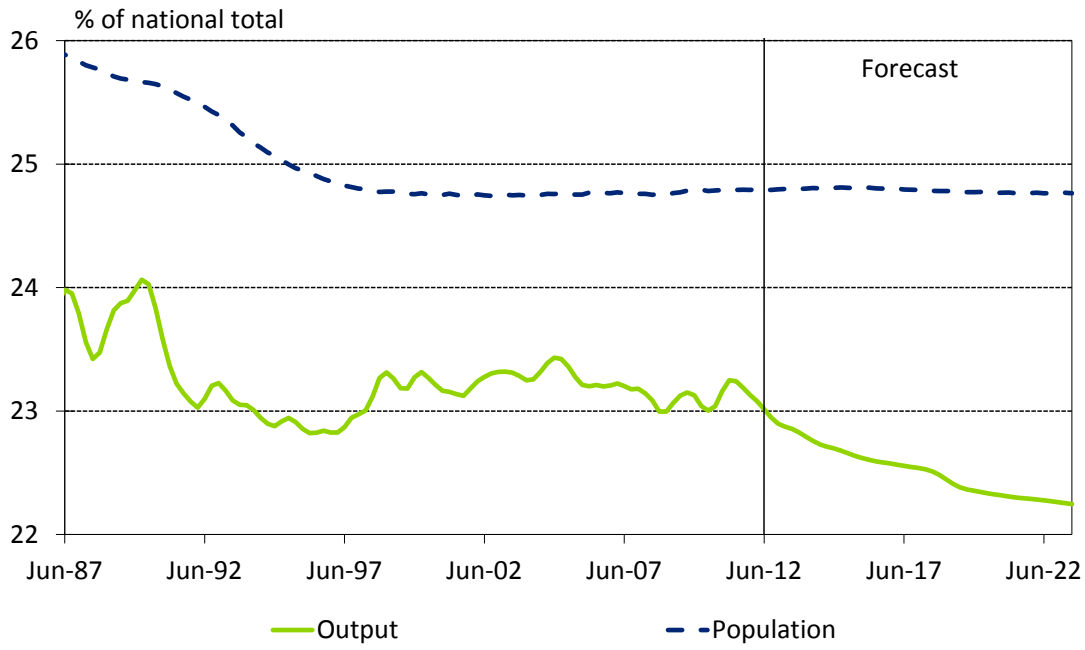
However, a boost from lower exchange rates and interest rates is still needed. Although housing construction has been better than expected in Victoria, residential rental vacancy rates have lifted, suggesting that housing activity will not be the generator of growth that it has been in recent years. And an earlier bout of hospital construction (which, in turn, extended the strength in commercial construction spending that began with the Federal Government's stimulus spending) has long since run its course – though it helps the economic outlook that the State Government is looking to lift its own infrastructure spending this year.

In addition, the pain from the $A is still being felt. Some very high profile manufacturers, including car makers, have made it clear that current conditions are very difficult. That has left job growth weak, job vacancies shrinking fast, and the State's unemployment rate lifting above the national average.

In addition, both consumer and business sentiment are particularly weak in Victoria. That lack of confidence is weighing on spending by families (with retail sales slower than their national

equivalent) and on business investment spending (which matched the strength seen in the rest of the nation through to mid-2010, but has since been left behind by the acceleration in the mining States).

Chart 3.3: Victoria as a share of national totals



Source: ABS, Deloitte Access Economics macroeconomic model

That is why the pace of economic growth in Victoria is expected to ebb further in the near term, before bottoming out in early 2013. It then begins a modest and partial recovery – we expect interest rates and (more importantly) the exchange rate to fall further, and that will help power the projected turnaround in Victoria's economic growth. However, while more favourable interest and exchange rates will help manufacturers, a complete turnaround in the fortunes of the manufacturing sector is not expected.

That outlook would still see Victoria lose share within Australia in the next few years: notably so as a share of the national economy, and marginally so as a share of the nation's population. That picture is portrayed in Chart 3.6 above.

3.3 South Australia's economic backdrop

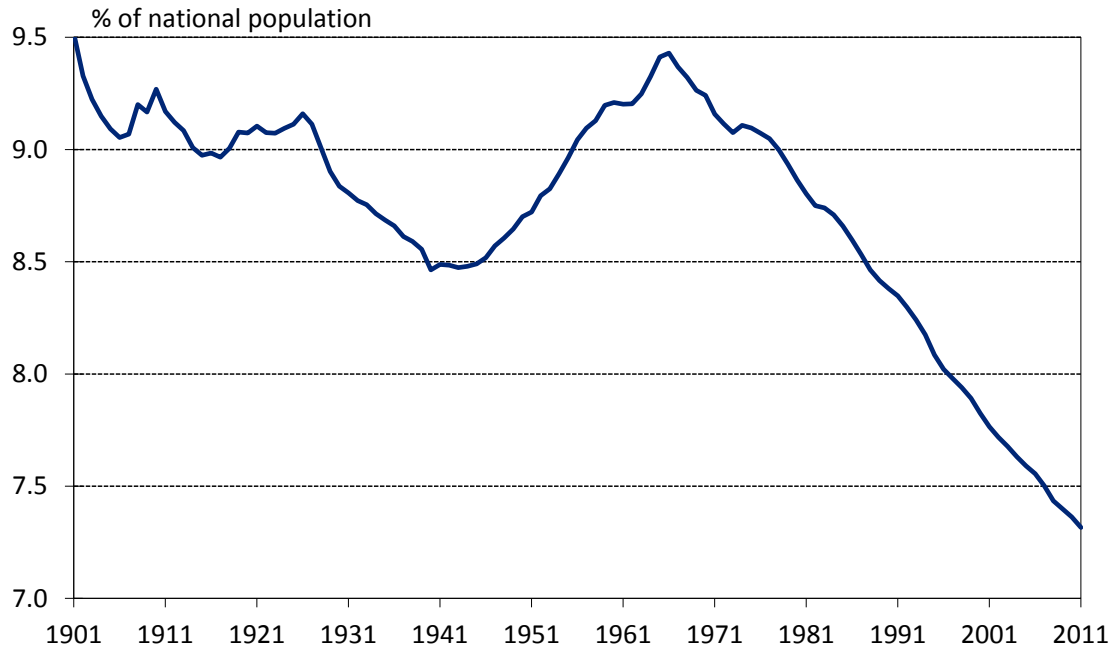
South Australia's economy expanded as a share of the Australian economy throughout the 1950s and 1960s as its strong manufacturing sector carved out a larger role.

However, once manufacturing stopped growing in relative terms, so did South Australia, and recent decades have seen South Australia accounting for a smaller share of Australia's population, as Chart 3.4 shows.

In the main that does not reflect South Australia's underperformance relative to the largest States (NSW and Victoria), but rather reflects the impact on the national average of years of strength in the resource rich States of Western Australia and Queensland.

South Australia was particularly hard hit in the recession of the early 1990s. That recession was accompanied by the collapse of some local finance companies and of the then State Bank.

Chart 3.4: South Australia's share of national population



Source: ABS

Moreover, the recession saw a particularly sharp shakeout in manufacturing, and ushered in a period of structural adjustment that led to a continuing series of job losses in the State.

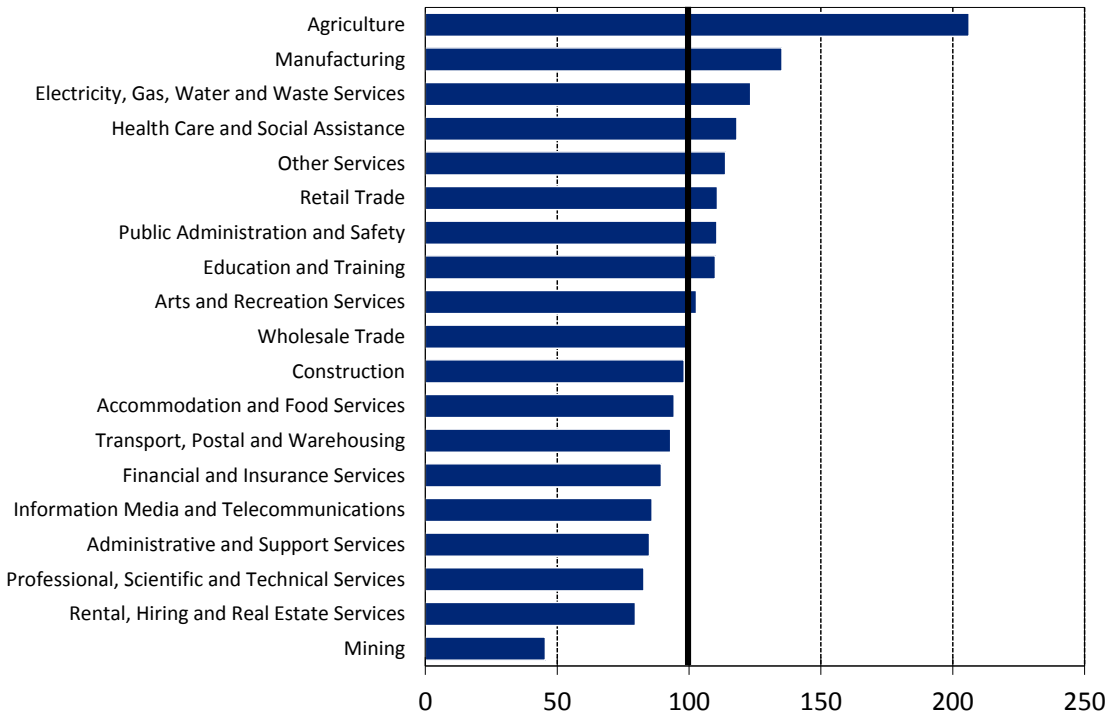
Much of the 1990s was marked by a loss of service sector jobs from Adelaide to Sydney and Melbourne, as those jobs became increasingly centralised in Australian headquarters.

However, South Australia's economy has seen a notable turnaround in recent years. In part, that reflected an end to the phase of earlier losses in service sector jobs. In turn, that led to a degree of recovery in the construction sector in the State – a recovery that saw broader growth rates for the State's output improve, meaning that South Australia has done a better job at hanging on to its share of Australia's economy in recent years, although as Chart 3.7 shows, it has not been completely successful.

In South Australia's case, it is worth noting that some of our State's relative strengths – particularly in manufacturing and the utilities (electricity, gas and water) – are not expected to face the kind of 'big bang' seen in other industries.

Chart 3.5 below shows the relative importance of each industry to the South Australian economy (as with Chart 3.1 a value of 100% indicates the industry contributes as much to the State's measure of value added as it does nationally).

Chart 3.5: Ratio of South Australian output shares to national industry shares – 2010-11



Source: ABS, Deloitte Access Economics

That chart shows that, relative to the make-up of the Australian economy as a whole, South Australia punches above its weight in sectors such as agriculture, manufacturing, utilities and health, but is relatively less reliant on mining and professional services than other States.

In brief, the State's relative strength in sectors such as manufacturing has left it closer to the firing line with respect to some drivers of structural change (such as the exchange rate).

3.4 The outlook for South Australia's economy

BHP Billiton recently decided that it would not be expanding its Olympic Dam mine in the near future. The delay in the expansion of Olympic Dam has been big news because, other things equal, that means that the outlook for State demand will be as much as $20 billion lower than if the expansion of Olympic Dam had gone ahead.

Many observers had long noted that South Australia could benefit from a larger resource sector so as to help it sell into the rapid growth in emerging Asia that is expected to be evident over the next decade or two. In effect, the hope had been that South Australia could transform its economy through a large increase in resource investment.

Therefore the recent decision by BHP Billiton was a disappointment. Yet some perspective is handy here. Olympic Dam is still a world class resource, and sooner or later its economics will stack up.

Moreover, there is a wider point worth considering. It is that the State's existing industrial make up has been a classic example of those businesses on the wrong side of Australia's two

speed economy (with lots of manufacturing and farming in the State, but relatively little mining and related engineering construction compared with Australia as a whole).

In that sense China's slowdown should have its eventual upside for this State. That will not be evident immediately because to date the $A has stayed stubbornly high even as commodity prices and Australian interest rates have fallen sharply. Indeed, the key to the silver lining will be the timing of any fall in the $A. However, much of the bad news in this State in recent years has revolved around the impact of the strength in exchange and interest rates, and Deloitte Access Economics projects that the latter will be less of a problem in the next few years than they were in the last few.

Or, in other words, although the State has lost an early boost to demand from the Olympic Dam go ahead, it is expected to gain from favourable movements in exchange and interest rates which have been weighing on some other sectors.

That said, as of today the $A is still relatively high, and the State's businesses have to deal with that. Hence, for example, Holden's Elizabeth assembly plant will be stopping work for a "small number" of days amid weak demand for locally-produced vehicles, with Commodore sales particularly hard hit, and sales of the smaller-sized Cruze also down over the past year.

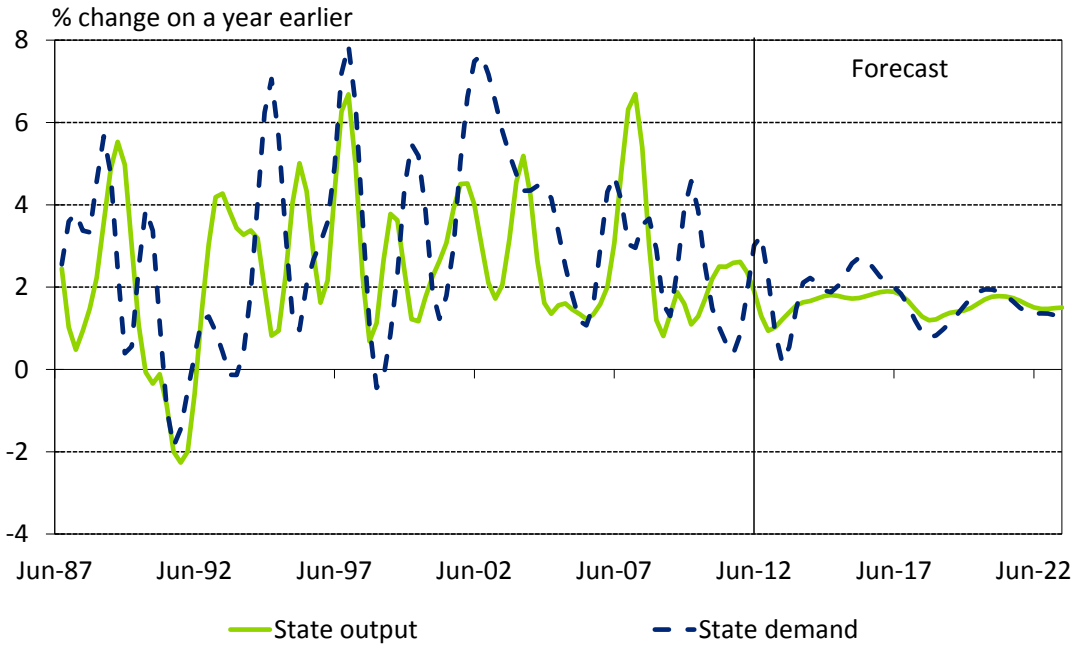
That is merely one example of the many of the difficulties being faced by manufacturing businesses in South Australia.

And nor is the damage of the moment only due to currency competitiveness (or the lack of it). The level of housing construction may be a relatively small part of the overall economy, but its volatility and its links to other sectors (such as retail spending) often see it acting as a turbocharger on the State's economy at a whole. And, for the moment at least, there is little boost to the economy from the housing construction sector. Housing starts have been weak of late, yet even that has not stopped a relatively rapid rise in residential rental vacancy rates and a matching deceleration in rental increases – pointing to the potential for ongoing weakness in the pace of housing construction. In turn, the weakness in housing construction is showing up as particularly weak results in the retail category of household goods: with fewer new or newly renovated homes, sales of furniture and fitting and carpets and curtains have been affected too.

Moreover, with the manufacturing sector shedding jobs and the housing construction sector weak, job growth has been lacklustre and unemployment has mostly been on the rise through 2012 to date, with that latter weakness then having flow on effects on the pace of the State's population growth (though the latter does appear to have bottomed out in mid-2011).

So there is a lot to monitor in the short term. On the other hand, interest rates have already been cut, with more to come, and Deloitte Access Economics projects that the $A will stop being as big a negative for the prospects of the State's manufacturing sector. That is expected to generate a turnaround for the State. Or rather, we do see growth getting worse before it gets better (as may be seen in Chart 3.6), but it does indeed get better, with the lows in this business cyclical projected to come in early 2013.

Chart 3.6: South Australian output and demand

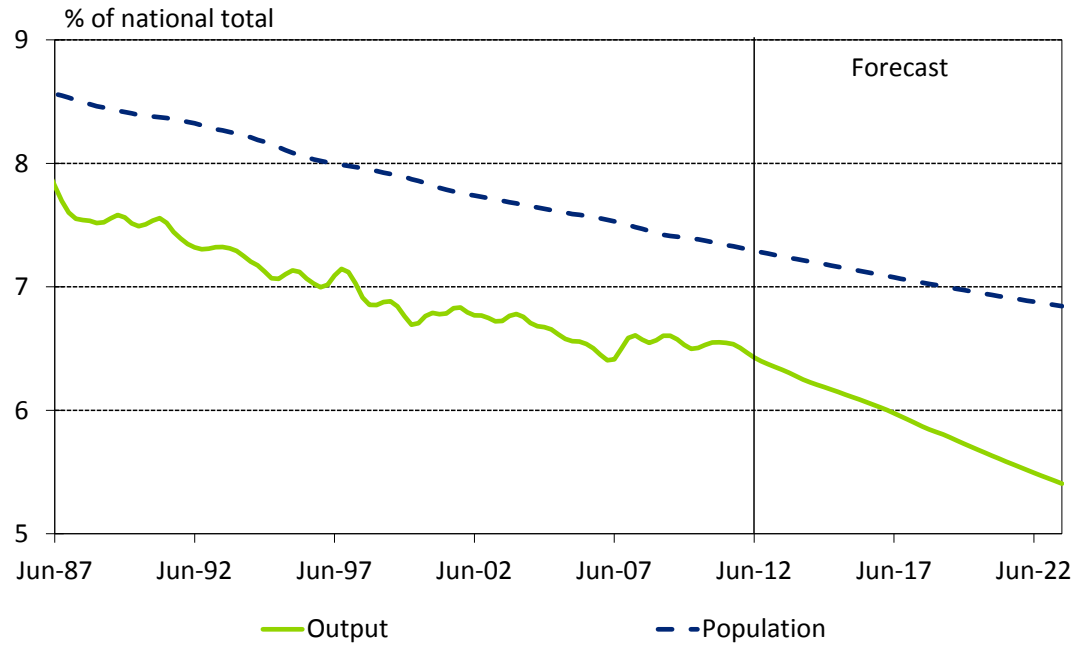


Source: ABS, Deloitte Access Economics' macroeconomic model

In turn, that does not change the longer term trend of South Australia growing more slowly than Australia as a whole (as seen in Chart 3.7), thereby losing some market share.

However, it does suggest that the loss of Olympic Dam from the short term outlook is not nearly as much as of a negative as it might otherwise seem.

Chart 3.7: South Australia as a share of national totals



Source: ABS, Deloitte Access Economics' macroeconomic model

4 The utilities sector outlook

The utilities sector (technically the electricity, gas, water and waste services industry, which is division D of the Australian and New Zealand Standard Industrial Classification, 2006) covers economic units engaged in the provision of:

- electricity;
- gas through mains systems;
- water;
- drainage; and
- sewage services.

4.1 The policy backdrop for the utilities sector

The carbon price debate is not a focus of this report. That said, this section notes some factors important as a backdrop to forecasting labour costs in the utilities sector.

In brief, climate change policies are, among a range of factors, having a large bearing on the electricity generation sector and the price of electricity paid by customers.

A broad-based carbon price represents the lowest cost means of reducing carbon pollution. That said, the shape of the future carbon pricing system in Australia was somewhat of an unknown quantity for a considerable time. That generated considerable investment uncertainty for utilities corporations. The electricity sector in particular is a large producer of carbon emissions (mainly through coal-fired power plants), and the absence of a fully settled carbon policy framework has hampered long term investment decisions.

It is therefore of note that there have been recent changes affecting the policy backdrop faced by the utilities sector.

The existing policy framework included, among other things, three key elements:

- Consideration of the Government buying out some coal-fired power generators.
- A $15 price floor when carbon emissions trading begins in 2015, and
- A $10 billion clean energy fund.

The first two of these elements have been amended recently.

First, the Government has now linked the carbon scheme directly to the European carbon price – the largest carbon market in the world.

Second, negotiations with five power companies over the potential for a Government buy out failed to reach agreement.

Yet despite these two changes, much of the existing policy framework remains in place. In effect, the climate change policy environment presently comprises a mix of Commonwealth-

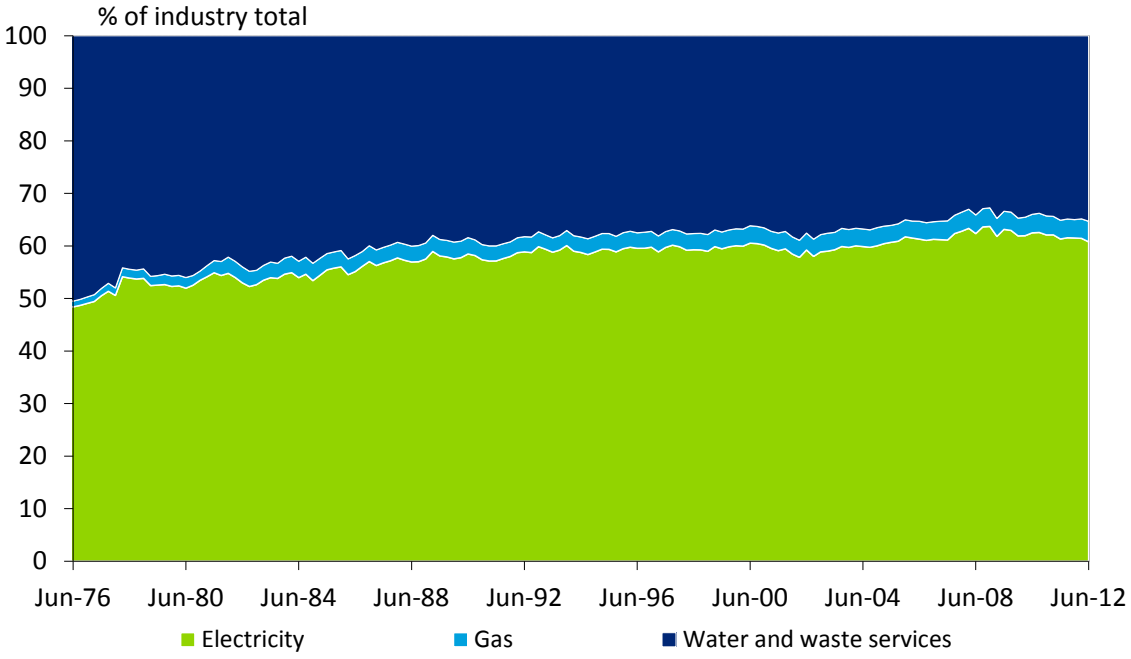
and State-based schemes with the stated aim of directly reducing the level of carbon emissions.

- At the State level, policies include mandated building standards for energy efficiency, solar rebates and feed-in tariffs.
- Federally, subsidy programs for household solar hot water and electricity generation are in place to encourage the deployment of small-scale low-emission technologies. In addition, a national Renewable Energy Target (RET) has also been established to foster renewable energy generation. The RET requires that 20% of Australia's electricity is sourced from renewables by 2020. The scheme will run to 2030.

4.2 The outlook for the utilities sector

As Chart 4.1 below shows, electricity has accounted for a rising share of the utilities sector over time. However, since the GFC, this trend has levelled off, and the share of the utilities sector accounted for by electricity has been falling in recent years, albeit slowly.

Chart 4.1: Composition of output in the utilities sector



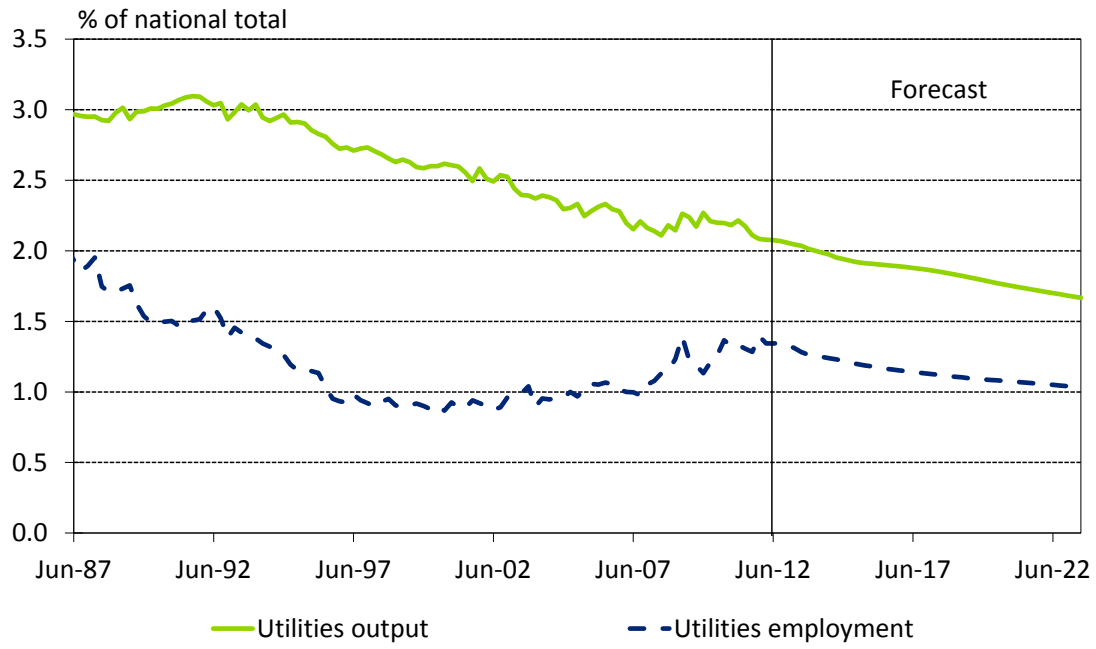
Source: ABS

As that chart also shows, water and waste services are a growing share of total utilities, at around 35% in 2012.

While the utilities sector at the national level has generally experienced solid growth in recent years, it is falling as a share of overall output and employment. Indeed, Chart 4.2 shows that utilities output has been falling steadily as a share of national output since the early 1990s.

Utilities employment as a share of national employment was showing a similar downward trend until the late 1990s, when the share began to rise. These opposing trends of falling output and rising employment have combined to create a large fall in the productivity of the utilities sector over the past decade.

Chart 4.2: The utilities as a share of Australia's economy and employment



Source: ABS, Deloitte Access Economics' macroeconomic model

While the falling share of national output attributable to the utilities is partly due to the rising importance of other sectors in the Australian economy over this time (largely other service sectors), part of the reason is likely to be higher utilities prices lowering consumer demand.

In the last five years the retail cost of electricity has risen five times faster than the CPI. There are many drivers of that, including the carbon tax and mandatory renewable energy targets, neither of which is as effective as they could be at cutting emissions for minimal cost. It also includes insisting on:

1. a very low risk of blackouts; yet
2. failing to charge extra to retail users at peak times.

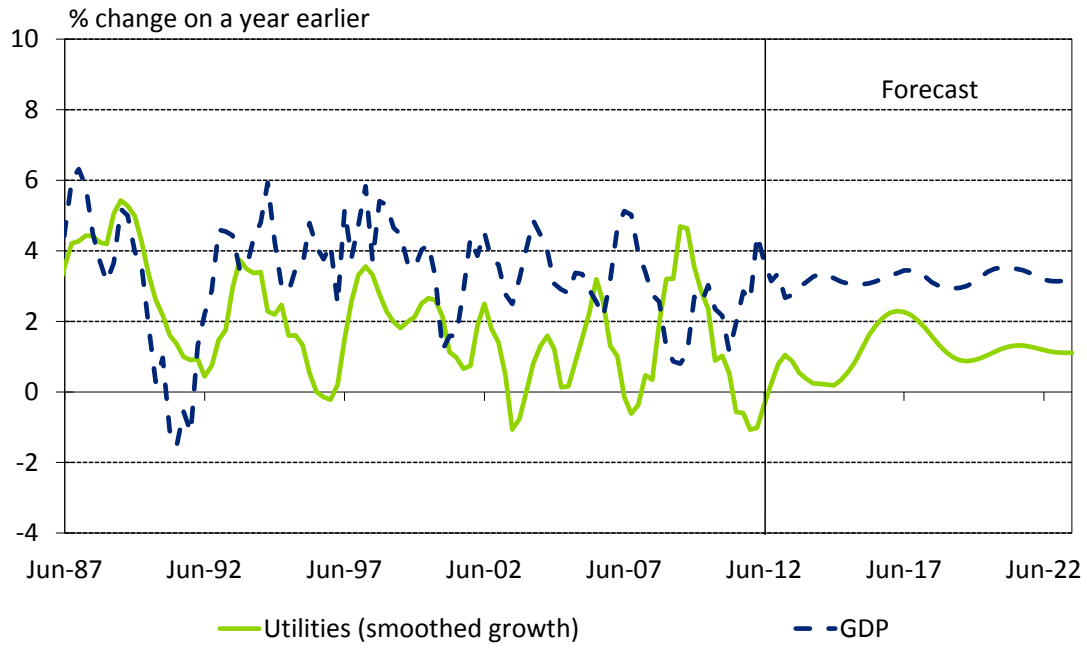
That means Australia has an electricity system only rarely used at its full capacity even though that capacity was very expensive to build in the first place.

The impact has slowed output growth in the sector (see Chart 4.3). Price increases of the magnitude we have seen recently have an impact even when demand is inelastic.

Demand has fallen from residential properties, however most electricity use is by businesses, and many of them are cutting back as a means of cutting costs. That is the key driver of the short-term modesty of the outlook seen in Chart 4.3.

However there are also some important supply side issues here. There is an important no-man's land in carbon pricing, where the price increase is enough to inhibit the growth of demand but not enough to champion a switch in supply. Sadly, Australia may be in that position – it would take a carbon tax of almost double today's levels to see a switch towards large scale gas fired plant investments.

Chart 4.3: Utilities output growth



Source: ABS, Deloitte Access Economics' macroeconomic model

That makes forecasting output growth in this sector particularly hard. On the one hand, demand fundamentals should pick up from their current low. On the other hand, it is less than clear that businesses will want to stump up the money to supply that extra demand in the absence of greater policy certainty.

That said, some parts of the utilities sector have been attracting considerable investment. For example, moves by various state governments to shore up water supplies in recent years are starting to bear returns, with the $3.5 billion Wonthaggi desalination plant producing its first glass of consumable water in September 2012, and with construction progressing on the $1.8 billion Desalination plant at Port Stanvac in Adelaide. Current investment in utilities projects underway totals upwards of $17.3 billion with a further $31.8 billion in the pipeline.

5 The competitor industry outlook

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

- Longer term wage outcomes by occupation and by sector tend to 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.

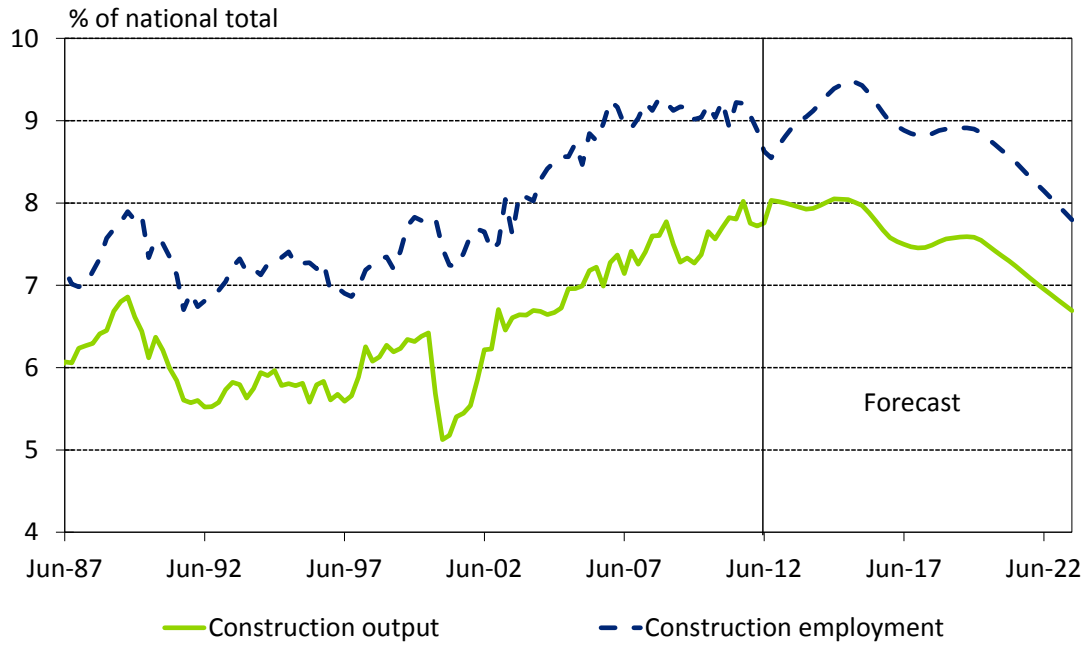
This chapter discusses the industries which compete most heavily for labour with the utilities sector – the construction and administration services sectors.

5.1 The construction industry

For some years now the construction story has essentially been one of great strength in engineering construction, with that resource-related strength outweighing the bad news evident in commercial construction and (even more so) in home building.

This can be seen in the increasing share of construction in both national output and employment. Over the past decade, construction has risen from around 6% of national output, to touch on 8% in the last year (see Chart 5.1).

Chart 5.1: Construction share of national



Source: ABS, Deloitte Access Economics' macroeconomic model

The rising share is largely due to very strong engineering growth which has been required by the ever expanding mining industry – billion dollar mining projects in northern Australia have

become commonplace, and they require vast amounts of construction before the mines and plants become operational.

However, some elements of that balance are already shifting. Industrial commodity prices have fallen recently, which has led to question marks over the medium to longer term size of global commodity demand, and the prices that can be expected to accompany that demand.

Consequently, there have been some high profile mining construction projects that have been put on the backburner. However that still leaves a quarter of a trillion dollars' worth that will happen, with much of that spending occurring in this financial year and next.

Because **residential construction** is more labour intensive than the other components of this sector, its current depressed state – with activity as a share of the Australian economy the lowest in many years – has led to falls in the overall level of construction employment in recent months.

Indeed, if you take out the artificial low caused by the introduction of the GST, housing construction is at a multi-decade low as a share of the Australian economy, resulting in falling employment.

The good news is that Deloitte Access Economics is of the view that the mix of:

- interest rate cuts (where we expect even lower rates as the Reserve Bank responds to continuing strength in the $A),
- more by way of land release by State Governments, and
- a continuing lift in the migration intake

will generate a recovery in the housing construction cycle, with that latter recovery starting in the next year or so. While DAE doesn't think the recovery in the pace of housing construction will be large, it should help to keep construction output as a share of national output at the record high levels seen recently, and also to boost employment in this sector (which began to flag in recent months).

Unlike engineering activity, **commercial construction** has been in troubled times. This portion of the construction sector is on the wrong side of the two speed divide, with soft retail turnover, faltering office construction and weak business and consumer confidence providing a shaky foundation for ongoing investment. In addition, deep cuts in various State Government budgets may see money for capital works in the health and education sectors ease back over the medium term.

The official statistics indicate that there has been a recent recovery in the level of commercial construction. Anecdotally the evidence is that it hasn't happened yet, and this is supported by Table 5.1, which shows the commercial construction projects listed in the Deloitte Access Economics *Investment Monitor.* There has been no growth in the past year in definite projects, while there has been a decline in projects which are in planning.

Deloitte Access Economics doesn't see the outlook as holding any strong growth prospects over the next couple of years. There is something of a hole in the development pipeline for both offices and retail developments – in effect, a lingering impact from the development projects which didn't get the go ahead through the global financial crisis. And the combination of weak retail conditions and modest white collar employment growth (with State Government

cuts affecting the size of the public sector) means that not many new projects are entering the pipeline. Additionally, some projects are struggling to get the finance that they need.

Table 5.1: Commercial construction projects (level and change over last year)

	Definite		In planning		Total	
	$m	% change	$m	% change	$m	% change
Trade	7,844	18.0	2,471	-26.4	10,315	3.1
Business parks	2,969	-11.9	1,100	-18.0	4,069	-13.6
Hotels and resorts	371	55.9	1,559	59.6	1,930	58.8
Offices	1,456	-52.3	756	-52.8	2,212	-52.5
Education	19,439	-6.0	827	67.1	20,266	-4.3
Health and community services	20,313	10.4	3,258	-31.8	23,571	1.7
Culture, recreation & other	7,902	-5.5	4,562	10.0	12,464	0.1
Business services	516	-29.0	3,715	-15.9	4,231	-17.7
Government	1,729	-19.5	532	-	2,261	-15.6
Mixed use	9,494	-5.9	3,031	-1.1	12,525	-4.8
Total commercial construction	**72,033**	**-1.1**	**21,811**	**-14.7**	**93,844**	**-4.6**

Source: Arup and Deloitte Access Economics' Investment Monitor

Rather, the growth in the construction sector over the next two years is expected to come courtesy of **engineering construction** – as it has for some time now. Bolstered by huge investments in gas development, the next two years will see a stunning surge in engineering activity.

This is outlined in Table 5.2, which shows engineering construction projects in the 'definite' category increased by nearly a third in the past year, while those in the planning stage have levelled off. Table 5.2 also shows that recent headline outlining cancellations and delays for some high profile projects – such as the Olympic Dam expansion and the Outer Harbour development in Western Australia – don't really change the view that there is a huge surge of engineering work for the mining sector waiting in the wings.

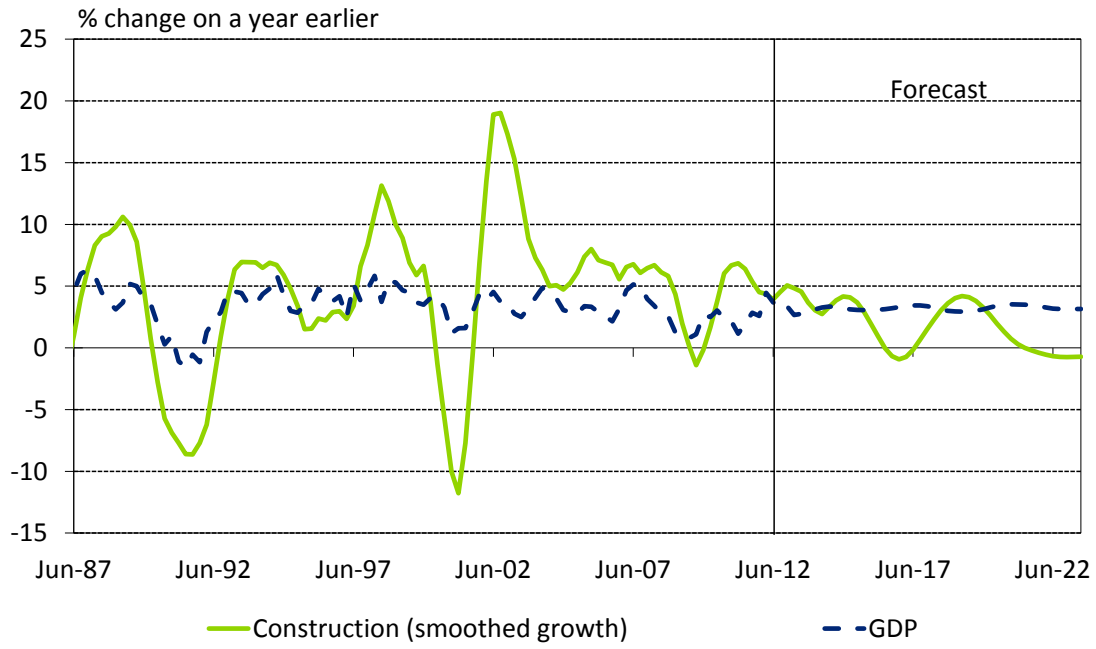
Table 5.2: Engineering construction projects (level and change over last year)

	Definite		In planning		Total	
	$m	% change	$m	% change	$m	% change
Manufacturing	5,095	-55.4	27,969	11.3	33,064	-9.6
Transport	78,431	-4.1	205,810	62.7	284,241	36.5
Communication	36,716	-10.8	175	-	36,891	-10.4
Mining	228,839	80.9	189,001	-29.3	417,840	6.1
Power & water	23,284	-0.2	30,805	3.1	54,089	1.6
Rural and forestry	560	0.0	0	0.0	560	0.0
Total engineering	**372,925**	**31.0**	**453,760**	**1.1**	**826,685**	**12.7**

Source: Arup and Deloitte Access Economics' *Investment Monitor*

Hence the overall construction sector growth mapped out in Chart 5.2 below is driven by engineering construction activity. However, the cycle mapped out in Chart 5.2 is looking a little less robust than it was. The peak of the resource construction boom isn't here yet, but nor is it that far away either. Luckily the coming upswing in housing construction should mute some of the negatives coming from the engineering downswing.

Chart 5.2: Construction output growth

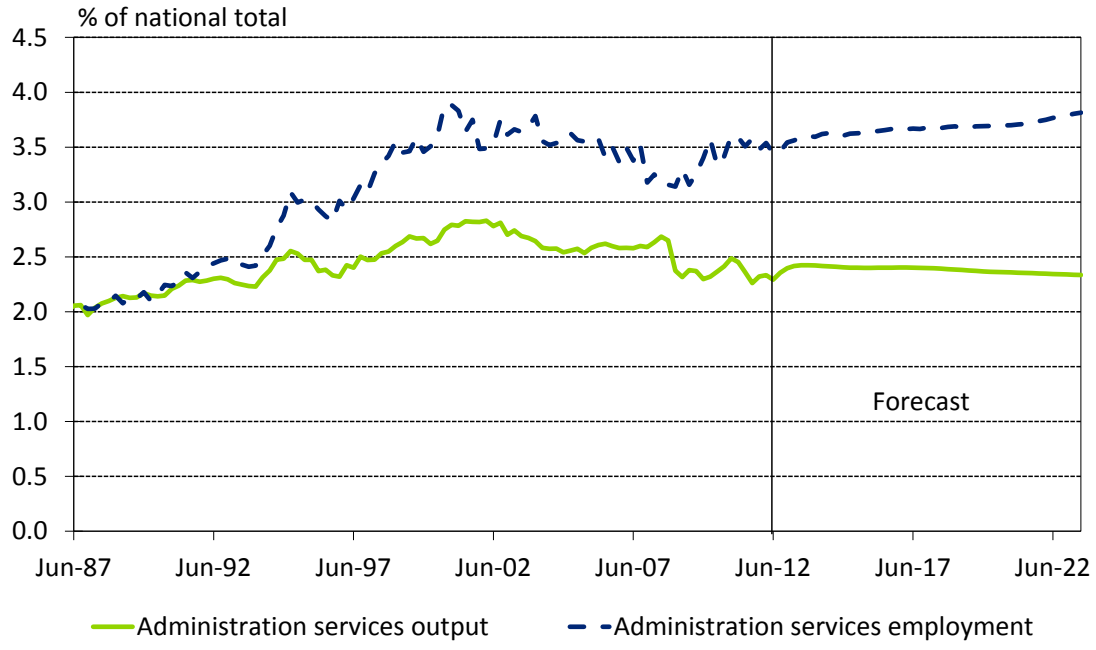


Source: ABS, Deloitte Access Economics' macroeconomic model

5.2 Administration services

Administration services is quite a small sector, accounting for just over 2% of national output, and 3.5% of national employment (see Chart 5.3).

Chart 5.3: Administration services share of national



Source: ABS, Deloitte Access Economics' macroeconomic model

This sector can be broken into two broad areas:

- Administrative services, of which the largest component is employment services (including employment and recruitment services and labour supply services); and
- Building and pest control services.

The sector has become increasingly competitive over the last decade, which has led to falling profit margins. Consequently, Chart 5.3 shows that between 2000 and 2009 employment was falling while output remained stable – indicating that productivity in the sector increased over this time.

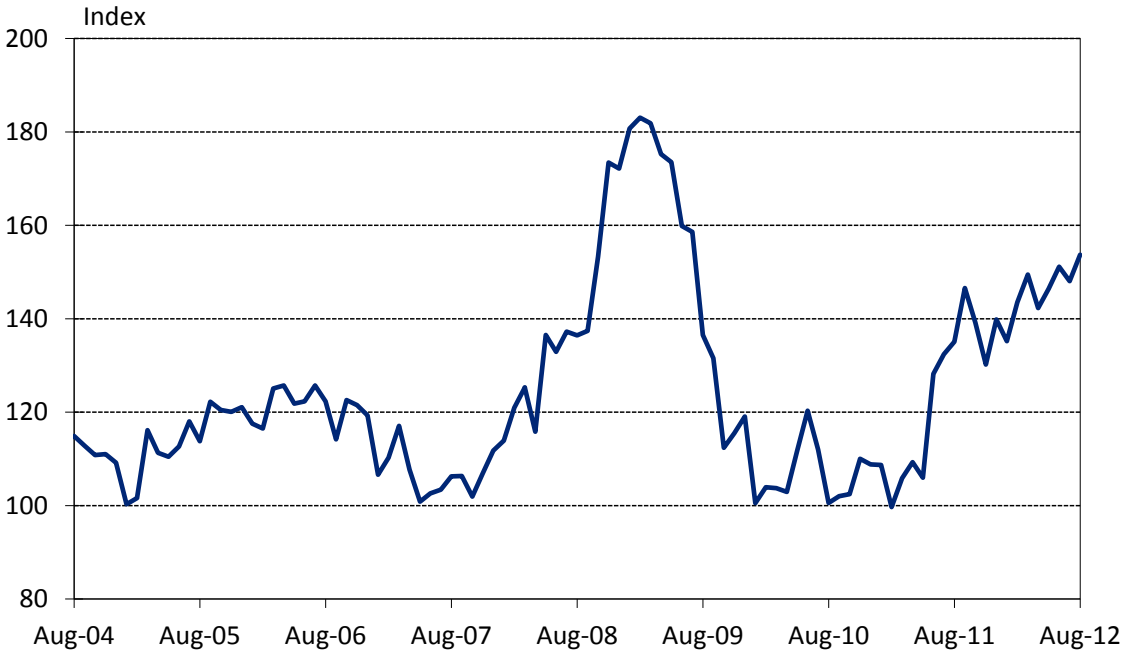
The impact of the GFC was felt keenly in the administration services sector (see Chart 5.5). In fact, during the worst of the downturn only Australia's manufacturing sector saw larger decreases in output (the latter's peak year-to decline was 11.2%, compared with 8.8% in administration services, with the next weakest being the dip in the transport sector of 5.1%).

This result highlights the point that the administration services sector is highly sensitive to the wider economy – when times get tough, businesses cut back on recruitment (and so the services to find the new employees), as well as cutting back on cleaning contracts and other building maintenance. This sensitivity has been seen again since mid-2011, with relatively modest employment growth across the nation leading to weaker growth in the administrative services sector.

Corporate profits may be relatively high, but they have been falling as a share of national income since 2010, and companies have become more focussed on cost cutting.

Accordingly, the administration sector will continue to be affected by cost cutting by both businesses and governments over the next couple of years, particularly the building management and cleaning portion of the sector.

Chart 5.4: Unemployment expectations



Source: Westpac – Melbourne Institute

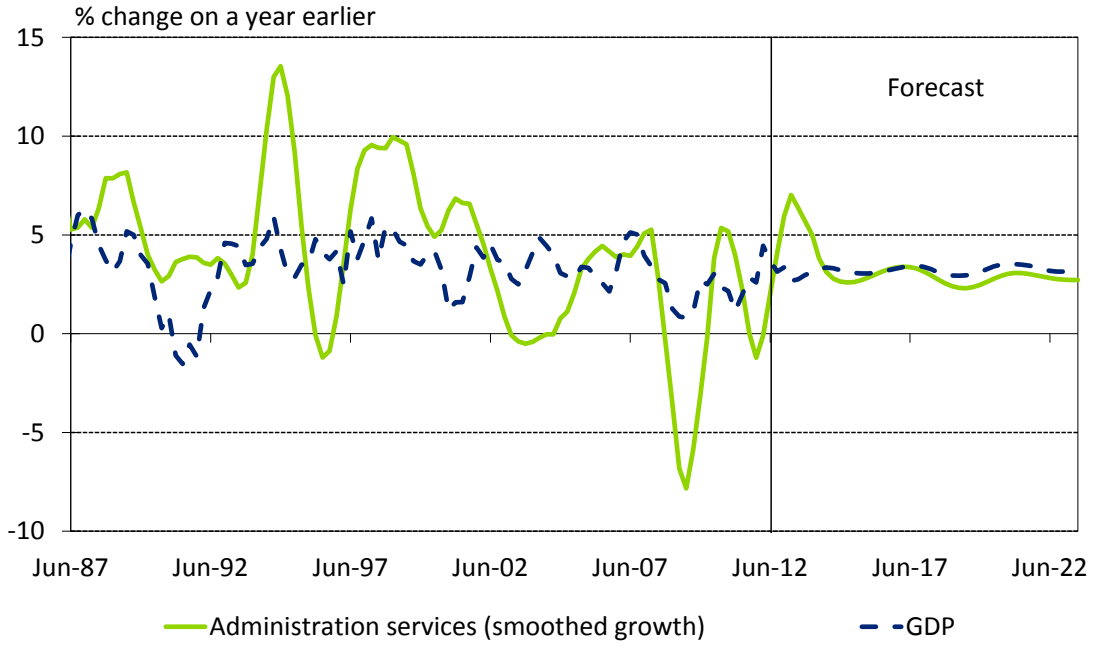
However the longer term fundamentals for this sector remain sound. Unemployment rates remain low, and DAE forecasts that, while they are on the way up, the unemployment rate peak should only hit 5.5%. That said, a constraining factor on the growth of employment services is that a rising number of Australians are worried that unemployment will increase. Other things equal, that will limit their interest in actively seeking a change in employer.

On the other hand, however, the pickup in the pace of baby boomer retirement will generate some additional supply side pressure on job markets – and as finding the right person for the job becomes more difficult demand for employment agency services will increase. A growing and ageing population, combined with busier families also indicates growth for domestic gardening and cleaning services.

This combination leads to the forecast seen in Chart 5.5. Output growth is expected to see a bounce after recent weakness, before then slowing back to rates just below that seen nationally. Within that total, cleaning services – which as a group employs some 120,000 Australians – has still been showing growth, albeit at modest rates, aided by the continuing trend towards outsourcing these services.

There may be modestly better growth in employment services, which is a less mature market.

Chart 5.5: Administration services output growth



Source: ABS, Deloitte Access Economics' macroeconomic model

6 The national outlook for wages and prices

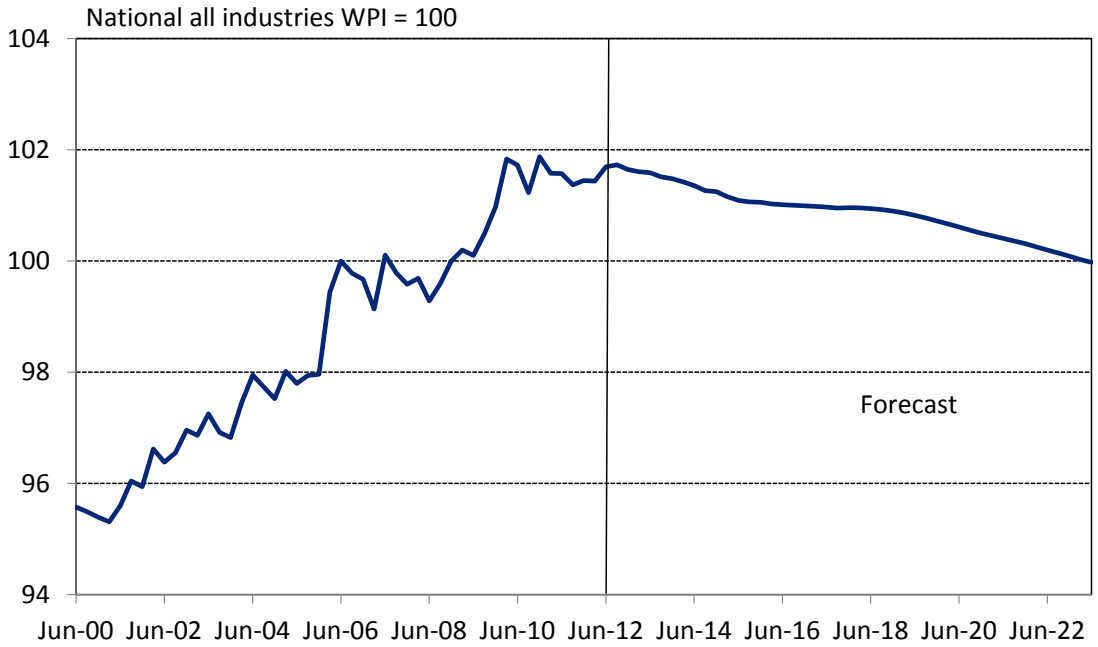
This chapter considers a series of related issues affecting the national wage outlook (which is discussed in section 6.5 below).

It is, however, worth starting this discussion by noting that the long running strength in emerging economies has led to job gains in both construction and mining as these two sectors try to facilitate Australia's swing in its industrial structure towards the big dollars available in resources. And there have been notable job losses in those sectors among the slower of the 'two speeds': manufacturing, wholesale and retail trade, and transport.

Those swings represent not merely the woes of the losing sectors and the strengths of the gainers, but also the difficulty in sourcing any workers at all to achieve the growth that some desperately want to achieve, with construction and mining increasingly having to poach workers from other sectors.

These trends have affected the movements of wages in the utilities sector in recent years. For example, the strength (and the rise in specific sector wages) of mining and construction have led to pressure for wage gains in other sectors (such as utilities) as industries were forced to react to higher mining and construction wages so as to help to keep workers in their jobs.

Chart 6.1: Utilities WPI relative to national WPI



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

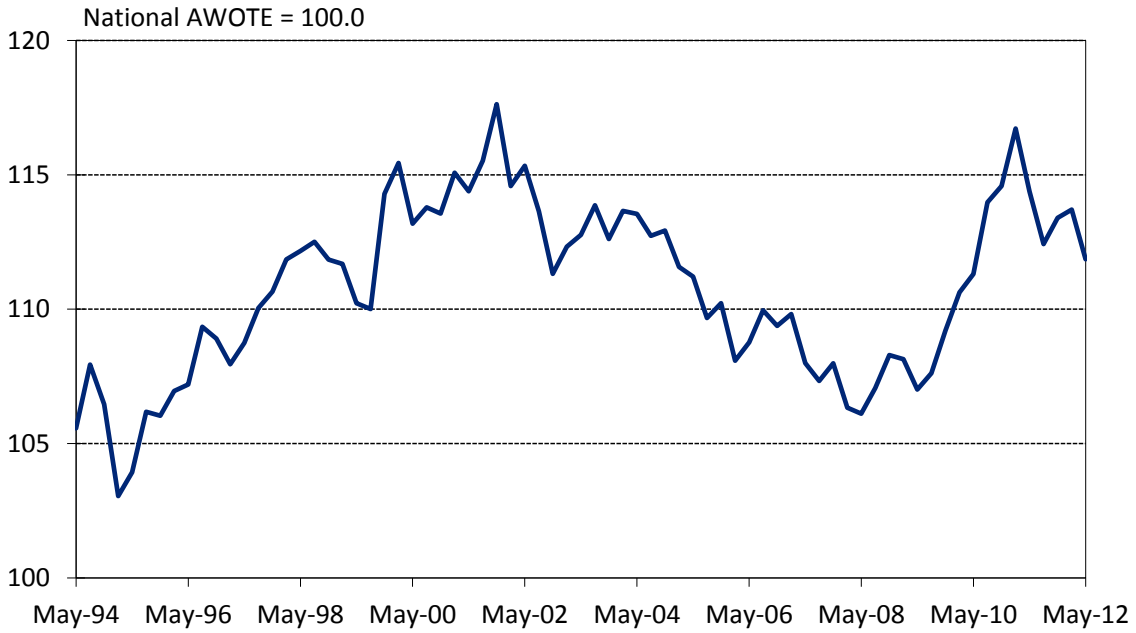
Accordingly, it is perhaps no surprise that the Wage Price Index (WPI) in the utilities sector has risen relative to the national average – see Chart 6.1.

Perhaps equally unsurprisingly, some observers assume that the future will be like the past: that the utilities sector will continue to see its wages rise relative to the average in the coming decade – just as they did in the past decade.

Deloitte Access Economics disagrees.

Chart 6.1 doesn't go back far enough in time to see if history can shed light on this debate, but the Average Weekly Ordinary Time Earnings (AWOTE) series does. The key difference is that the AWOTE relativities tell a very different story in the pre-1998 period than it does in more recent years – see Chart 6.2 below.

Chart 6.2: Utilities wages relative to national wages (AWOTE)



Source: ABS, Deloitte Access Economics

Chart 6.2 shows that, despite the rapid productivity gains recorded from 1985 to 1994, it was not until after the Australian economy had embarked on its long expansion that relative wages in the utilities began their climb.

Or, in other words, history – other things equal – tends to support the 'business cycle' view of wage relativities in the utilities sector rather than the 'permanently increasing' view.

That is not to say that this index must always return to previous values. It is possible that some sort of structural change in the sector (such as the replacement of lower-paid workers with machinery) could have a permanent level change effect on the results – though in theory at least the calculation of more detailed components of the WPI is meant to be cognisant of such structural shifts.

However, even such structural developments will not drive a continuous divergence in growth rates.

That is because **skill shortages are temporary – they don't drive permanent wedges in wage relativities**. The higher wages on offer as a result of skill shortages lead, over time, to reactions on both the demand and supply side of labour markets to whittle those shortages away. To fail to forecast an eventual end to skill shortages – and to use them to justify further widening in wage relativities – sits strangely as a view on the longer term outcomes from labour markets.

6.1 Shifts in wage and cost relativities are rarely permanent

Over a long enough time period growth rates in the costs of materials and labour across different regions should not differ too much at all.

That is because, if prices or wages became too different over time, then there would be money to be made in shipping products or people moving home so as to limit those divergences once more.

Similarly, 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 Hobart and try our luck in Brisbane").
- 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.
- Shifts by New Zealanders (who face less 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.

6.2 The outlook for the CPI in Australia

Recent developments have cooled prospects for inflation in Australia – just as they have for the world as a whole. As a result, inflation risks have receded of late.

Underlying CPI inflation was around 2% over the past year, having eased notably across that period, leaving it at its lowest in over a decade and, carbon tax effects aside, the short term outlook is relatively moderate.

In assessing the inflation outlook, it is necessary to look at the three key building blocks of inflation – demand pressures, labour costs and import prices.

On the **demand** front, the impact of slowing growth in China has been to squeeze national income growth, thereby limiting the pricing power of many companies in Australia. The latter factor can be expected to help limit the usual linkage between strong demand and strong pricing pressures, as can the "glass half full" attitude of many consumers and businesses. This demand link (seen in Chart 6.3) remains relevant, but less so than before. And that's not just because global pressures are adding to the prevalence of discounting, or because Australians are worried about the outlook.

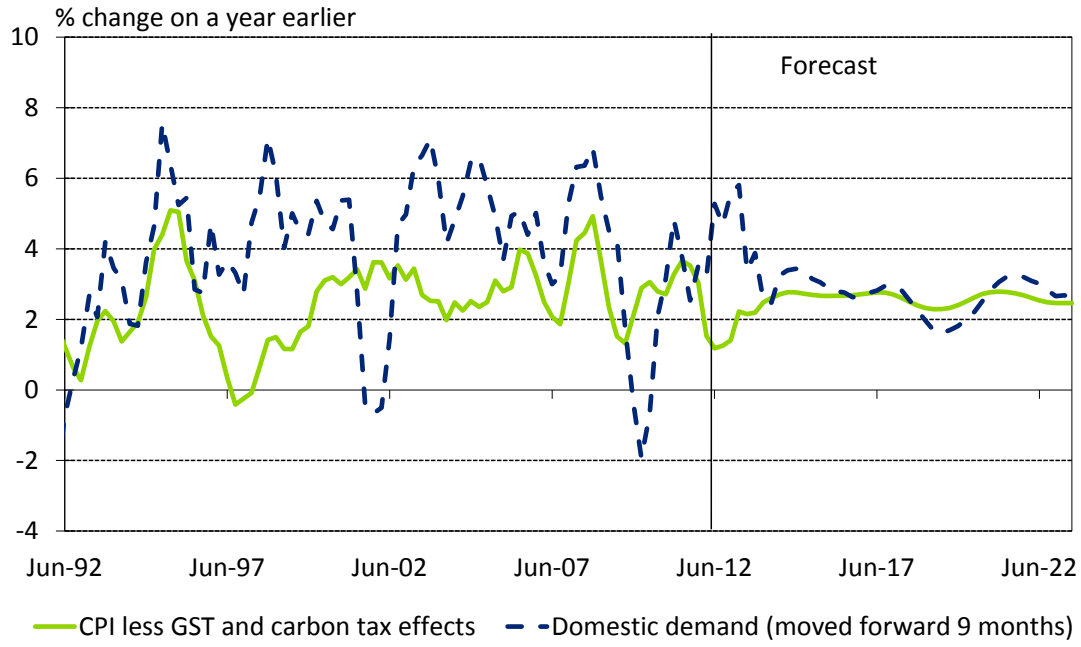
It is also because the single biggest component of the continuing strength in domestic demand is resource-driven construction projects. The latter are a special case in terms of their impact on inflation prospects, mainly because there is a very high import share for the gas projects now dominating business investment spending.

Yet some items within the CPI basket continue to record relatively robust rates of inflation. In the main that group consists of services on the one hand and/or products protected from international competition on the other. For example, housing rentals are up 4.4% over the past year, while the combination of carbon costs and the expense of hitting mandatory renewable targets have increased electricity prices significantly.

However, the overall gain in the price of products that are not traded was a relatively low 3.3% in the past year. That is well down on its 2008 high of over 5%, and very close to its lowest in a decade. In part that is because, although housing related costs are still growing faster than prices on average elsewhere in the economy, they are rising at their slowest rate in over a decade.

Hence, despite relatively strong demand growth in Australia, there is expected to be relatively weak inflation. The strength in demand is not being seen in consumer demand, where deep discounts remain as prevalent as ever. And, as noted above, areas of the economy most protected from competitive forces are proving less problematic for the inflation outlook than they have done in a while.

Chart 6.3: The lagged impact of output on prices



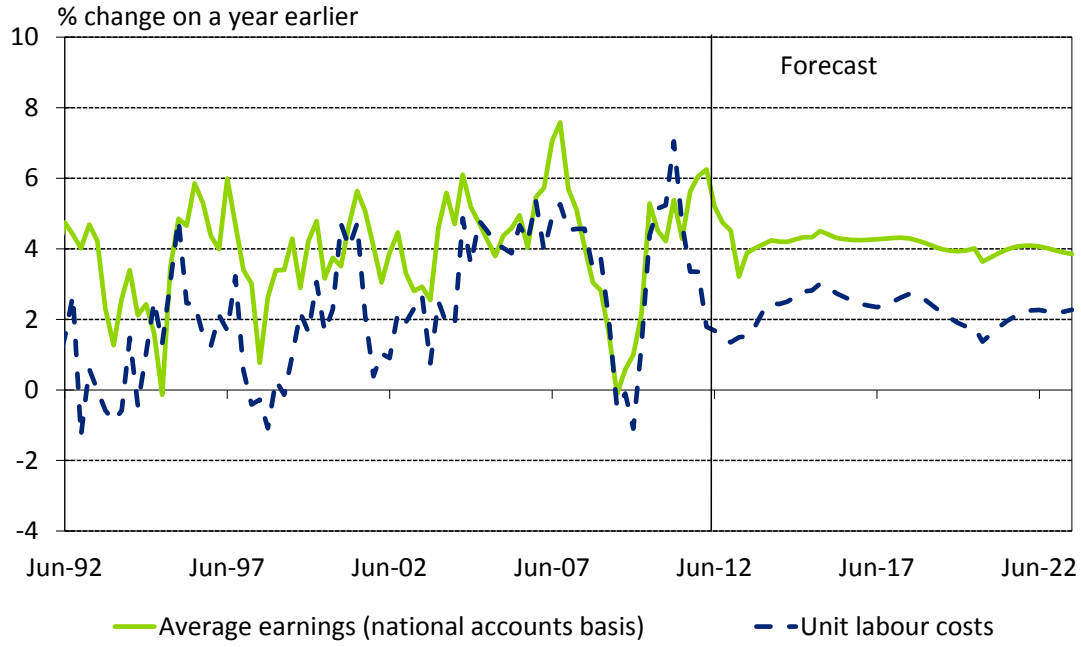
Source: ABS, Deloitte Access Economics' macroeconomic model

Another important influencing factor in the inflation outlook is **labour costs**. Although wage growth has been relatively restrained, poor productivity growth has meant that the effective cost to businesses of workers has been rising relatively rapidly.

A renewal in productivity gains is expected, in part as tightening margins and weakening prospects make managers more focussed on costs. There has already been a marked turnaround in recent productivity performance. Although some of that will fade – a management focussed on costs can only get you so far in terms of ongoing growth in productivity – productivity growth is expected to be generally better in the next few years than it has been across the last decade. Therefore, despite relatively solid expectations for wage growth, the better news on productivity is going to mean unit labour costs should stay relatively restrained (see Chart 6.4).

Or, in other words, the good news on productivity is good news for the inflation outlook as well. It may not be enough to mean labour costs will be helping to actively reduce inflation risks, but it does say that labour costs now look rather less likely to be an upside inflation risk in the next little while.

Chart 6.4: Wages and labour costs



Source: ABS, Deloitte Access Economics' macroeconomic model

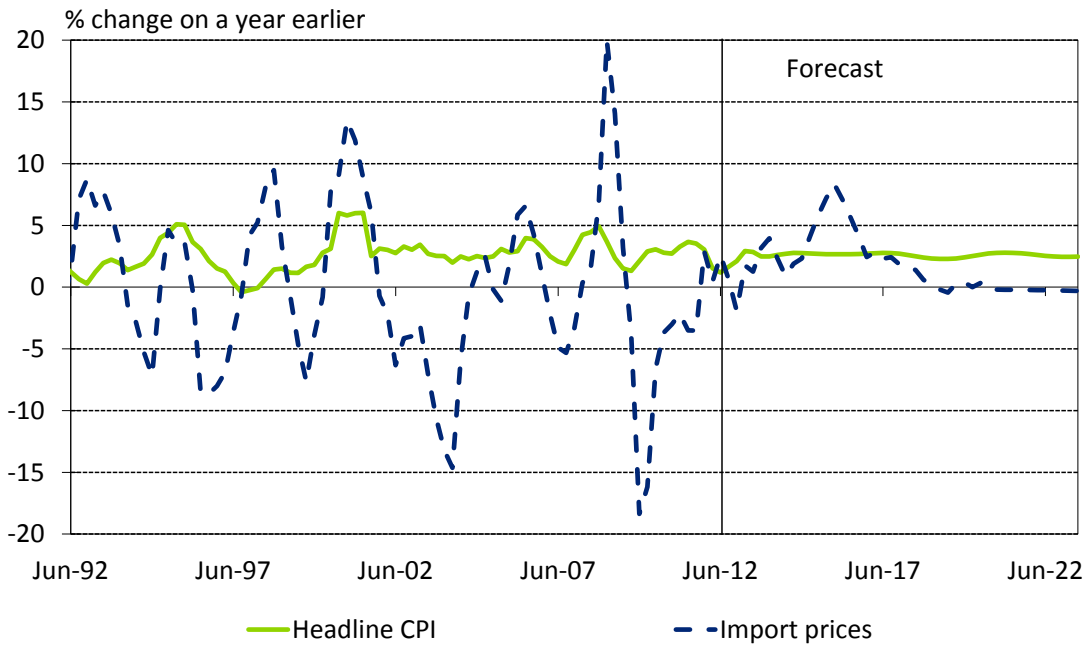
Rather, upside inflation risk may stem from the potential role of **import prices** (seen in Chart 6.5). Swings in import prices (and hence swings in the $A) are less important for the inflation outlook than they were in decades past because importers and retailers appear a bit more willing to absorb some of the swings. However, with the brief and impressive exception of a spike in import prices during the global financial crisis, import prices have mostly helped to hold down inflation over the past decade. In other words, import prices have much more regularly been below the CPI rather than above it.

Looking ahead, for all the trials and tribulations of the world economy, the $A is still at a relatively high level, and some further flow through of that to retail prices should continue to be of assistance in the short term. However, I share the concerns of the Reserve Bank that the positive influence of the exchange rate on the price of tradables is unlikely to get much better, and indeed is actually likely to get worse as time passes.

Tradables prices have fallen by more than 1% over the past year, and that's the equal of any result that Australia has seen in recent decades. However, all it takes is for the $A to stop rising for tradables inflation to lift from its current deflationary status. Although it is true, as noted above, that chronic over-production in China is generating ever deeper discounts from that nation for a many of the products that are imported into Australia, a swing is expected from another six months or so of good news on the import price front to several years of relatively bad news on the import price front.

That is heavily predicated on our forecast of the $A. Currency forecasting is notoriously hard. However, the $A is above its fundamentals for the first time in a while and there are reasons to expect those fundamentals to deteriorate even further over time. That suggests that import price inflation may place some upward pressure on an otherwise modest overall outlook for inflation.

Chart 6.5: Import prices and inflation

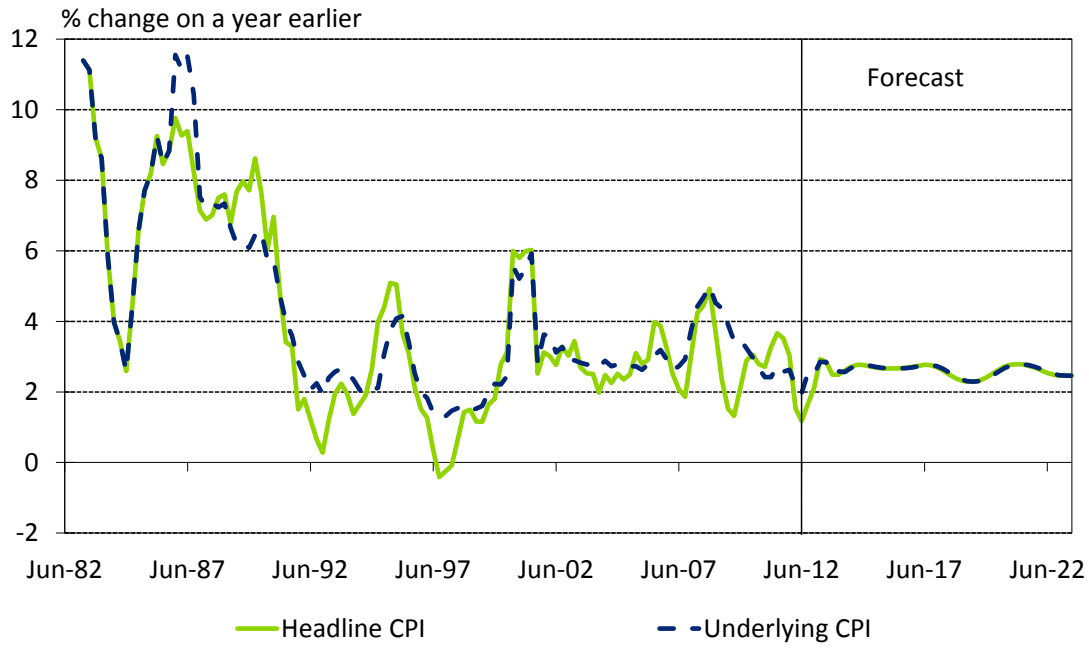


Source: ABS, Deloitte Access Economics' macroeconomic model

It is also worth considering what's happening in **upstream pricing**. The available producer price data is telling a relatively bland story at the moment. In part that is because businesses are still absorbing some of the producer price pressures that they are facing due to the market weakness of the moment.

Moreover, the industrial commodity price falls of recent times will also provide a boon to the short term outlook, including for the prices of materials used in manufacturing, though droughts in the US and around the Black Sea will add to farm-related prices in the near future.

Chart 6.6: Headline and underlying CPI



Source: ABS, Deloitte Access Economics' macroeconomic model

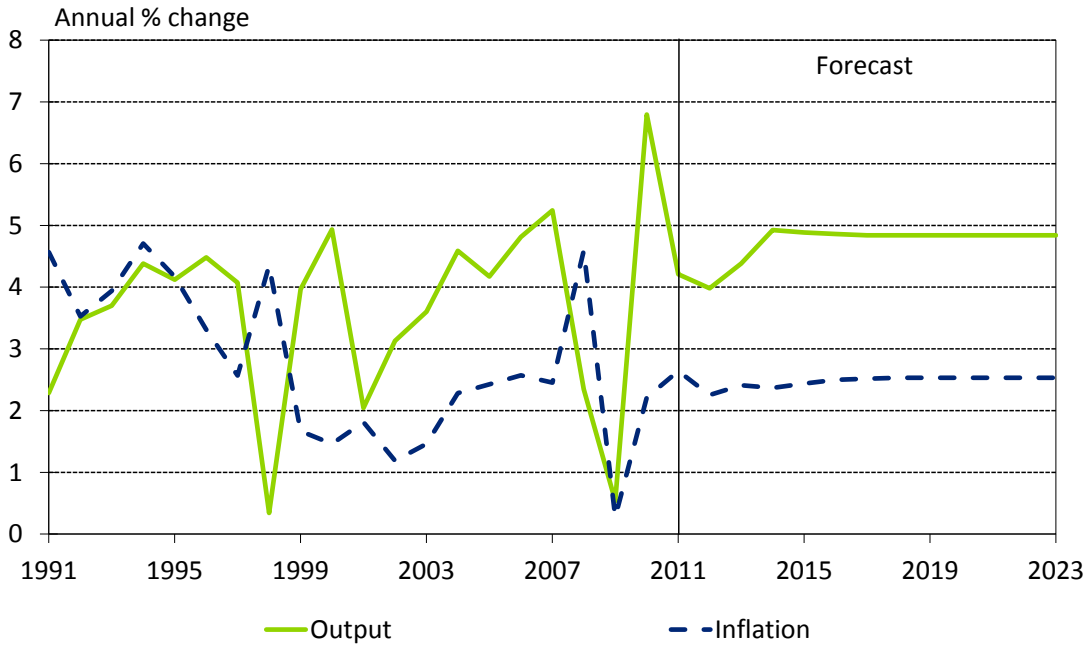
In sum, that leaves the inflation outlook relatively benign for the moment. That isn't as clear as it could be in Chart 6.6, as carbon price effects have led to an essentially one-off lift in the inflation rate. Strip that out and inflation should be relatively modest for the moment, held back by a lack of pricing power among businesses and a lack of confidence among customers, as well as some China-related effects, including lower commodity prices, deeper discounts among manufactured goods, and a weakening in profits which is prodding productivity into growth.

Because the challenges for global growth remain notable – with the pace of growth around the world easing through 2012 to date – global inflation remains relatively subdued. China is a good example of that, as recent moves to cool inflation have prices well under control.

Or, in other words, fears of a surge in inflation because some governments are 'printing money' have been overstated for several years now. Slow global growth together with ongoing pressures in credit markets should be enough to contain global inflation for the next year or two at least.

It also means the gap between inflation in Australia and among our trading partners looks set to be small over the next few years, with restrained price gains both here and elsewhere (as producer price deflation in China offsets the impact of rising food prices in that nation).

Chart 6.7: Output growth and inflation in Australia's major trading partners



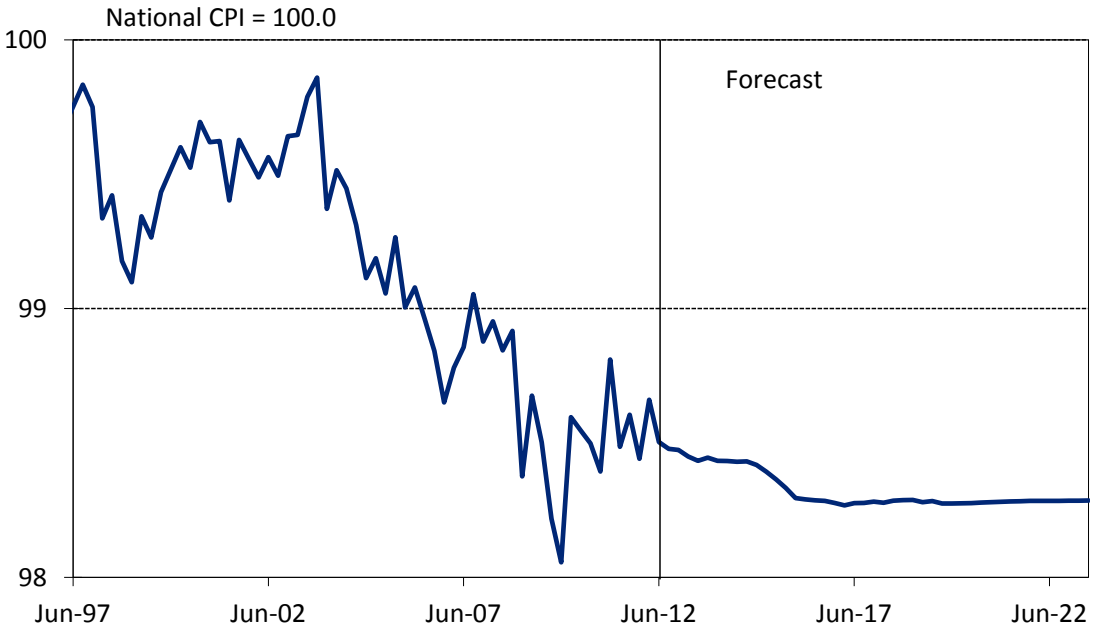
Source: Consensus Economics, Deloitte Access Economics' macroeconomic model

Nationally, the impact of a faltering China has been to squeeze national income growth, thereby limiting the pricing power of many companies. The latter factor can be expected to help limit the usual linkage between strong demand and strong pricing pressures. This demand link remains relevant, but less so than before, because global pressures are adding to the prevalence of discounting, while Australians remain worried about the outlook. However it is also because the single biggest component of the continuing strength in demand is resource-driven construction projects. These are a special case, mainly because there is a very high import share for the gas projects now dominating business investment spending.

6.3 The outlook for the Victorian CPI

Divergences between prices at the State level tend to be temporary rather than permanent. Chart 6.8 shows both history and forecasts for the CPI. It compares the Victorian series with the national equivalent. (For the purposes of describing the CPI series derived by the Australian Bureau of Statistics, the terms 'Victoria's CPI' and 'Melbourne CPI' are used interchangeably here.)

Chart 6.8: Victorian CPI as a ratio to the Australian CPI



Source: ABS, Deloitte Access Economics' macroeconomic model

Prices in the Victorian economy have not been increasing as quickly as prices in the wider Australian economy – meaning that the ratio in the chart has been falling. The commodity boom which has been driving the Australian economy has produced higher prices for commodities such as coal and iron ore. These high commodity prices (and the demand strength they have encouraged) have been helping to lift prices relatively more in States other than Victoria and South Australia. That therefore shows up in the ratio of the State CPI to the Australian CPI seen in Chart 6.8.

The strength of this effect has been easing with the passing of time, and has recently shifted more notably as industrial commodity prices have fallen in recent months. Those industrial commodity price falls are bad news for the Australian economy as a whole, but are less so for Victoria and South Australia, who have relatively small mining sectors. Just as the States had less to gain from high commodity prices and more to lose from the high $A, so too will they will be relatively better placed now that those trends are starting to be being played out in the other direction.

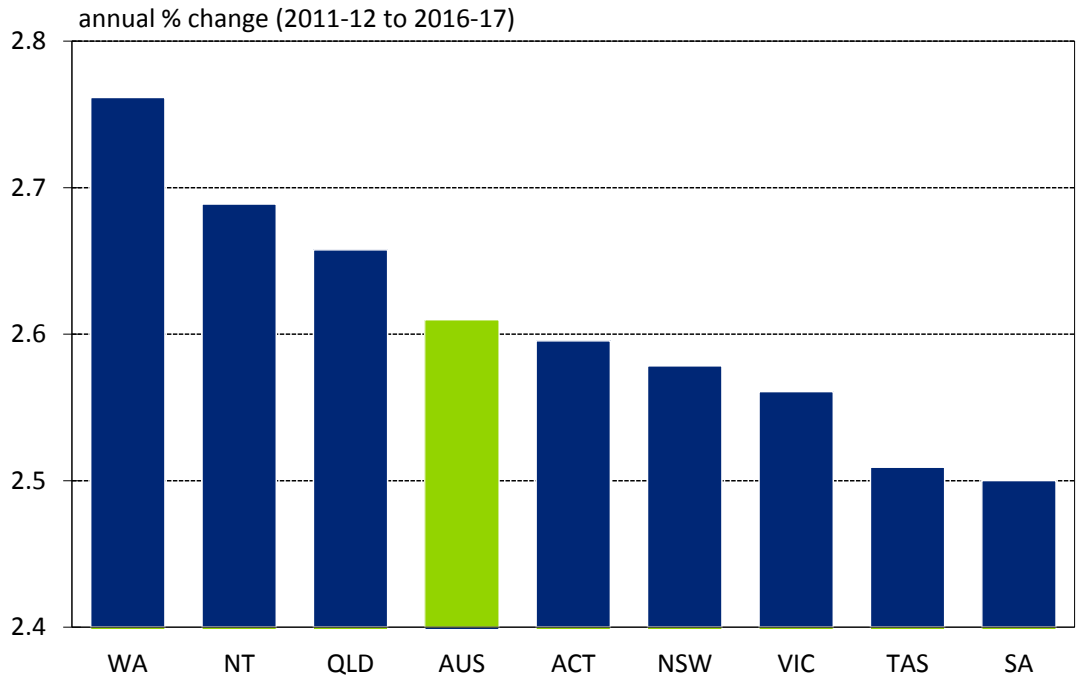
Even so, a degree of difference in relative inflation rates is expected to continue in the forecasts, albeit at a more moderate rate.

That moderation is in part a reflection of the fortunes of the wider Victorian economy discussed in Chapter 3. Just as the earlier strong gains in commodity prices favoured resource States of Queensland and Western Australia, so too will this new phase be good news – albeit only in relative terms – for the Victorian economy.

Chart 6.9 compares forecasts of inflation between the States, using the average annual rate of inflation between 2012-13 and 2016-17. Western Australia, Queensland and the Northern

Territory are expected to experience the fastest rate of inflation over that period, though the range of inflation rates across the States is not large.

Chart 6.9: CPI forecasts by State



Source: ABS, Deloitte Access Economics' macroeconomic model

Victoria is now projected to sit closer to the middle of the pack of the States when it comes to price inflation over this period, reflecting a more robust economic outlook – relative to other States – than had been expected previously.

6.4 The outlook for the South Australian CPI

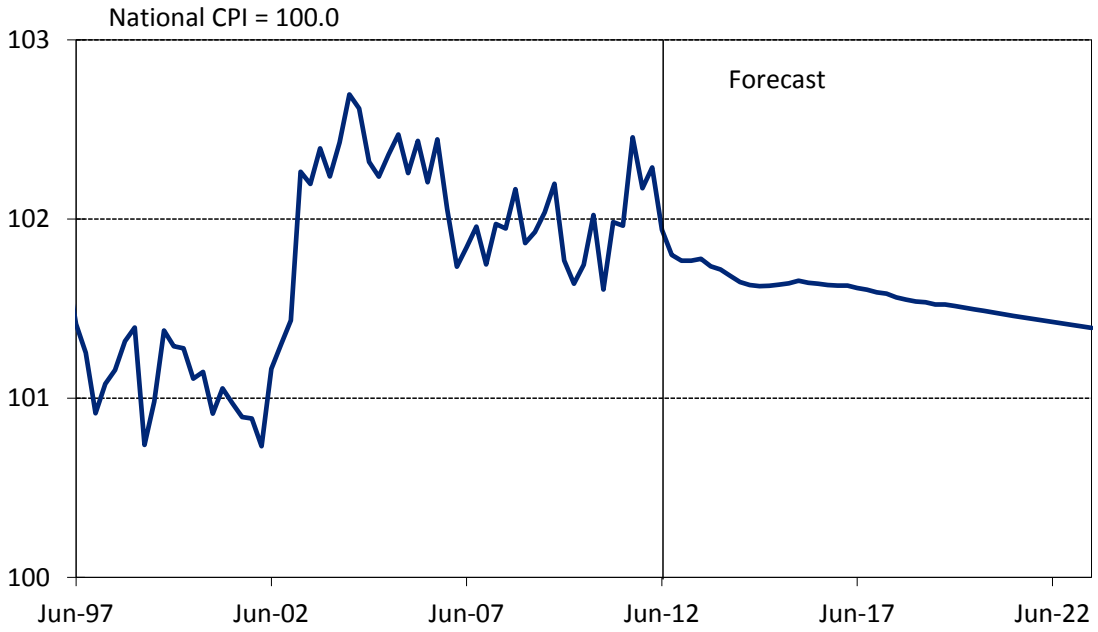
Chart 6.10 compares the South Australian and Australian CPIs.

The broad downtrend in South Australian prices relative to Australian prices was briefly interrupted in the early 2000s due to Adelaide "having increases in housing and transportation costs that were well above the weighted average of eight capital cities for those two groups" at that time (see the ABS March quarter 2003 release[3]).

Apart from that one-off, the description above of the trends in Victoria relative to national prices mostly also hold true for South Australia as well.

[3] Available at http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/5125EE0D0ED3EA4ACA256D1100028280/$File/64010_mar%202003.pdf

Chart 6.10: The South Australian CPI as a ratio to the Australian CPI



Source: ABS, Deloitte Access Economics' macroeconomic model

With its relatively weaker economic outlook, Chart 6.9 earlier shows that South Australia is expected to see the lowest price growth over the next five years, at just on 2.5% per annum, as weaker demand growth limits price pressures.

6.5 The outlook for wage growth in Australia

If the RBA is to aim for 2-3% inflation over time, and if labour productivity averages around 1½% a year, that points to wage gains of 4% a year as a sensible outcome.

WPI growth recently returned close to its longer term average, with gains in the past year of 3.9% in the private sector and 3.2% in the public sector, for an overall gain of 3.7%. That is a close to historical rate of wage growth, although pressures on State and Federal Budgets mean that it is the weakest public sector wage growth in a decade, and Deloitte Access Economics projects that the latter will stay low for a while.

Although private sector wage growth is close to its longer term average, it is unlikely to be gathering too much pace in the short term given some sectors are cutting their headcount. That remains true in manufacturing, and that sector is unlikely to be return to strength any time soon. Similarly, retailers are still shedding jobs, and remain on the defensive.

This good news on productivity is good news for the inflation outlook as well. It may not be enough to mean labour costs will be helping to actively reduce inflation risks, but it does say that labour costs now look rather less likely to be an upside inflation risk over the next couple of years.

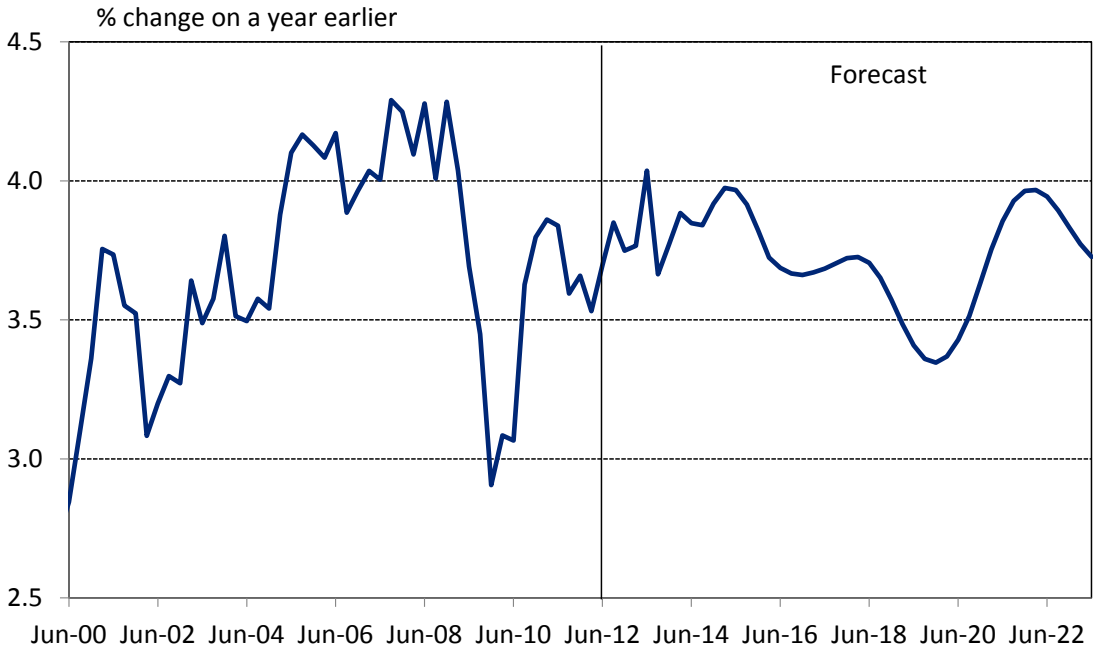
Then there are several sectors which are likely to weigh on the short term outlook for wages, including road transport and construction (the latter has been doing well, however companies are more worried about costs than they've been for some time. Additionally, the most labour intensive bit of this sector is housing construction, and housing construction activity is weak).

Finally, business surveys are suggesting that employers are quite cautious on the wage front, which is not surprising amid the more modest news on profits evident of late. Add all that together, and it's hard to see a sectoral spark for wages in the short term.

Yet there are some factors pointing to underlying wage pressures. In part that is because unemployment remains very low, with the pickup in the pace of baby boomer retirement generating supply side pressures on job markets even though migration has also lifted a little. In some sectors the increase in productivity gains now becoming evident may put pressure back on employers to share more of those gains with employees (though we note the important caveat that wages have run substantially ahead of productivity for a long time). Finally, some sectors are seeing more by way of industrial relations tensions.

On balance, although DAE forecasts wage growth to lift from here, however the lift will be gradual, with the WPI projected to increase modestly from its current pace of growth to something closer to 4% in 2013-14 and 2014-15 (as evident in Chart 6.11).

Chart 6.11: WPI forecast growth

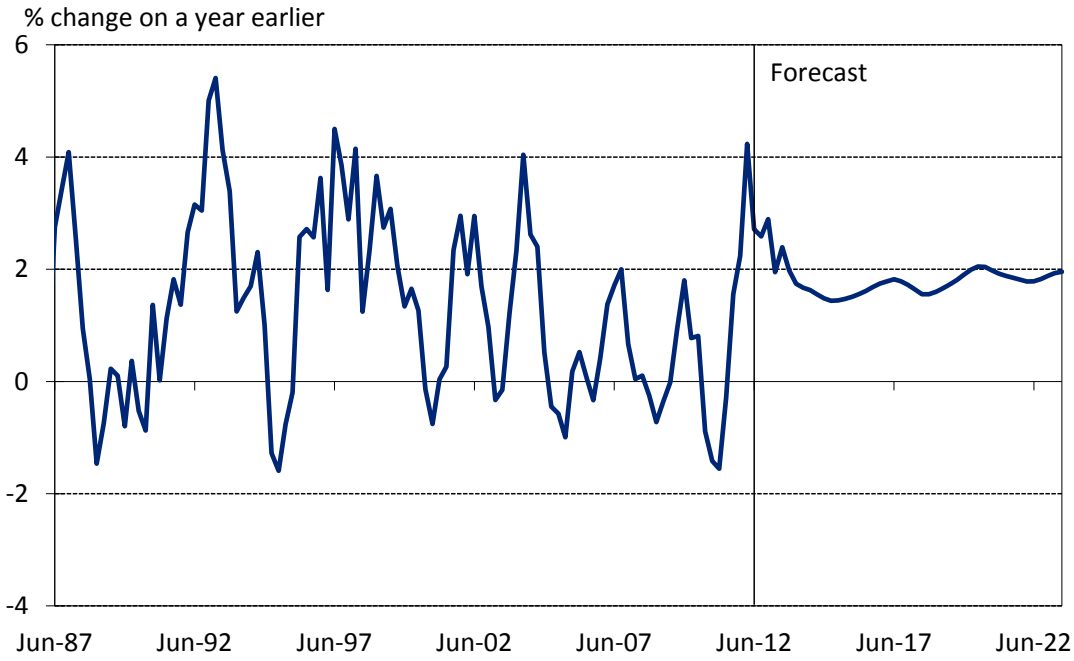


Source: ABS, Deloitte Access Economics' macroeconomic model

For some time now the most concerning component of the inflation outlook has been labour costs. Although wage growth has been relatively restrained, Australia's productivity performance has been so poor that the effective cost to businesses of workers has been rising relatively rapidly. However over the past year there has been reason to hope that this may be about to turn around as companies focus on reducing costs and mining investment comes

onstream. Indeed, there has already been a marked turnaround in recent productivity performance, and DAE expects this trend to continue over the next few years.

Chart 6.12: Productivity growth (change on a year earlier)



Source: ABS, Deloitte Access Economics' macroeconomic model

Table 6.1: National wage forecasts

Financial year nominal wages forecasts

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Wage price index	3.6	3.9	3.8	3.9	3.8	3.7	3.7	3.5	3.4	3.7	4.0	3.8
Average weekly ea	4.3	4.6	3.8	3.9	3.8	3.7	3.7	3.5	3.4	3.7	4.0	3.8
Ordinary time earn	4.5	4.1	4.3	4.4	4.4	4.3	4.2	4.0	3.9	4.2	4.4	4.4
Unit labour costs	2.5	1.5	2.2	2.7	2.8	2.4	2.6	2.4	1.9	1.7	2.2	2.2

Financial year real wages forecasts

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Wage price index	1.3	1.4	1.2	1.2	1.1	0.9	1.0	1.2	0.9	0.9	1.3	1.3
Average weekly ea	2.0	2.1	1.2	1.2	1.1	0.9	1.0	1.2	0.9	0.9	1.3	1.3
Ordinary time earn	2.2	1.6	1.7	1.7	1.7	1.5	1.5	1.7	1.4	1.4	1.7	1.8
Unit labour costs	0.2	-0.9	-0.3	0.0	0.1	-0.3	-0.1	0.1	-0.6	-1.1	-0.4	-0.2

Source: ABS, Deloitte Access Economics' Labour Cost model

7 General labour cost growth across States

Current developments have different implications across different industries, which is turn implies differing regional effects due to the relative importance of different industries in each State.

This chapter discusses the general outlook for wages for Victoria and South Australia as a whole.

Unlike the resource rich States of Western Australia and Queensland, these two States have less to gain from the current mining boom – particularly as the key mining development in South Australia, the expansion of Olympic Dam, has been scaled back and put off for some time. That implies that Victoria and South Australia are seeing fewer of the current economic positives affecting this nation and its labour markets, while the negatives of higher interest and exchange rates have hurt manufacturers in both States, holding back overall wage growth in both.

That points to fewer wage pressures in Victoria and South Australia than in some other States – continuing a trend that is already evident.

Table 7.1 provides a summary of State WPI forecasts to 2022-23 in real and nominal terms. Additional measures showing growth less the impacts of productivity growth are also given.

Table 7.1: State WPI forecasts

Financial year changes in nominal Wage Price Index forecasts

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
National	3.6	3.9	3.8	3.9	3.8	3.7	3.7	3.5	3.4	3.7	4.0	3.8
Victoria	3.5	3.5	3.5	3.7	3.7	3.6	3.8	3.5	3.3	3.7	4.0	3.9
South Australia	3.4	3.4	3.6	3.7	3.7	3.6	3.6	3.5	3.4	3.7	4.0	4.0

Financial year changes in real Wage Price Index forecasts

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
National	1.3	1.4	1.2	1.2	1.1	0.9	1.0	1.2	0.9	0.9	1.3	1.3
Victoria	1.1	1.2	0.9	1.0	1.1	0.9	1.1	1.1	0.9	1.0	1.3	1.4
South Australia	0.7	1.4	1.1	1.0	1.0	0.9	1.0	1.2	0.9	0.9	1.4	1.5

Financial year changes in State nominal productivity adjusted Wage Price Index

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
National	0.9	1.1	2.4	2.4	2.2	1.9	2.0	1.8	1.4	1.7	2.1	1.9
Victoria	1.0	1.9	2.0	2.0	2.2	1.9	2.0	2.2	1.5	1.7	2.2	2.0
South Australia	1.5	1.1	3.4	2.7	2.7	2.4	2.8	2.5	2.1	2.4	2.9	2.6

Financial year changes in State real productivity adjusted Wage Price Index

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
National	-1.4	-1.3	-0.2	-0.3	-0.4	-0.8	-0.6	-0.5	-1.1	-1.0	-0.5	-0.6
Victoria	-1.3	-0.3	-0.5	-0.7	-0.4	-0.8	-0.6	-0.2	-0.9	-1.0	-0.4	-0.5
South Australia	-1.1	-0.8	0.9	0.1	0.0	-0.3	0.2	0.3	-0.3	-0.3	0.3	0.2

Source: ABS, Deloitte Access Economics' macroeconomic model

7.1 Technical notes

State forecasts of WPI are mainly driven by the different industry structure and economic climates of individual jurisdictions. However, they are also affected by a number of technical points that should be borne in mind:

- Unlike the national accounts, State accounts do not produce output estimates on a quarterly basis, only in annual terms. Those figures released each quarter some State final demand (consumption and investment) and some partial international trade measures. The other components of output, notably estimates of interstate trade, are estimated by Deloitte Access Economics using its own in-house methodology. This creates quarterly historical estimates of State output, which use (in part) historical job levels by industry. With the release of annual State accounts, these growth rates can change significantly, both because of the inclusion of more data into the modelling, but also due to often very significant revisions in the ABS' estimates of these components of State output. This can change historic estimates of growth, particularly for smaller States and Territories.
- Employment patterns are currently being revised to match trends uncovered by analysis of 2011 census data. This may see significant changes in employment measures that may differ from State to State.

In general, these impacts are not particularly significant, though they are a reminder that State level results are subject to greater caveats than matching Australian aggregates.

7.2 Victorian wage growth

In brief, Victoria has been on the wrong side of two speed economy pressures, with an above-average share of industries adversely affected by a strong $A (manufacturing, agriculture, higher education) and by relative strength in interest rates (housing construction and the retail sector).

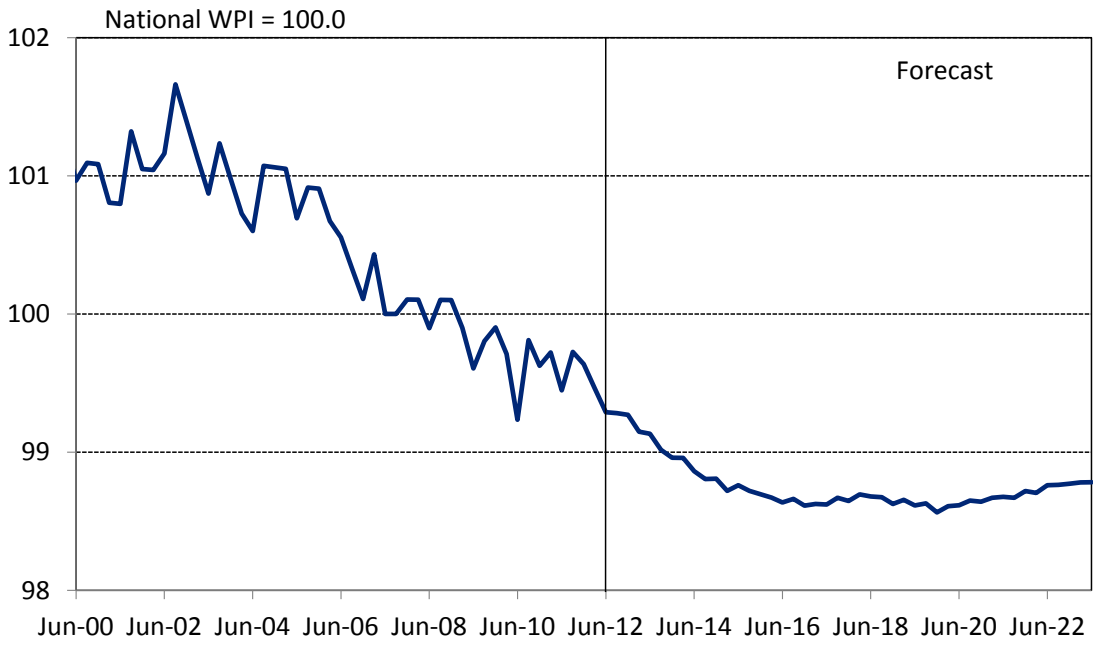
Chart 7.1 maps Victoria's WPI relative to that for Australia as a whole. As is true of consumer prices, wages in Victoria have risen more slowly than they have in Australia as a whole over the past decade. That trend reflects the relative concentration of economic strength in the resource States, which has added to both price and wage pressures in those jurisdictions relative to Victoria.

Deloitte Access Economics' earlier expectation had been that Victorian wage growth could pick up relative to the national figure, in part due to a lift in construction wage growth in the State. In practice, and apart from a brief flurry at the start of 2011-12, recent quarters have seen Victorian wage growth falter once more relative to its national counterpart.

Moreover, Deloitte Access Economics' estimates of Victorian economic growth relative to the matching national figure for Australia have seen a further erosion of this State's 'market share' of the nation.

Looking ahead, that has led us to the view that Victorian wage growth may not see the earlier relative recovery that we'd expected – the momentum remains the other way.

Chart 7.1: Victorian WPI relative to national WPI



Source: ABS, Deloitte Access Economics' macroeconomic model

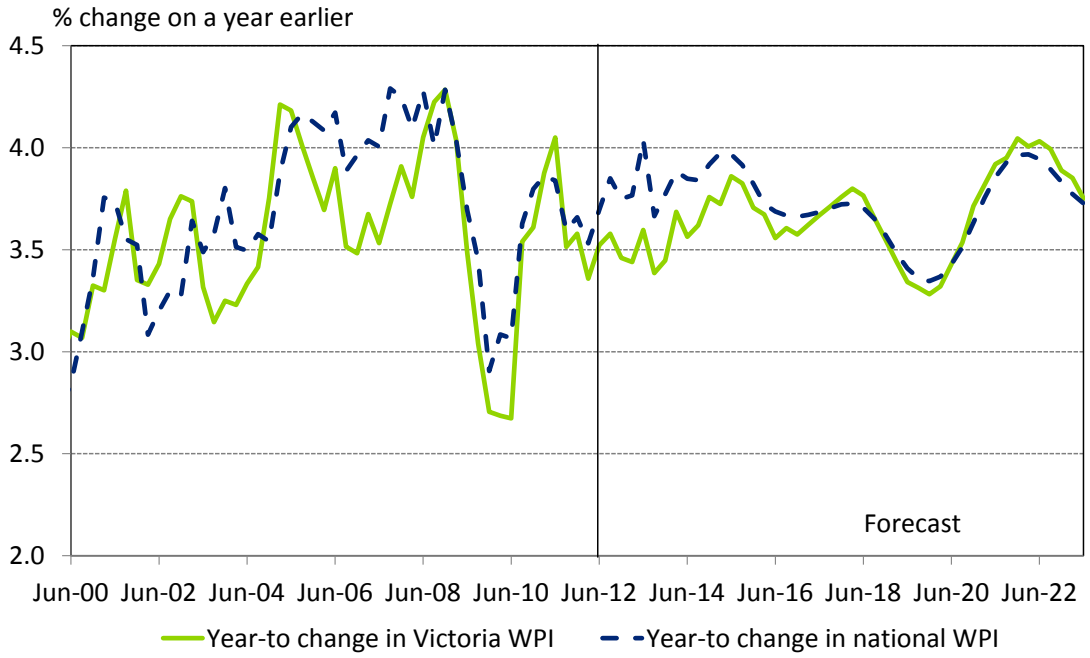
That said, and as Chart 7.1 shows, just as the early part of the mining boom favoured the economic strengths of the resource states, recent falls in key commodity prices and the ongoing slowdown in the Chinese economy are likely to result in greater headwinds for wages in Queensland and Western Australia than in Victoria. That is projected to lead to the growth rate of Victorian wages level pegging with the national rate from 2016 onwards.

That is really down to two factors:

- Despite fears of an impending slowing in the mining boom as China's economy stutters, 'two speed troubles' are still a negative for Victoria's industrial base. The dollar is expected to ease back, but still remain at a level that will hurt manufacturing.
- The impact of strength in wage gains in mining and in engineering construction will be rather more in evidence in the rest of Australia than in Victoria itself. Victoria's construction sector wages have been a strong contributor to overall growth, but growth is shifting away from the residential side of construction (which is Victoria's strength) to engineering construction in other States.

Accordingly, and as Chart 7.2 shows, the growth in Victorian WPI is expected to remain at around 3.5% per year across the next eighteen months or so, before then accelerating to re-join national wage rate. A combination of easing currency pressures, stabilising economic growth and catch-up to other States will see the gap eventually begin to close and State WPI growth to increase.

Chart 7.2: Victoria general labour cost growth



Source: ABS, Deloitte Access Economics' macroeconomic model

Growth rates should be in line with the national rate thereafter, with the two moving closely in line from that point on.

7.3 South Australian wage growth

South Australia has suffered the same negatives as Victoria, but did not benefit from either the strong housing construction sector its neighbour enjoyed or (despite much promise) from the mining boom that has boosted wages growth in Queensland and Western Australia.

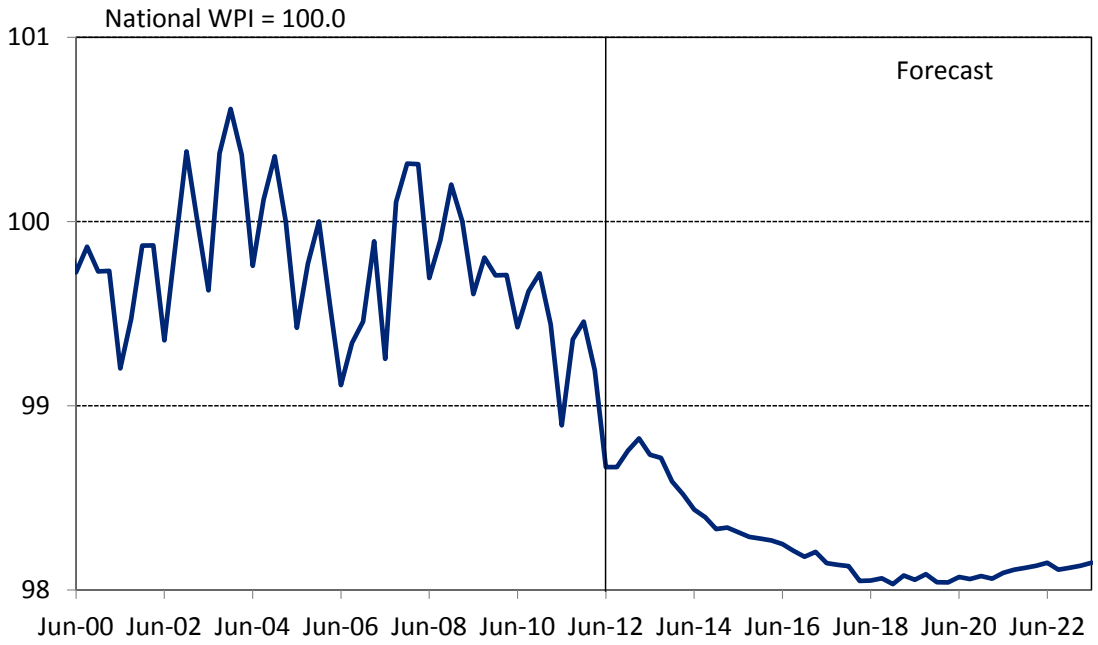
With manufacturing one of the key areas of weak wages growth, the importance of the sector to South Australia's economy has been a key reason why the State's WPI growth has grown a little less rapidly than the comparative national measure.

Yet those general trends might obscure the fundamentally interrelated nature of wages across industries. Overall the manufacturing sector has been slow WPI growth in recent years, most notably so in 2009 as the main impacts of the GFC dragged down the performance of the sector, but that followed a period where manufacturing wages – caught in competition with buoyant mining and construction wages – grew relatively rapidly, and South Australia's WPI growth actually exceeded the national average, even as the State's output growth rate lagged behind the rest of the country.

The swings in manufacturing's fortunes drove South Australia's WPI growth, which slipped from nearly 5% in 2007 to just half that pace in 2009. More recent manufacturing sector wage weakness has been more specific to South Australia (and less evident in Victoria where competition from other industries may be keeping manufacturing wages relatively buoyant), driving local WPI growth back below the national average.

That trend may be seen in Chart 7.3, which compares the WPI for South Australia to its Australian counterpart.

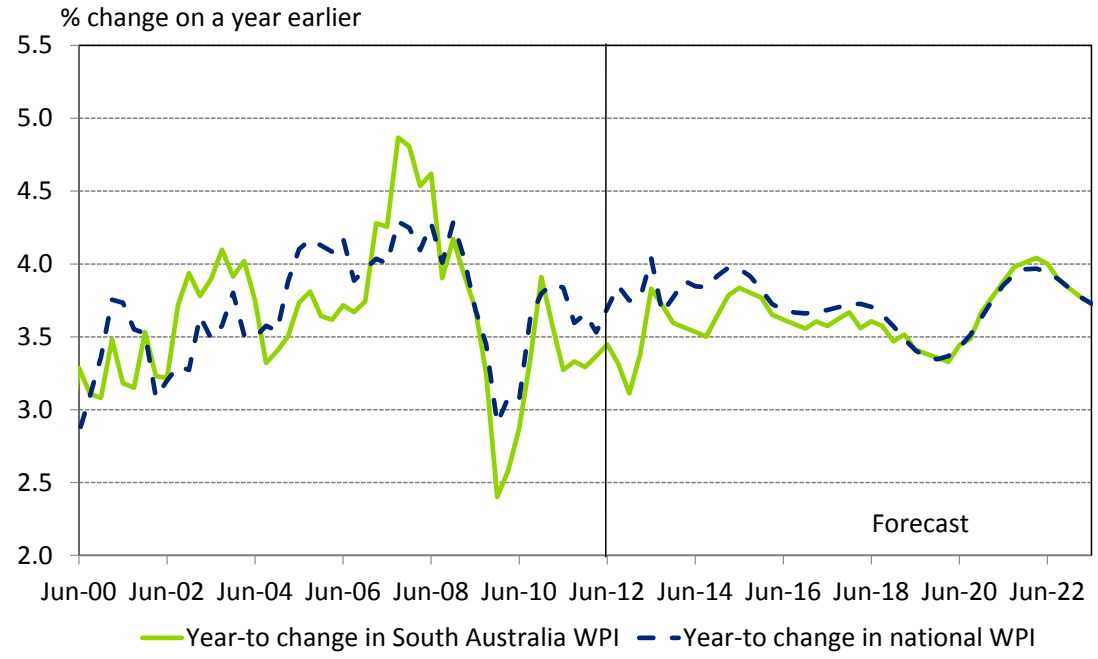
Chart 7.3: South Australian WPI relative to national WPI



Source: ABS, Deloitte Access Economics' macroeconomic model

Looking ahead, competition for workers between both States and industries means South Australia's wage growth will need to remain reasonably in touch with the national average.

Chart 7.4: South Australia general labour cost growth



Source: ABS, Deloitte Access Economics' macroeconomic model

On the other hand, the State's manufacturing sector is forecast to continue to struggle with exports limited by the high $A, even though the currency is projected to ease back over time.

On balance, South Australia's lack of strong wages gains in engineering construction and mining, as well as a continued decline in its overall economic importance to the country, will mean growth rates will be lower than the national average (as shown in Chart 7.4 above) for the next few years. As the mining boom eases and the currency eventually declines to more helpful levels the gap between growth rates will tend to ease.

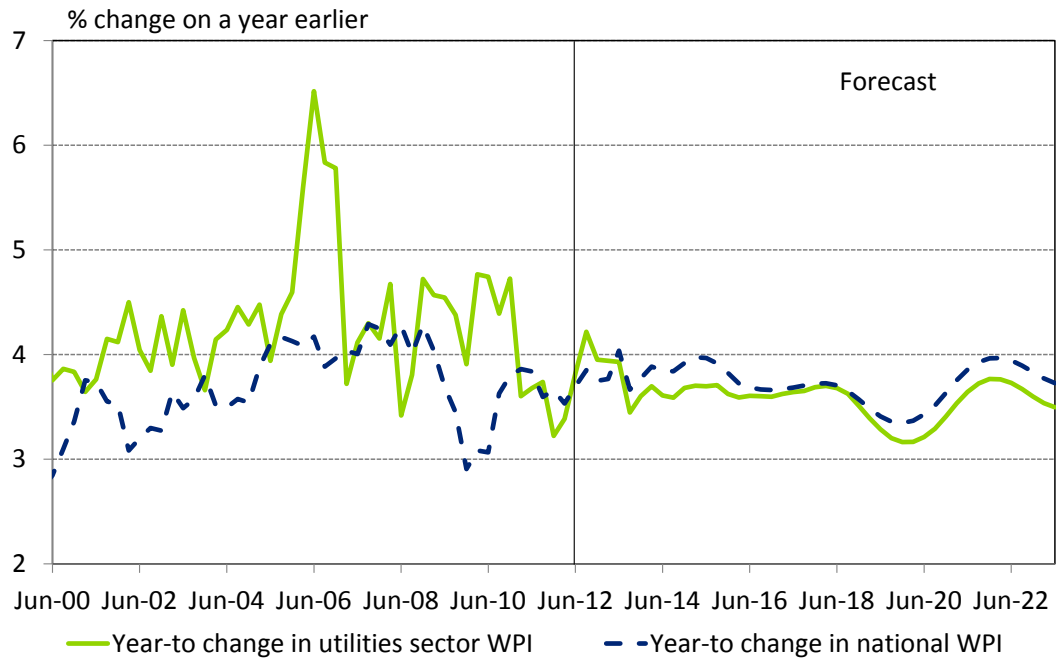
8 The national outlook for wage growth in the utilities sector

This chapter discusses the wage growth outlook for the utilities sector for Australia as a whole.

8.1 Strength in relative wages in the utilities in recent years

Subject to the caveat that the relatively small size of the industry (about 1.3% of total employment) means the wages data is quite volatile, the data indicates that, as Chart 8.1 shows, until recently growth in the utilities WPI had run consistently ahead of the national average across the period that WPI data has been published.

Chart 8.1: Wage growth nationally and in the utilities



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

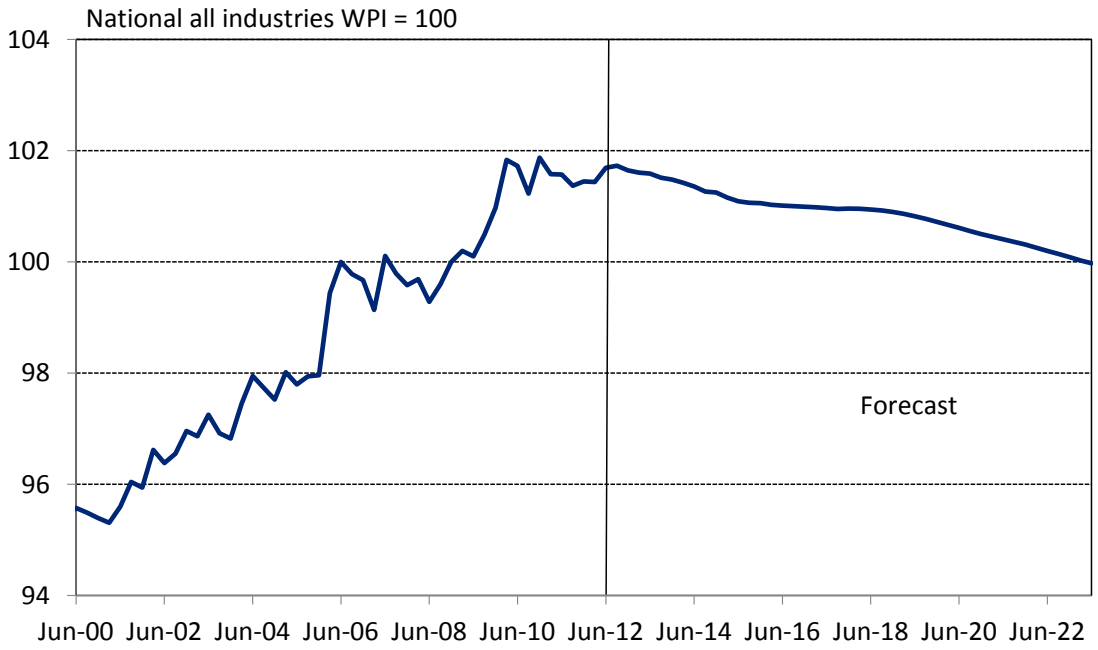
From 2002 to 2008 this relative strength in wage gains in the utilities occurred at a time when Australia's rate of wage increase itself accelerated. Even after the national wage growth rate slipped sharply in 2009, utilities growth stayed quite high and has come down more slowly.

Chart 8.2 illustrates the relative strength of utilities wages more clearly by comparing the level of the utilities WPI to the overall WPI.[4] Over the decade to 2010 the utilities WPI grew by 6%

[4] Note this is a comparison of two indexes both set to equal 100 in 2008-09 – it does not mean wage levels are much the same in the utilities as the national average.

more than overall wages, with a very consistent level of relative increase over that period. However, this increase then stopped completely, and even declined (if only marginally).

Chart 8.2: Utilities WPI relative to national WPI



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

There were a number of reasons for the general acceleration in national wage growth over the decade to 2010, but most revolve around a strong economy and the resultant pressure on prices and on the labour force:

- Job growth averaged 2.2% a year, almost double the 1.2% a year evident across the 1990s.
- That stronger economy pressured a range of prices, including the price of labour, with rising inflation also leading to rising wage growth.

However, for the utilities sector the composition of the job boom was particularly significant. Demand for blue collar occupations did far better in the past decade than they had over the previous generation. As a result, a number of trades saw shortfalls in available labour, driving labour 'prices' higher.

Wage growth was most notable in mining and in sectors where miners were key alternative employers (such as construction and the utilities) or where mining strength induced strength in that sector itself (with construction again a good example).

Mining employment is almost three and a half times bigger today than a decade ago, while construction jobs have lifted almost 300,000 to one million (meaning one in eleven workers in the workforce are in construction jobs, the highest such share Australia has ever recorded).

Similarly, wage growth was strongest in resource States such as Western Australia, Queensland and the Northern Territory.

Or, in other words, demand for employment within the utilities lifted, and it also rose sharply in sectors competing with the utilities for its skilled workforce.

As a result of links to these fast growing sectors and States, as well as its own growth in employment, the utilities sector therefore saw relative wages increase steadily across much of the past the decade, as seen in Chart 8.2 above.

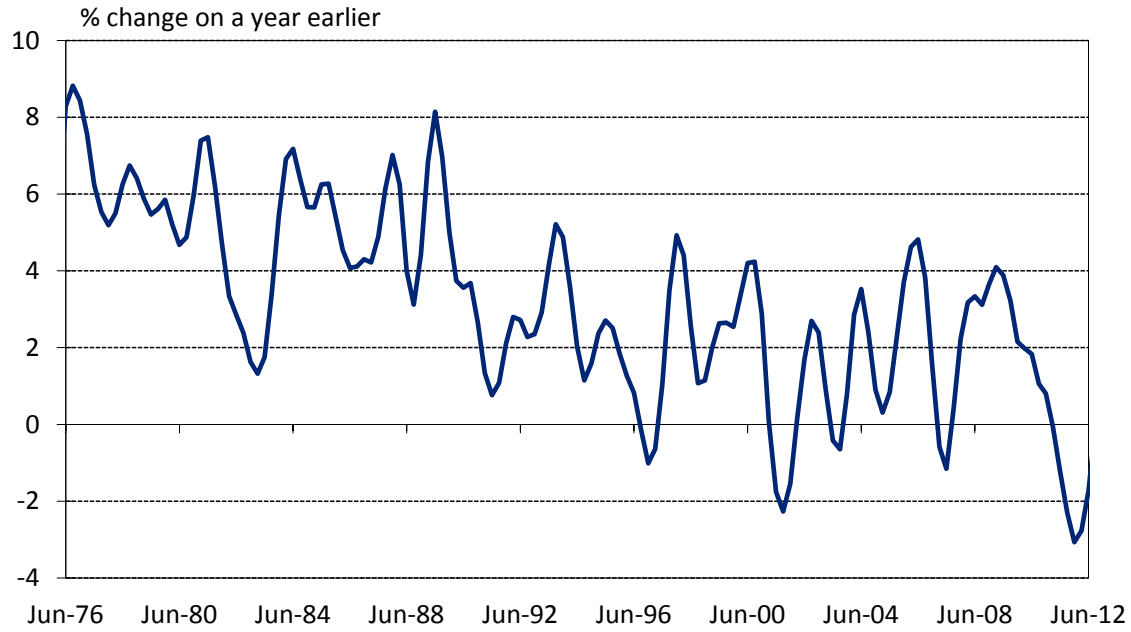
This was true in the period of strong economic growth from 1999 to 2008, but was even more evident as the Australian economy in general (and mining and engineering work in particular) began to recover from the global financial crisis, with the WPI in the utilities sector rising by about 2 percentage points relative to the national WPI from mid-2009 to early 2010.

As is also evident in Chart 8.2, however, over the last year or two wage gains nationally in the utilities sector have fallen slightly below the national rate (which was itself slowing).

This easing partly reflects a degree of unwinding of previous gains, as well as weakness in the wider utilities sector. The utilities sector itself contracted in size through 2011, an unusual situation by historical standards, though 2012 to date has seen a partial recovery.

That weakness is even more notable in the electricity component of the wider utilities sector. Using trend data, the electricity sector is amid its longest and sharpest contraction in output since records began on a consistent basis in the mid-1970s. Output levels have been falling since late 2010 – and are currently 3% below their peak – while the other components of the utilities sector have seen output increase over this period.

Chart 8.3: Year-to growth rates in trend electricity output



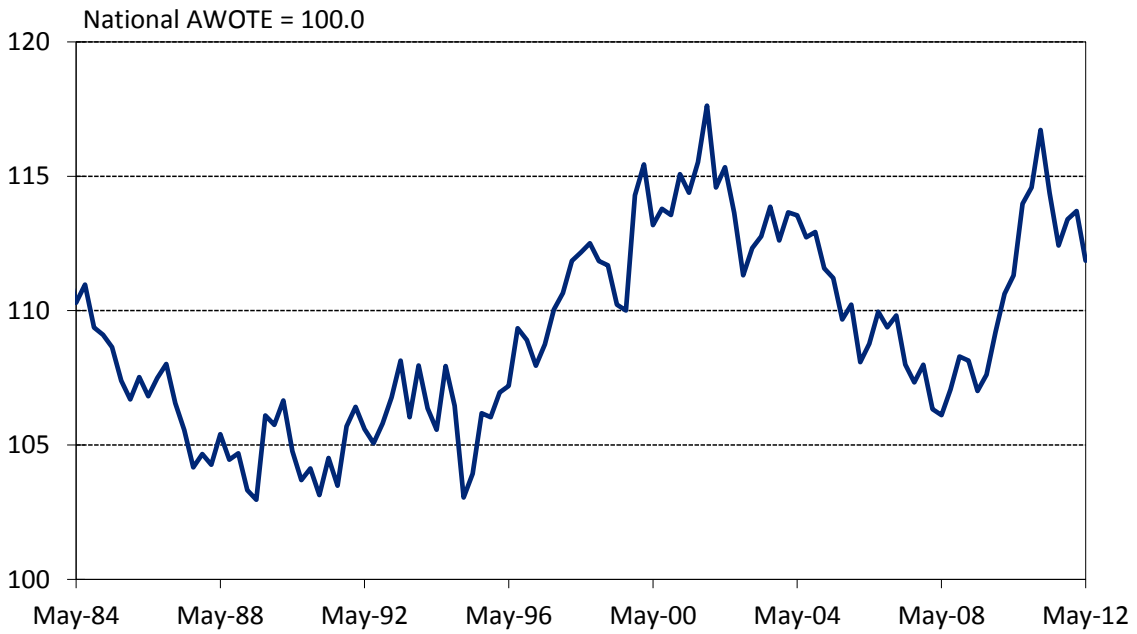
Source: ABS

Overall, we see this as a turning point in relative utilities wages – albeit a modest one – with the sector starting to see its WPI growth lag behind the average.

Indeed, it is arguable that the peak was reached a few years ago. However, with the outlook for some competitor sectors for workers in the utilities either still very weak (as is true of manufacturing) or at risk of easing beyond a peak in resource-related construction in mid-2014 (as is true of construction itself), some of the factors that drove a relative increase in wages in this sector over the past decade are likely to weaken or partly unwind over the next decade.

It is worth noting that the period over which the WPI has been available is similar to the period over which China and other emerging economies have had a growing impact on Australia, including on the wages able to be earned in the utilities sector. Hence it is useful to look at the WPI comparison seen in Chart 8.2, but to also go back further in time using an AWOTE-based comparison (seen in Chart 8.4). The latter's longer timeframe helps to show the impact of long cycles (rather than the secular trend seen over the shorter timeframe shown Chart 8.2).

Chart 8.4: The utilities AWOTE relative to the national AWOTE[5]



Source: ABS, Deloitte Access Economics

Moreover, the factor which underpinned both the last boom and the current one – very high prices for Australia's key exports such as coal and iron ore – were never likely to be permanent.

Those prices have already fallen notably in recent months, and there are reasons to believe that, even if China and India keep growing fast, the world's miners may dig faster still, bringing commodity prices down further over coming years, and gradually slowing the long running boom in key Australian sectors as a result.

[5] Data before August 1994 has been spliced using the previous definition of the utilities sector.

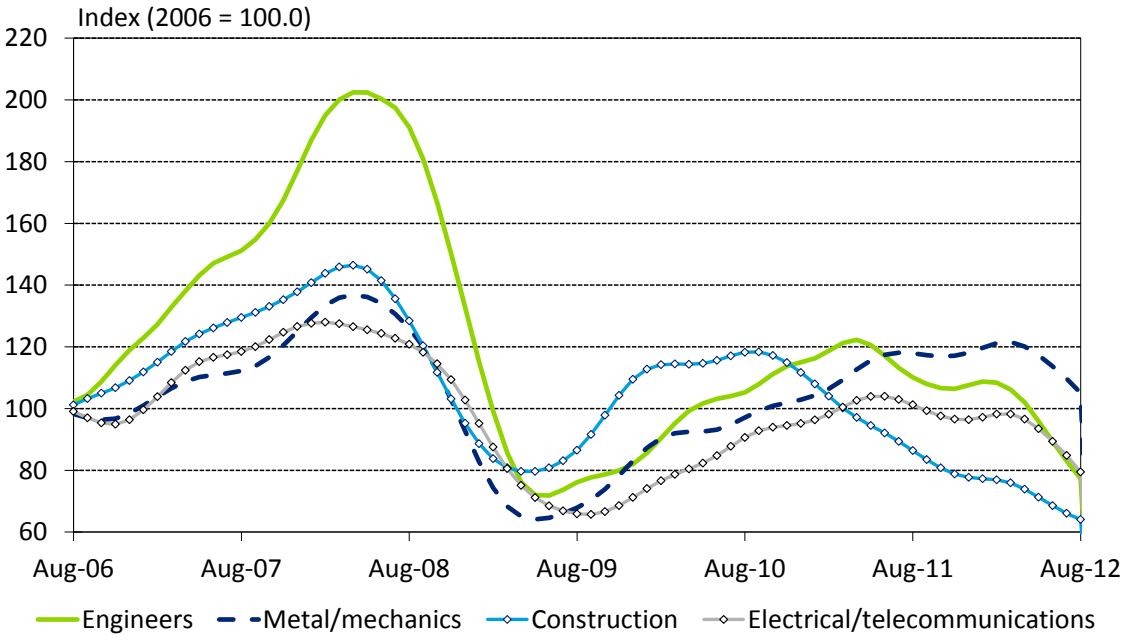
8.2 Demand pressures on the utilities sector and its competitors

Chart 8.5 below shows vacancies data compiled by the Federal Department of Education, Employment and Workplace Relations (DEEWR), and focuses on vacancies in the trades. Several relevant trades are noted – engineers, metal workers and mechanics, construction workers, and electrical and telecommunications workers.

The performances of the construction and mining sectors are readily evident in the data – with rapidly rising demand for construction and related workers ahead of the GFC, followed by a sharp decline and subsequent rebound.

In construction that rebound in vacancies has been ebbing away across the past two years while the remaining occupations in the chart below continued to rise until early 2011 and then stabilised across the remainder of that year. That split in performance was driven by the different strengths across components of construction, with weak housing and commercial construction being offset by the continuing strength in engineering construction demand for the mining sector.

Chart 8.5: Trades vacancies



Source: DEEWR Vacancy Report

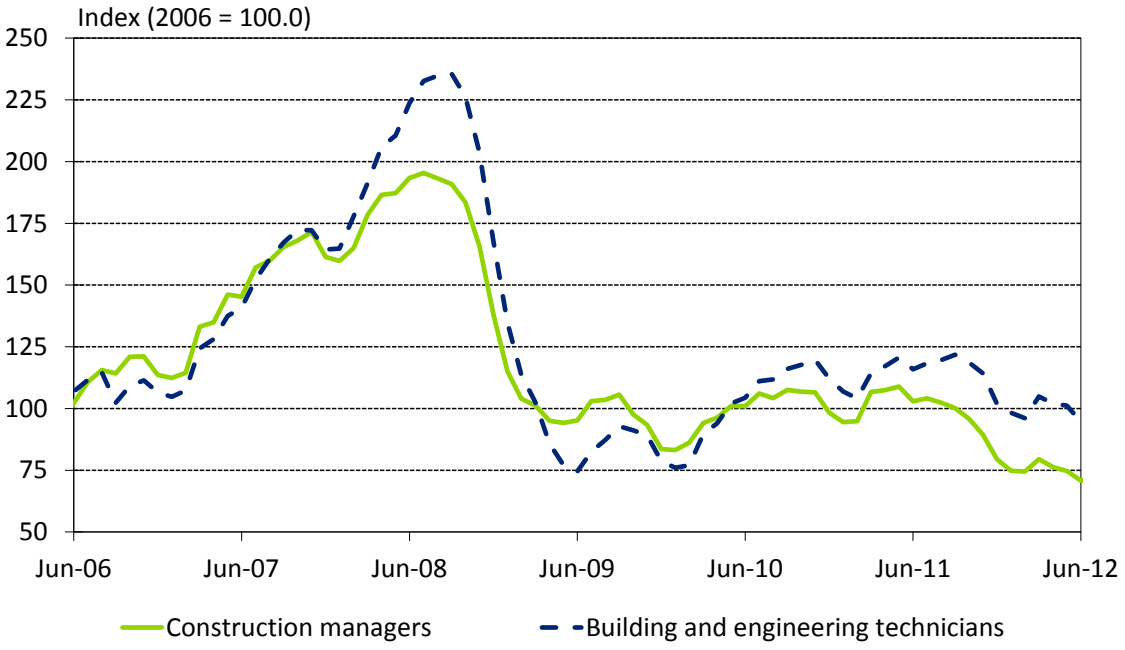
Note: In December 2011 the previous indices, based mainly on newspaper ads, were discontinued and replaced by new indices based on popular job search websites. Data are only available from 2006 for these new indices.

Yet the engineering side too will ease, with the peak in resource-related construction now expected to come in mid-2014.

Even the strongest of these sectors (mechanics) is now starting to fall below the level of vacancies seen in 2006 (that is, below the levels seen as the pre-GFC peak began to drive demand).

Professional vacancies in building and engineering (seen in Chart 8.6 below) have shown broadly the same movements as the trades, particularly when comparing the two construction sector categories, although there are some differences.

Chart 8.6: Managerial and technical vacancies in building and engineering



Source: DEEWR Vacancy Report

Note: In December 2011 the previous indices, based mainly on newspaper ads, were discontinued and replaced by new indices based on popular job search websites. Data are only available from 2006 for these new indices.

First, movements in demand for professional engineers (the building and engineering technicians in the chart above) have displayed stronger demand during periods of relative strength, than have trades vacancies – reflected more recently in a greater level of resilience to the softening labour market. This is likely because the professional category displayed above is more heavily oriented toward the mining sector, whereas the trade category contains a good deal of non-mining occupations.

Second, the upturn in demand for construction managers as a result of Federal stimulus was less notable than that for construction trades, and so too has been the subsequent downturn in response to the latest bout of market weakness. This is to be expected – when a rush of construction work comes in, firms will need a lot more 'hands on' workers than they do site foremen. Similarly, when demand wanes, 'hands on' positions are often the first to go.

Yet even these occupations are seeing declining demand amid the weakness in Europe and developing concerns on the Chinese economic growth outlook. As with the trades vacancies, demand in the broader construction is weaker than the mining intensive engineering sector.

8.3 Comparison with results from enterprise bargaining agreements

Chart 8.7 compares growth in the utilities sector WPI with a number of other wage growth measurements that are produced on a regular basis.

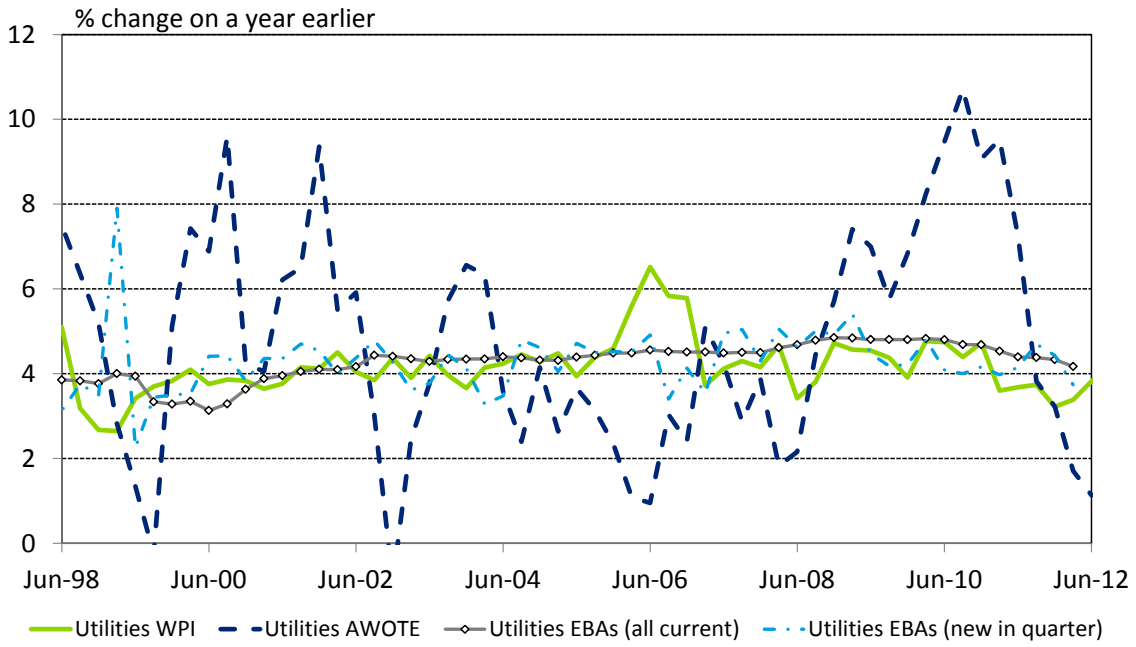
The first measure shown is average weekly ordinary time earnings (AWOTE) for the national utilities sector. As the chart illustrates, the growth in this wage series is particularly volatile, and this volatility limits its use in forecasting.

The next series is the matching measure of wage growth in the utilities, but using the preferred WPI series.

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

- The third series in the chart shows growth in wages under all agreements current during the quarter. We would expect movements in this measure to be broadly reflective of trends in the broader utilities sector – or in other words, when this series accelerates we would expect a similar acceleration in growth in the sectoral WPI.
- The final series shows annual growth that will occur under any agreements commencing in the quarter shown. This series is more indicative of immediate future trends in the first EBA series – if there were to be, say, a sustained decline in wage growth, then that would show up first in new agreements.

Chart 8.7: Measures of utilities sector wage growth



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

In general, growth in new EBAs in the utilities sector is a solid predictor of the level and trend in the WPI in the immediately following quarters, while the AWOTE movements have been almost unrelated to the EBA results over this time:

- Growth in EBA wage rates seen in newly submitted agreements has broadly been between 4% and 5% per year, but they have edged below 4% during 2012. Sectoral WPI movements eased slightly earlier and have been below 4% for around 12 months. Indeed, since 2007 neither measure has drifted much outside a range from 3%-5% annual growth – whereas the AWOTE measure has moved between 1% and 10% over the same period.
- Both EBA measures and movements in WPI have generally trended down since a peak in early 2009, with some late 2011 strength in new EBA movements now having unwound to bring that measure more closely in line with WPI trends.

The current rate of growth in EBAs (4.2% per annum for all agreements operating at the end of March 2012, the lowest rate of increase seen for a decade, and 3.7% for new agreements lodged in the March quarter, itself the lowest increase for five years) will have an impact on wage growth over the medium term – only around one in every ten agreements are re-negotiated in any given quarter, meaning a typical agreement lasts just over three years.

8.4 Forecasts of utilities wage growth

As noted in Chapter 6, the tide is already starting to turn – although the trend is not significant. Deloitte Access Economics continues to see the utilities sector experiencing wage gains in line with or slightly lower than those in the broader economy in coming years.

Looking longer term, the trend shown in Chart 8.2 earlier suggests that around a third of the outperformance in utilities wages will be unwound across the next decade. Indeed, as that chart shows, the relative wage gains in the utilities sector stalled around two years ago, and there is some evidence that the forecast partial unwinding of earlier strength has already begun.

Data for the WPI (total hourly rates of pay excluding bonuses) from the ABS shows Australian utilities WPI grew by 5.1% over the eighteen months to the latest available period (June 2012 – an annualised rate of 3.4% across that eighteen month period), while growth across all industries measured 5.5%. The data also shows lower growth across calendar year 2011, with utilities growing by 3.2% compared to 3.7% growth across all industries.

Indeed, since March 2011, year to growth in the utilities sector has been less than that seen for the all industries average in four out of the six quarters, and December 2011 saw the lowest year-to growth rate for wages in the utilities sector since 1999.

That is not to say that the utilities sector is immune from broader wage pressures – it should be noted that the most recent quarterly data for utilities WPI growth (for the June quarter 2012) was marginally stronger than the average, growing by 3.8%. However, overall gains in national utilities wages growth are projected to lag broader national wage growth marginally over the medium term (see Chart 8.1).

As the summary results for financial year WPI growth show (see Table v in the executive summary), we still expect annual wage growth in the utilities sector to move within the 3½% to 4% range, averaging 3.7% over the next five years.

9 The national outlook for wages in related industries

This chapter discusses the outlook for wage growth in the construction and administration sectors. These sectors are likely to compete strongly with the utilities sector to attract and retain workers, although that pressure is likely to be offset by some weakness elsewhere in the economy, including from parts of manufacturing.

9.1 Construction

The construction sector has always played a large (and cyclical) role in Australia's economy. When Australia does well, construction grows strongly, and when Australia slows, construction can fall notably.

With overall construction growing solidly in the near term, the sector is currently facing faster than average wage gains over the next couple of years as well. Those gains would likely be greater still if not for the weakness in housing and commercial construction – although competition with the mining sector counteracts some of that weakness. While, for example, few of Australia's retail workers have the skills to move directly to the mining industry, many construction workers who were previously building new shopping centres or office blocks can shift to working on the buildings and infrastructure needed to support the growing resource sector.

That said, even the great strength of the moment in engineering construction and in mining is not permanent. Engineering work, for example, is now projected to peak as a share of Australia's economy in mid-2014.

Moreover, although there is a lot of growth ahead for Australia's mining sector, some miners are losing money, and mining services, previously 'boom central', is now feeling the pressure of cost cutting.

The latter phase is worth discussing further. Having grown stunningly for many years, the pipeline of engineering work yet to be done in Australia has begun to fall. You can see some evidence of that in Deloitte Access Economics' *Investment Monitor* survey, with many projects worth big dollars having been stuck in the same spot in the development cycle for some time now, failing to proceed on to approval and the commencement of construction.

In part that represents concern that earlier projections in and around what Asia's rise may mean for industrial commodity demand may yet prove too optimistic. And in part it's a response to the easing in commodity prices evident in recent times.

Yet there are also some important issues around costs as well. Some of those costs are obvious, including the exchange and interest rate penalties applying to operating in Australia. And some are pretty well known, including the long running boom in mining wages, as well as

the lift in both State mining royalties and the overlay of the new mineral tax, plus the implications for the resources sector of the carbon tax.

Other elements of this equation have been less visible, including the delays around approval processes, and the headlines around the decision to let a temporary migrant workforce form a part of meeting the peak construction needs for Western Australia's Roy Hill project.

The upshot is that some mega-projects that have seemed on the cusp of approval for some time may now stay locked away for longer. None of this will derail the sheer strength of engineering construction in the short term. The latter remains huge, and the dominant driver of Australia's economic growth in the short term. Yet it is a reminder why the strength in engineering construction is projected to reach a crescendo by mid-2014 before then dropping away once more.

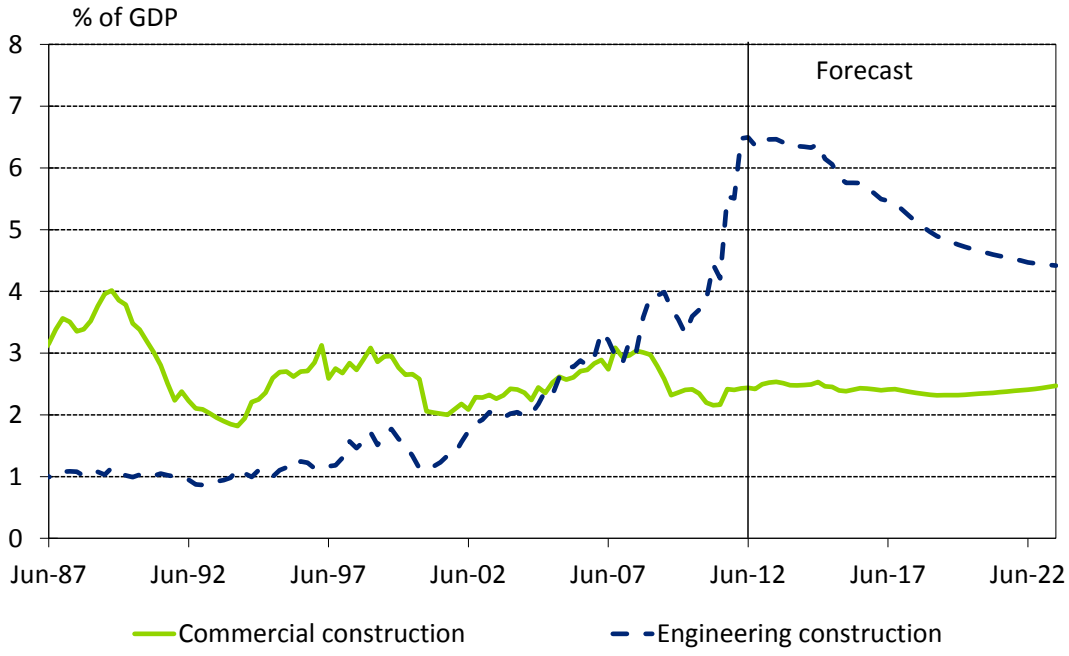
9.1.1 Current WPI projections

As discussed in Section 5.1, and as shown in Chart 9.1 and Chart 9.2 below, the construction sector is experiencing great strength in engineering work, but weakness in commercial construction and (particularly) housing construction.

As Chart 9.1 and Chart 9.2 also show, a solid recovery in housing construction is expected over the next few years driven by lower interest rates, as well as a better pace of land release by State Governments, and continuing growth housing demand from ongoing population growth.

That will help to offset a relative decline in engineering construction as major resource projects now underway reach completion.

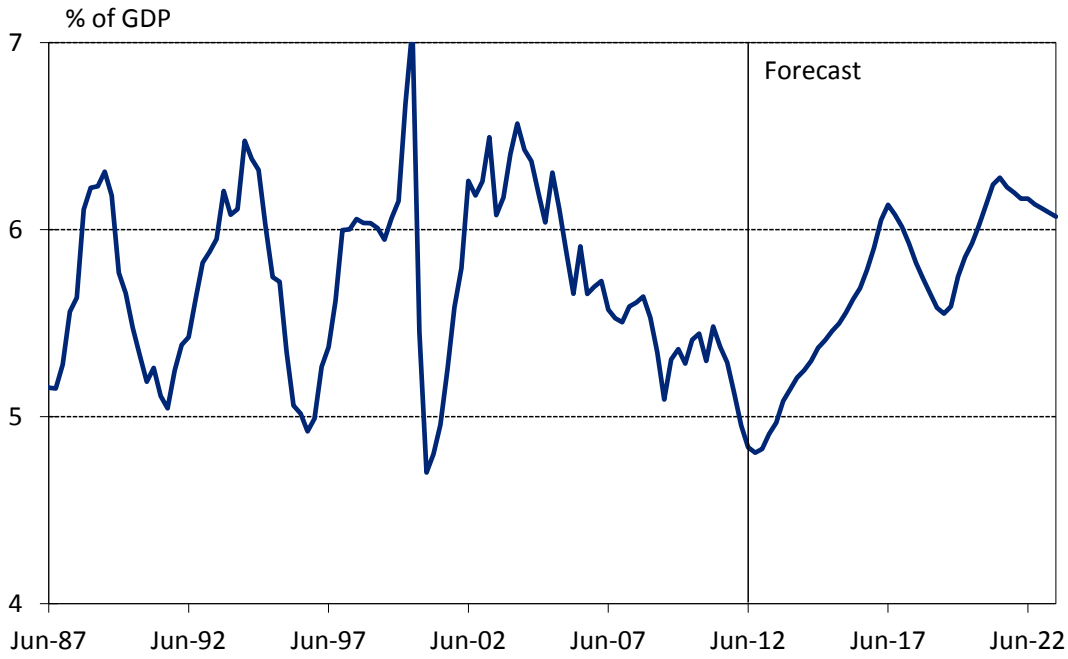
Chart 9.1: Components of construction – commercial and engineering work



Source: ABS, Deloitte Access Economics

In addition, there are also longer term infrastructure needs that lie outside of the mining sector (the National Broadband Network is a good example) which will help to support construction as the investment phase of the resource boom fades.

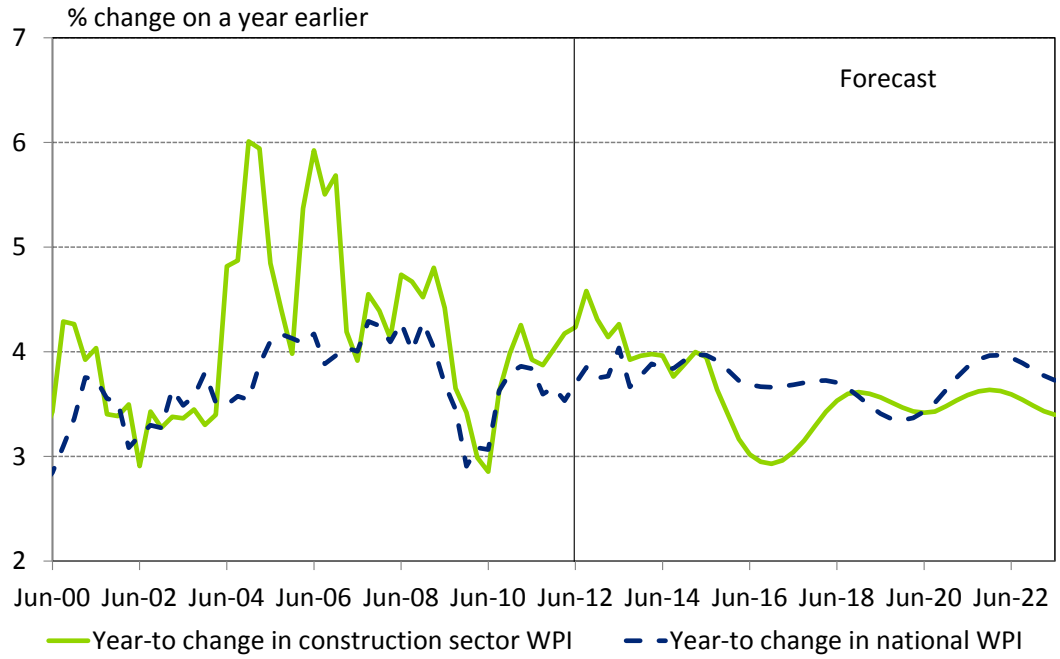
Chart 9.2: Components of construction – housing work



Source: ABS, Deloitte Access Economics

Chart 9.3 shows that wage growth in the construction sector can be quite volatile when compared with the overall WPI.

Chart 9.3: Construction WPI growth forecast



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

Construction wages had outpaced those in the wider economy for some time prior to the GFC, and even in the downturn in 2008-09, growth rates were at or slightly ahead of the average.

The past eighteen months have seen growth rates for construction sector wages remain at around 4% while the general rate across the economy as a whole has been around 3½%. Over the year to June 2012, construction sector wages (measured by the WPI) grew 4.2%, a gain above that for all Australian wages (with the latter at 3.7%).

Over the next 18 months, good growth in the construction sector as a whole, and in engineering construction in particular, is expected to see the construction sector WPI generally continuing to grow at a faster rate than the national WPI.

However, it won't be one way traffic, with large parts of the sector – housing and commercial construction in particular – still feeling a degree of weakness currently.

Moreover, as the current rush of resource related construction begins to peak, and as the negatives facing housing and commercial construction fade, the baton of construction growth will again shift.

As noted above, through 2013 and 2014 a more positive outlook for housing in particular, and to a lesser degree in commercial work as well, is expected to underpin continued solid wage growth. That said, growth in construction sector wages will be more in line with the national average over that time, as the weakening in the pace of engineering activity becomes increasingly evident in 2015 and beyond.

As a result, growth in construction sector wages is expected to remain at or above than the national average through to mid-2015, or until the current rush of engineering construction projects starts to wind down. Wage gains are expected to cool thereafter – including an

expectation of a short term pothole in wage growth caused by the winding up of some major engineering projects – alongside broader wage growth in general and engineering demand in particular.

9.1.2 Comparison with EBA results

Construction sector Enterprise Bargaining Agreements (EBAs) wage outcomes have been on an upward trend since early 2011, with the average rate of increase rising to 6.0% for EBAs lodged in the June quarter 2012 – the highest rate of growth since March 2009.

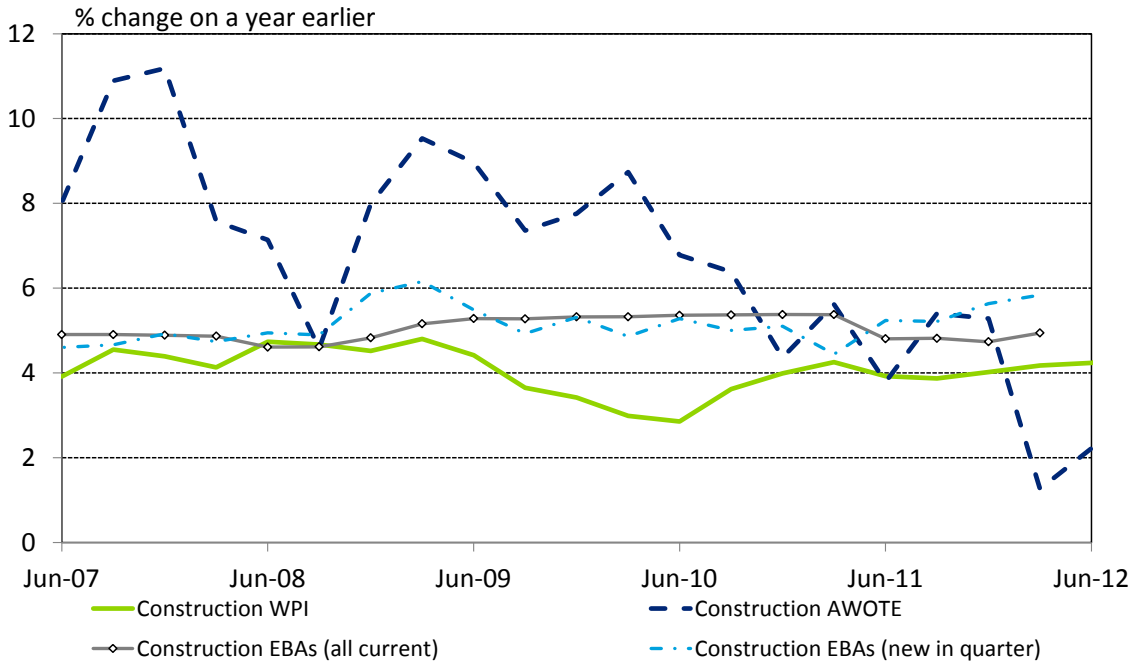
Industrial action by unions in the construction sector also appears to have increased. For example, the construction company Grocon has been in a serious dispute with the Construction, Forestry, Mining and Energy Union (CFMEU), which involved the union blockading a Grocon construction site in the Melbourne CBD for several weeks.

Chart 9.4 shows the outcomes for wage growth in the construction sector as measured by EBAs, WPI and AWOTE.

As Chart 9.4 shows, the recent lift in wage gains under new agreements is now also increasing the average increase under all current EBAs, which has now increased to 5.1% – slightly above its average rate of increase since 2000 (that said, the average increase under all current EBAs remains slightly below its rate of increase in the period following the GFC).

This has meant that WPI results and those from EBAs are now somewhat closer than they were through much of 2009-10.

Chart 9.4: Measures of construction sector wage growth



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

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

9.2 Administration services

9.2.1 Current WPI projections

Over recent years growth in WPI in the administration services sector has lagged well behind the national average, though the volatility in the data means there have been some periods of relative strength.

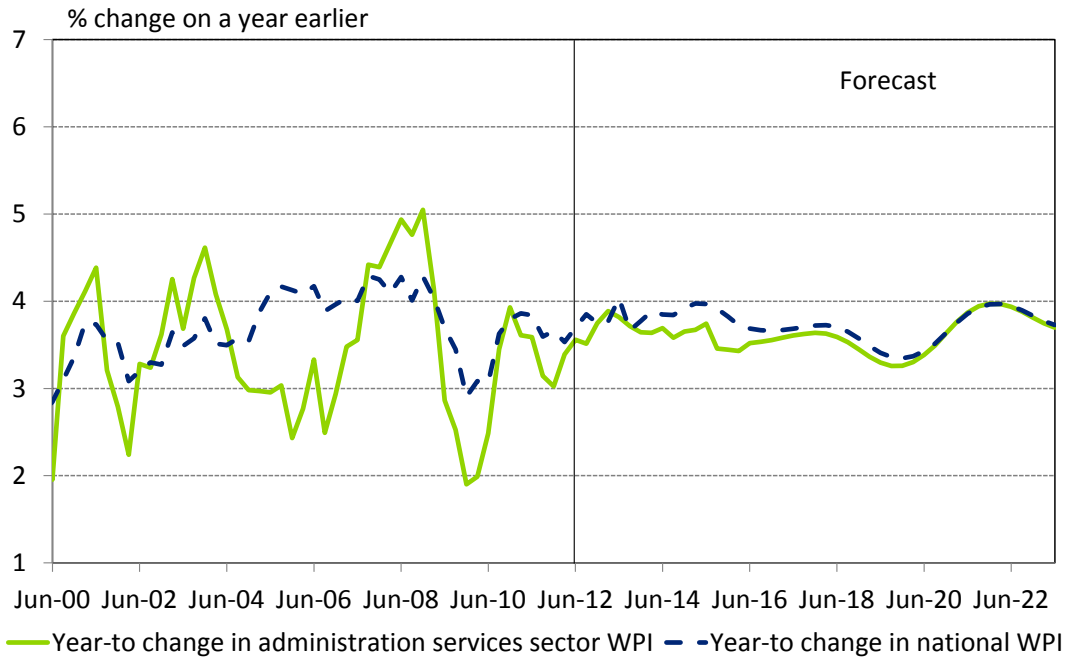
For example, Chart 9.5 below shows some short periods of stronger than average growth in 2003 and 2008, but more significant periods of weaker growth from 2004 to 2006 and again in 2009.

As noted in Section 5.2, this sector of the economy is one where downturns have a proportionately large impact – for example, the downturn in 2009 hit growth in administration services much more than average. However, the sector recovered quite strongly in 2010.

More recently, the sector has weakened again as softness in the labour market reduces demand for employment services, while corporates have been cutting back on some outsourced services to cut costs in the face of weakening profitability.

Looking ahead, recent short term weakness could give way to a brief lift in growth. However, further ahead, the sector's output growth is expected to be a little below the national average.

Chart 9.5: Administration services WPI growth forecast



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

As Chart 9.5 shows, growth in the WPI in this sector has been volatile in recent years, and currently stands at 3.6% in the year to June 2012. That is a little below the national WPI growth of 3.7% over the past year and represents a pick-up in growth from 3.0% over the year to December 2011.

However, the current rate of increase in wages in the administration services sector is well within the wide range observed in recent history – the current growth rate is above the historically low growth rate of around 2% following the GFC and below the growth rate of around 5% in the run-up to the GFC, when the employment market was at its strongest.

This sector contains a significant number of workers on minimum wage levels. As a result, legislated changes to those wage rates will have a more measurable impact on the WPI in this sector than may be obvious more generally.

A 3.4% increase granted by Fair Work Australia in its 2011 Annual Wage Review therefore contributed to the administrative services sector holding its own relative to the national average in the short term.

As part of the 2012 Annual Wage Review, there was an increase of $17.10 per week, the equivalent of a 2.9% increase in the national minimum wage. Although overall wage growth has also slowed, the latest increase in the minimum wage is less than its 2011 equivalent, and hence implies less by way of continuing support to wage growth in the administrative services sector.

More broadly, the outlook for output growth for the administration services sector – a brief lift in growth in the short term followed by slightly below average growth over the medium term – is reflected in the outlook for wage growth as shown in Chart 9.5. Wage gains for the sector are expected to be a touch below the national average in 2012-13, with a slightly wider gap across the medium term as the sector struggles to keep up with the national average.

In addition, the projection for wages across the medium term also reflects Deloitte Access Economics' view that the pace of growth in the administration services sector's wages will be held back in relative terms by the sector lying on the wrong side of the longer term trend towards increased skill differentials in wages and salaries.

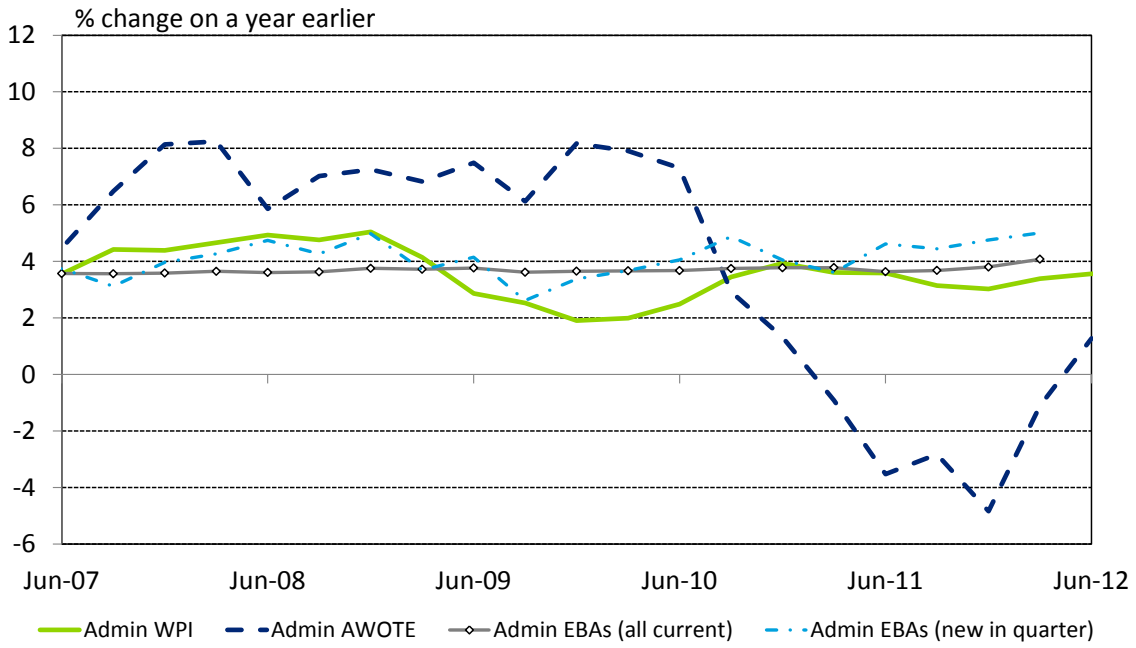
Growth in the sector may also swing towards lower skill components of the sector – such as building cleaning and pest control – which would drive a further wedge in wage gains between this sector and the national average.

That said, the latter phase will not last forever, and wage growth in the administration services sector is likely to move towards tracking the general rate of WPI increase in the longer term.

9.2.2 Comparison with EBA results

Growth in wages under EBAs in the administration services sector has picked up since early 2011.

Chart 9.6: Measures of administration services sector wage growth



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

Slightly fewer than average workers in this sector are covered by EBAs, with coverage under the latter in the sector estimated at around 18% – compared with 19% overall and close to 30% in the utilities sector.

Wage gains in new EBAs have picked up from 3.6% in the March quarter 2011 to 5.0% in the March quarter 2012 and 4.8% in the June quarter 2012. These are one of the fastest rates of growth outside of construction and mining (and faster than the matching gains in the WPI measure for this sector).

As a result, the average increase for all current EBAs has also edged up in recent months to 4.2%. The recent increase in the growth in wages under EBAs for the administration sector is consistent with the recent lift in the WPI for this sector as shown in Chart 9.5 above, with both measures suggesting a degree of upward pressure on wages. The AWOTE data show a different picture to the EBA and WPI data – suggesting that wages fell rapidly through 2011 and have now returned to positive growth.

9.3 Summary results

The forecasts for national and sectoral wage growth are shown in Table 9.1. Forecast components include real and nominal WPI, and real and nominal productivity adjusted WPI.

Table 9.1: National wage forecasts

Financial year changes in nominal national industry sector WPI

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
All industries	3.6	3.9	3.8	3.9	3.8	3.7	3.7	3.5	3.4	3.7	4.0	3.8
Utilities	3.5	3.8	3.8	3.7	3.6	3.6	3.7	3.4	3.2	3.5	3.8	3.6
Construction	4.1	4.1	4.2	3.9	3.3	3.0	3.3	3.6	3.4	3.5	3.6	3.5
Administration ser	3.3	3.5	3.9	3.7	3.5	3.6	3.6	3.4	3.3	3.7	4.0	3.8

Financial year changes in real national industry sector Wage Prices

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
All industries	1.3	1.4	1.2	1.2	1.1	0.9	1.0	1.2	0.9	0.9	1.3	1.3
Utilities	1.2	1.4	1.2	0.9	0.9	0.9	1.0	1.1	0.7	0.7	1.1	1.1
Construction	1.7	1.7	1.5	1.1	0.6	0.2	0.7	1.2	1.0	0.7	1.0	1.0
Administration ser	0.9	1.1	1.3	0.9	0.8	0.8	0.9	1.0	0.8	0.9	1.3	1.3

Financial year changes in nominal productivity adjusted Wage Price aggregates

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
All industries	0.9	1.1	2.4	2.4	2.2	1.9	2.0	1.8	1.4	1.7	2.1	1.9
Utilities	1.0	1.3	1.9	2.2	2.0	1.8	1.9	1.8	1.2	1.5	1.9	1.7
Construction	1.0	1.0	3.0	2.7	1.9	1.2	1.6	1.8	1.4	1.5	1.8	1.5
Administration ser	1.1	0.7	2.2	2.2	2.0	1.8	1.9	1.8	1.4	1.8	2.3	2.0

Financial year changes in real productivity adjusted Wage Price aggregates

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
All industries	-1.4	-1.3	-0.2	-0.3	-0.4	-0.8	-0.6	-0.5	-1.1	-1.0	-0.5	-0.6
Utilities	-1.3	-1.1	-0.6	-0.6	-0.6	-0.9	-0.7	-0.6	-1.2	-1.2	-0.7	-0.8
Construction	-1.3	-1.3	0.4	-0.1	-0.8	-1.5	-1.0	-0.5	-1.0	-1.2	-0.9	-1.0
Administration ser	-1.2	-1.6	-0.4	-0.5	-0.6	-0.9	-0.7	-0.5	-1.0	-1.0	-0.4	-0.4

Source: ABS, Deloitte Access Economics Macroeconomic model, Deloitte Access Economics Labour Cost model

10 Utilities and competitor sector wage growth by State

This chapter sets out the projections for labour costs in the utilities sector in Victoria and South Australia, and provides additional projections for the two additional industry sectors of construction and administration services in those jurisdictions.

10.1 Technical notes on WPI data and forecasts

It should be borne in mind that the ABS does not release an official WPI measure for the South Australian utilities sector (nor for construction in South Australia), so Deloitte Access Economics estimates an imputed value based on a combination of:

- WPI for utilities as a whole, and for South Australia, as well as relative movements in those industries in South Australia that do have an official estimated WPI.[6]
- When and where published, AWOTE for the sector in question. Note that sectoral by State AWOTE estimates are no longer published.
- Data on enterprise bargaining agreements.

In brief, **there is now less information published than previously on State level wages by industry. For two of the industries under consideration in this report – the utilities in South Australia, and the construction sector in South Australia – Deloitte Access Economics has estimated wage (WPI) growth using a range of related data, including overall South Australia WPI wage growth, overall utilities sector wage movements, data for enterprise bargaining agreements, as well as the data published for other States.**

While a greater discussion can be found in Appendix E, the key points to bear in mind are:

- Not all industries have WPI published for all States (see Table E.1 for a detailed list of the components of this report that are based on published ABS data and those which have been imputed by Deloitte Access Economics). Some industries for which WPI data is not published at the State level previously had official estimates of average weekly ordinary time earnings provided. The latter were useful in indicating relative wage movements. However, this additional source of data was discontinued at the end of 2011, meaning the ABS no longer produces any compensation measures at the State by industry level for these sectors. In addition, the differential movements in overall AWOTE (compared with overall WPI) need to be accounted for if the AWOTE measure is used to inform an estimate of the detailed WPI measure.
- In those cases (since the start of 2012) where no State-specific industry WPI figure is available, a combination of the overall national WPI growth rate for that sector, the overall State WPI growth rate and (where available) movements in detailed wages covered by

[6] South Australian sectoral WPI indices are published for manufacturing, retail, administration services, public administration, education and health.

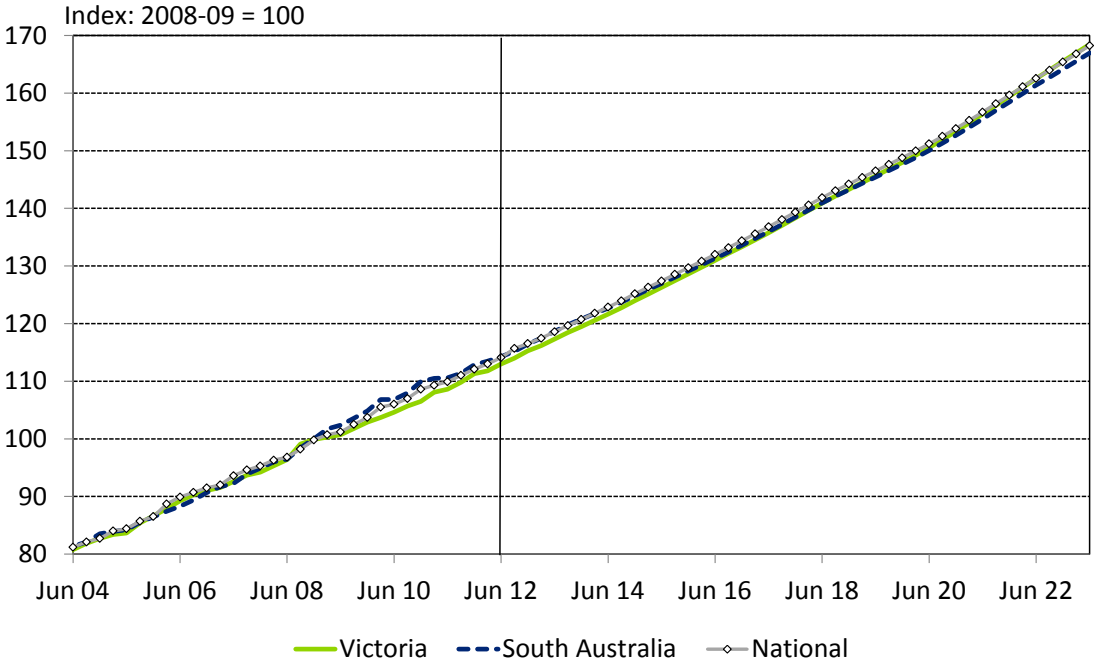
EBAs is used. Among the key sectors shown here, this only affects the utilities and construction sectors in South Australia, which are particularly small.[7]

- Note this means **there is no longer any officially released time series estimate for utilities wages in South Australia** (in terms of WPI, AWOTE or other equivalent measures). **Therefore extreme care needs to be taken in analysing these series over time.** The modelling here implicitly assumes that overall South Australia WPI wage growth, overall utilities sector wage movements, data for enterprise bargaining agreements, as well as the data published for other States, can be used to create a reasonable estimate of the specific WPI series in history. However, there is no guarantee that the data used matches what the ABS data would show were it to be released.[8]

10.2 National trends

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

Chart 10.1: Utilities sector WPI forecasts by State



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

As Chart 10.1 above shows, over the longer term the underlying trends in wages in the sector (that is, at the national level) dominate the movements by State – that is, these lines look very similar in both history and forecast.

[7] The South Australia utilities sector employs around 10,500 people compared to total State employment of just under 780,000.

[8] The ABS does estimate these values, but does not release them externally due to the small number of businesses that are included in the sample, and the possibility that individual results could be estimated from the data if it were to be released.

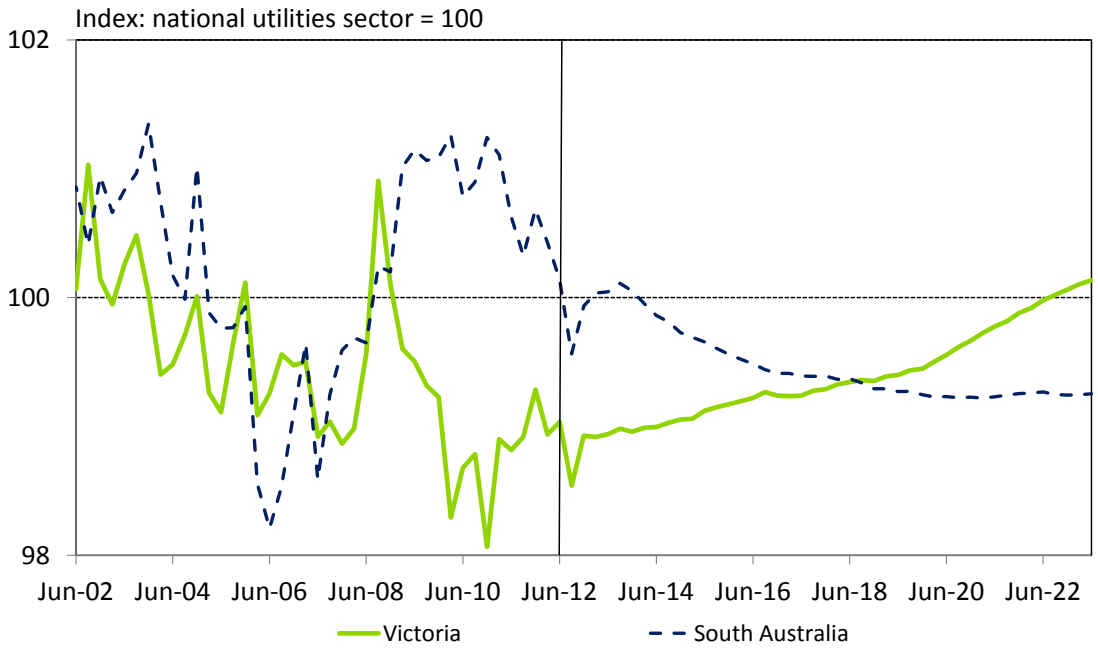
There are deviations from State to State, with these differences driven by a combination of:

- General trends in State wage growth. Slower growing States will likely see slower WPI growth; and
- One-off factors that affect a particular industry – such as movements in a specific award level or a single EBA, or a sharp swing in demand or supply for workers in that sector *and* in that State.

However, as we have stressed elsewhere, there are limits to how far wage rates can deviate over the longer term – large and lingering relative swings in either direction will tend to be limited by competition between State and industries and the ability of workers to move towards better paying jobs.

Overall, the differences in index levels for utilities wages by State are easier to see when expressed in relative terms, as they are in Chart 10.2 below.

Chart 10.2: Relative utilities forecast by State



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

In this chart the national utilities index at any point in time is set to a value of 100 and the index for each State is expressed relative to that value.[9] Both the volatility at the State level and the tendency for indices to revert towards the national average over time are evident.

In brief, and although the utilities sector has seen relatively faster wage growth nationally, much of that strength from the late 1990s to around 2005 was due to strength in New South Wales. Wage gains among the two jurisdictions considered here were more moderate than those in NSW through to 2005, and only South Australia managed to keep pace with the mining States across the first (pre-GFC) mining boom.

[9] As noted earlier, this does not imply an ordering for wage levels, as each individual series is an index equal to 100 in 2008-09.

In more recent times the flow-on effects from the Queensland and Western Australia mining sectors have been a more important driver of WPI growth. Utilities wages in those strong mining States has been growing particularly rapidly, with the result that South Australia's relative utilities sector WPI has declined slightly since mid-2009. This is not a measure of absolute weakness, just weakness relative to the industry average; an average that has been increasingly dominated by Queensland across the past two years.

We have noted that the fact that relative wages have diverged in recent years does not mean those moves are necessarily 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.

Relatively small movements are more likely to be maintained – but overall State trends will increasingly dominate in most cases. The forecast profile in Chart 10.2 shows a moderation in South Australia's relative performance across the forecast period, matching the trends seen in overall WPI measures. By contrast, Victoria's relative utilities WPI measure rises. These patterns are partly driven by the relative strength not only of the two State economies – the general weakness in South Australia's economic growth being less conducive to maintaining the differential in wages, with the known lack of an early go ahead for the Olympic Dam expansion a new factor in this round of our forecasts – but in other States as well.

The expectation that relative WPI increases seen in Western Australia and Queensland will ebb slightly over time means that States such as Victoria will see relatively faster growth in utilities WPI than the average (even as Victoria's utilities sector WPI grows less rapidly than its overall WPI measure).

However, as the earlier Chart 10.1 makes clear, these deviations are quite modest compared with the general upward movement in the utilities sector WPI.

It should also be noted that volatility in the State indices implies that actual movements in State-by-industry WPI 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 10.2 therefore more useful in showing the broad trends in relative labour cost movements in the sector over a period of time.

10.3 Victoria

Overall growth rates for Victoria WPI measures across the next decade are shown in Table 10.1.

Table 10.1: Victoria wage forecasts

Financial year changes in Victoria nominal Wage Price aggregates

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
All industries	3.5	3.5	3.5	3.7	3.7	3.6	3.8	3.5	3.3	3.7	4.0	3.9
Utilities	4.0	3.8	3.7	3.7	3.8	3.6	3.7	3.5	3.3	3.7	4.0	3.8
Construction	3.5	3.4	3.5	3.4	3.0	3.1	3.6	3.6	3.4	3.5	3.7	3.5
Administration ser	2.6	3.7	3.6	3.6	3.5	3.5	3.7	3.6	3.4	3.7	3.9	3.8

Financial year changes in Victoria real Wage Price aggregates

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
All industries	1.1	1.2	0.9	1.0	1.1	0.9	1.1	1.1	0.9	1.0	1.3	1.4
Utilities	1.6	1.5	1.1	1.0	1.2	0.9	1.0	1.2	0.8	0.9	1.3	1.3
Construction	1.1	1.1	0.9	0.7	0.4	0.4	1.0	1.3	0.9	0.7	1.0	1.0
Administration ser	0.2	1.4	1.0	0.9	0.9	0.8	1.0	1.2	0.9	0.9	1.3	1.3

Financial year changes in Victoria nominal productivity adjusted Wage Price aggregates

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
All industries	1.0	1.9	2.0	2.0	2.2	1.9	2.0	2.2	1.5	1.7	2.2	2.0
Utilities	1.5	1.5	1.9	2.2	2.2	1.8	2.0	2.0	1.4	1.7	2.1	1.9
Construction	0.3	0.4	2.6	2.3	1.7	1.4	1.9	2.0	1.4	1.6	1.8	1.5
Administration ser	0.5	0.9	2.0	2.2	2.1	1.8	2.1	2.1	1.6	1.8	2.3	2.1

Financial year changes in Victoria real productivity adjusted Wage Price aggregates

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
All industries	-1.3	-0.3	-0.5	-0.7	-0.4	-0.8	-0.6	-0.2	-0.9	-1.0	-0.4	5.9
Utilities	-0.8	-0.8	-0.6	-0.5	-0.4	-0.9	-0.6	-0.4	-1.0	-1.0	-0.5	6.6
Construction	-2.0	-1.9	0.0	-0.4	-0.9	-1.3	-0.7	-0.3	-1.0	-1.2	-0.8	7.7
Administration ser	-1.8	-1.3	-0.5	-0.5	-0.4	-0.8	-0.6	-0.2	-0.8	-0.9	-0.3	6.1

Source: ABS, Deloitte Access Economics labour cost model

10.3.1 The Victorian utilities sector

Official ABS data show that annual wage gains in Victoria's utilities sector have been running between 3½ and 4½% since 2010, marginally outpacing general wage growth in Victoria, and ahead of the national average for utilities (Chart 10.6 shows a comparison of growth rates).

Utilities sector employment in Victoria has increased both as a share of total employment in Victoria, as well as increasing its share of total utilities jobs nationwide. That pattern is expected to continue through 2013, supported by current and recent investment in key infrastructure building on projects such as the recently completed Wonthaggi desalination plant, Melbourne Water's almost completed $220 million main sewer replacement from Swallow Street (near Beacon Cove) to Wurundjeri Way at Docklands, and the soon to be completed $417 million upgrade of the Eastern treatment plant at Carrum.

That said, Victoria's utilities sector is outperforming what is a shrinking sector of the national economy – sectoral output has fallen from 3% of the national total to marginally above 2% across the past two decades. Moreover, while the sector's share of employment has increased across the past decade, it remains relatively capital intensive. Further, as noted above in Chapter 4, the output trend is expected to continue, with overall prospects for employment growth in the sector relatively limited.

Once the current upswing ends, Victoria's utility sector employment is expected to see a more modest climate. This reflects the significant challenges for the utilities arising from:

- the 'two speed troubles' gripping the State's manufacturing sector,
- the impact of past price increases for the sector's output, especially electricity,

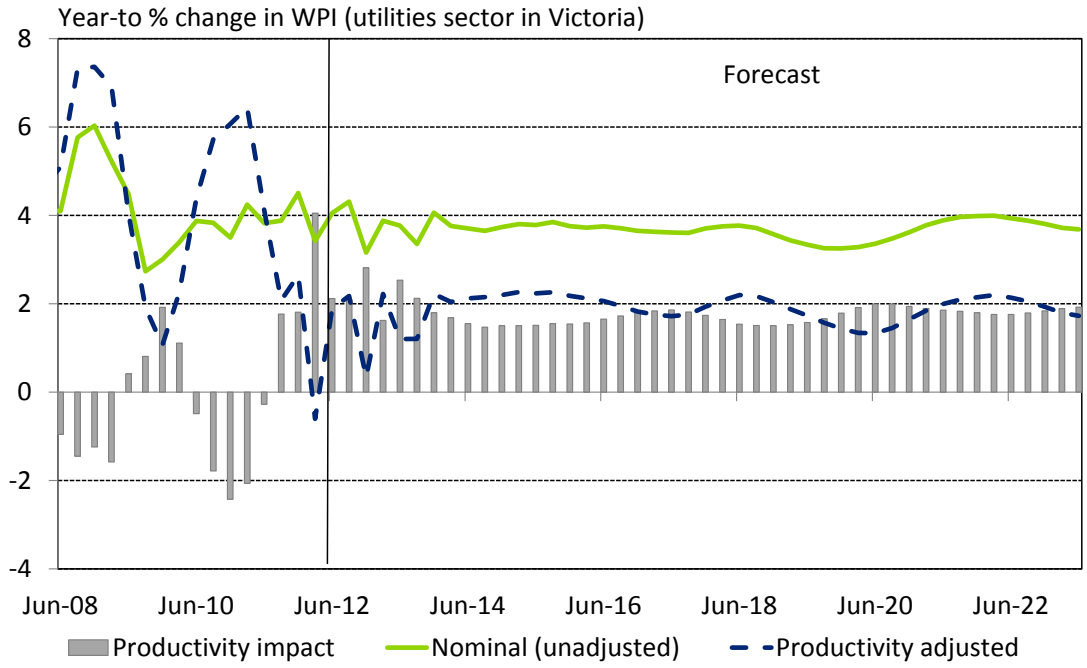
- the slowdown in housing construction (and hence the pace at which utilities will be connected to new homes), as well as
- the impacts of the carbon price.

Wage growth will also likely be constrained by further decreases in competition for labour from other key industrial sectors in the State. The declines experienced by manufacturing across 2010 and 2011 have eased somewhat in recent months, while construction and mining employment have remained relatively strong. Yet all three are now heading into a period of much greater uncertainty. Meaning there may be a relatively weaker challenge posed by mining and construction in Victoria than in Australia in general, and that may be especially true of manufacturing as well.

Indeed, the pace of wage growth in Victoria's utilities sector in the short term may be affected by job losses elsewhere in Victoria's industrial base, particularly if there is a significant slowdown in the State's housing construction sector. That will obviously make the task of finding workers easier than it would otherwise be at a time when unemployment remains low, hence limiting the pressure on wages in the sector.

With further modest prospects for output growth and with the State's overall WPI growth rate remaining at around 3½% (rather than the 4% seen in early 2012) the State's utilities sector WPI growth is expected to trend lower across the medium term period – falling from 4.0% in 2011-12 to a range between 3.6% to 3.7% for each year in nominal terms unadjusted for productivity growth (see Table 10.1).

Chart 10.3: Victoria utilities WPI forecasts



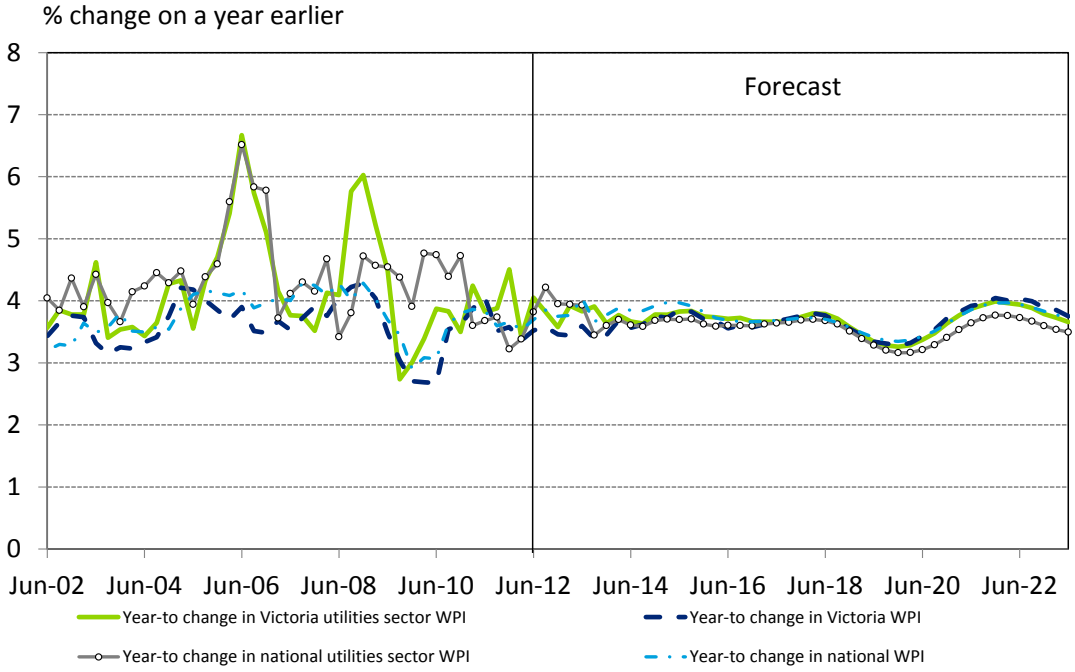
Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

Such a view is consistent with the trend in outcomes from EBAs in the sector (see Chart 10.5 below), where average annualised wage increases across all current agreements have

continued to decline steadily – falling from 4.9% growth in the June quarter of 2010[10] to just 4.2% in the March quarter of 2012.

While broader wage growth in Victoria is expected to edge slightly higher through 2013, wage growth in the utilities sector is expected to both edge lower, but still remain slightly ahead of the average. That continues the trends of recent years, but the pressures that drove those trends should be easing – two speed negatives may begin to fade and the degree of competitive pressure from other sectors and other States on Victoria's utilities sector may slip back a peg as the peak of the boom in investment is reached.

Chart 10.4: Victoria utilities forecast comparison

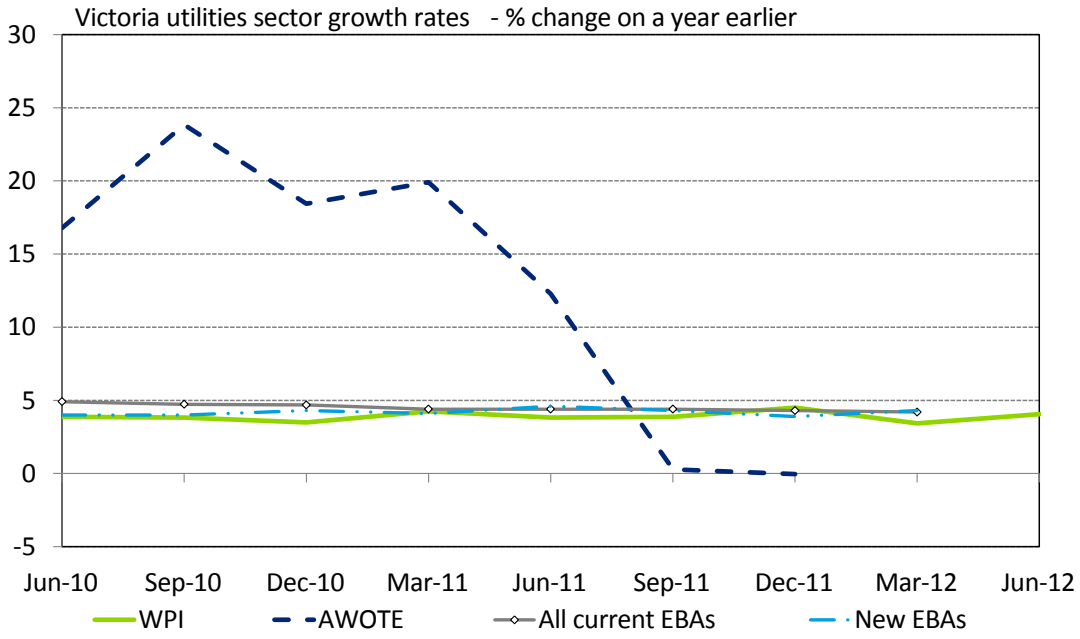


Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

Looking further forward (and as Chart 10.4 illustrates), State utilities WPI should move back into line with other State trends and overall industry trends. That will mark a period where the current strong outperformers (Queensland and Western Australia in terms of States and mining in terms of industries) ease back towards the national average in terms of wages growth. Even further out, utilities wages growth may fall back behind the national average, although the Victorian industry may do marginally better, moving more in line with overall State WPI growth.

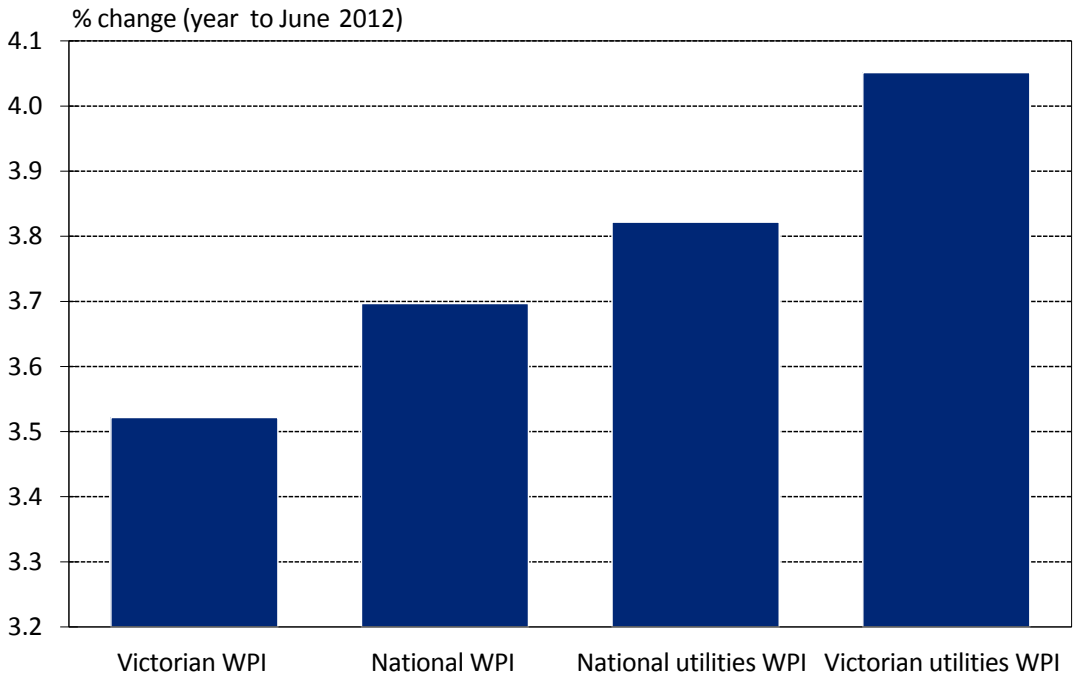
[10] The first period for which detailed data for each industry within a State is available.

Chart 10.5: Measures of utilities sector wage growth in Victoria



Source: ABS, Deloitte Access Economics, Department of Education, Employment and Workplace Relations

Chart 10.6: Latest Victorian and national WPI growth rates



Source: Australian Bureau of Statistics

10.3.2 The construction sector

Construction has been a key contributor to Victoria's economic outperformance of the past decade. A winning combination of strong rates of population growth, sensible zoning policies

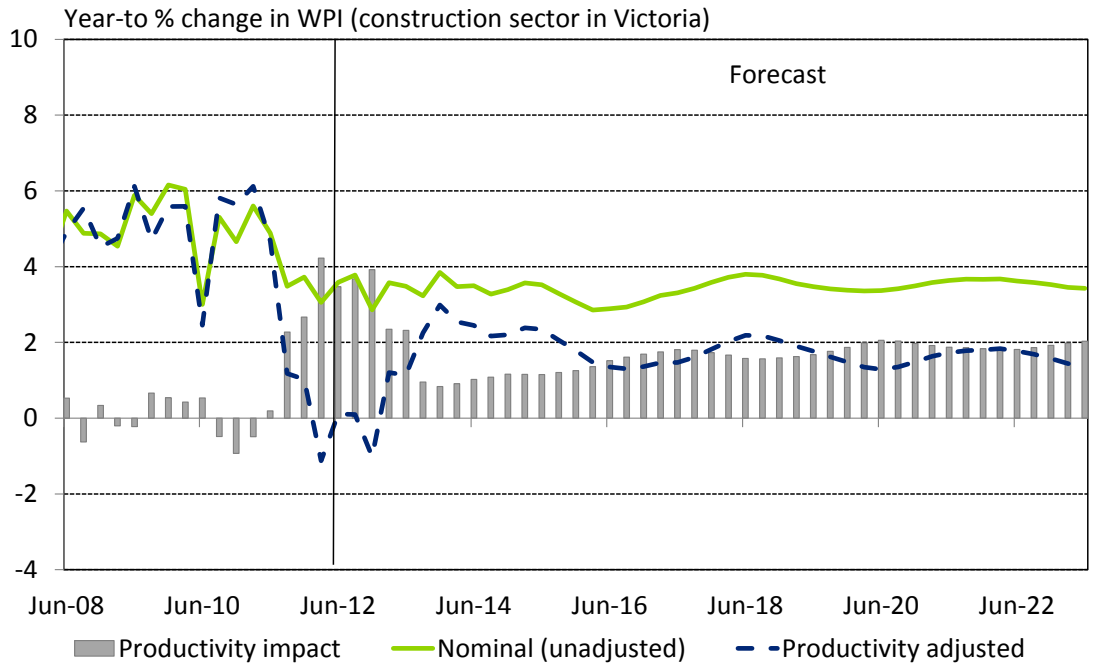
and (if data on investment spend against housing levels is any guide) relatively modest pricing of new housing production has seen Victoria lead the way in terms of new building.

New developments, everything from new subdivisions on the outskirts of Melbourne to the reconstruction efforts following the Black Saturday bushfires and flooding in regional Victoria saw construction activity in the State running well ahead of national trends – easily outpacing the moribund New South Wales and stumbling Queensland.

Just considering this strength in isolation would mean there would be little surprise in the fact that Victorian construction sector wages have outpaced the overall WPI growth for the State across the past decade – rising by 56% in the 10 years to June 2011, compared with the State's overall growth rate of 42%. Add in the increasing effects of competition for labour from the infrastructure demand of the mining boom in Queensland and Western Australia and the results are little if expected.

Even the GFC did little to halt the momentum of wage gains in the sector, as Chart 10.7 below shows wage rates stalled for a single quarterly reading before returning to growth above 5% per year.

Chart 10.7: Victoria construction WPI forecasts



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

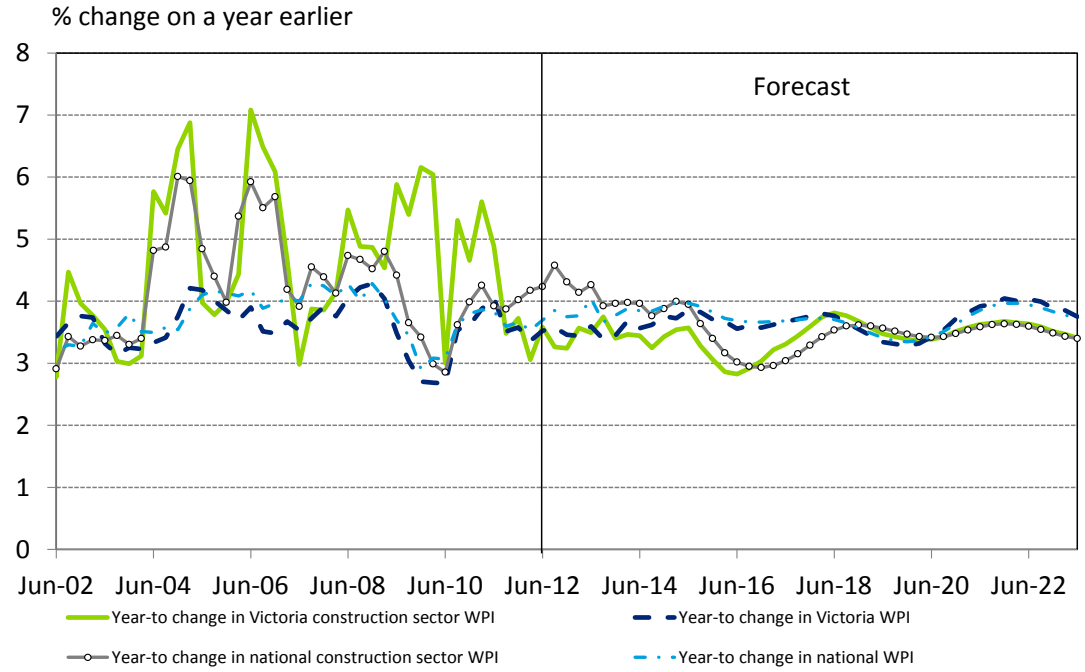
Yet, as Chart 10.7 also shows, more recently some of the fire has gone out of the sector. Wage growth has already weakened in the wake of significant falls in housing starts and other leading indicators of activity. These falls may have been more significant in other States, but Victoria has been unable to avoid the worst of the problems. Most Victoria housing indicators have eased over recent years – approvals levels are down, rental vacancy rates have rising (although they remain low) and house prices have eased from peaks across 2010 and 2011. These indicators may not return to the boom levels seen pre-GFC, suggesting that sectoral wages are unlikely to return to their strong rates particularly when the effects of weakness in retail turnover and a relatively modest jobs market are considered.

On the bright side however, the start of 2012 saw a return to strength in commercial construction commencements in Victoria, and a healthy list of works under currently construction. That includes Australia's largest current mixed use development at 5 Collins Street in Melbourne's CBD. When finished, and at a cost of $1.3 billion, it will consist of five commercial towers over a 10,000 square metre retail podium and will stretch over a whole city block. Construction on the old Carlton United Breweries site on the corner of Swanston and Victoria Streets continues with the project expected to come in at a cost of $1.2 billion sometime in 2014. Work on two towers at Bourke Street Junction is continuing at a cost of $700 million, while the ongoing $670 million upgrade to the Epping wholesale fruit, vegetable, flower and fish market rounds off the list of major retail construction works for the State. Some big dollars are being spent in the health sector too, led by the ongoing construction of the $1.3 billion Victorian Comprehensive Cancer Centre at Parkville, which is expected to be completed in 2016, along with the $447 million redevelopment of the Box Hill hospital, due to come online in 2015, as well as the proposed expansion of inpatient facilities at Frankston hospital. Work in planning includes proposed upgrades to the Geelong, Charlton and Ballarat hospitals and a proposed second stage in the development of the Olivia Newton John Cancer and Wellness Centre.

That offsets the weaker outlook for the State's engineering construction sector. That said, the $4.4 billion Kipper-Tuna-Turrum Project located south east of Lakes Entrance in Bass Strait is a welcome piece of the resource pie and will provide work out to 2016. However, after that there is very little in the pipeline from the resource sector. VicRoads have two big projects underway, a $980 million project to widen the Western Ring Road to three lanes between the Hume Highway and the West Gate Freeway, as well as a $759 million plan to build the 'Peninsula Link' (a 25km four lane connection between Eastlink at Carrum Downs to the Mornington Peninsula Freeway at Mount Martha). But the big dollars in Victoria are being spent in the rail sector, led by a $5.3 billion project for a regional rail link from West Werribee to Melbourne's Southern Cross Station and a series of other projects that range from line upgrades to 40 new trains for Melbourne commuters, with a total cost upward of $20 billion. As noted above, the major utilities projects are either at or near completion.

With a generally weak outlook for activity in the State's construction sector there is little reason to expect that construction sector wage growth in Victoria will rebound from the easing seen since late 2011. As Chart 10.8 below shows, Victorian construction sector wages are rising in line with the States (slightly less than average) overall wage growth rate – whereas overall construction wage have been outperforming other industries.

Chart 10.8: Victoria construction forecast comparison



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

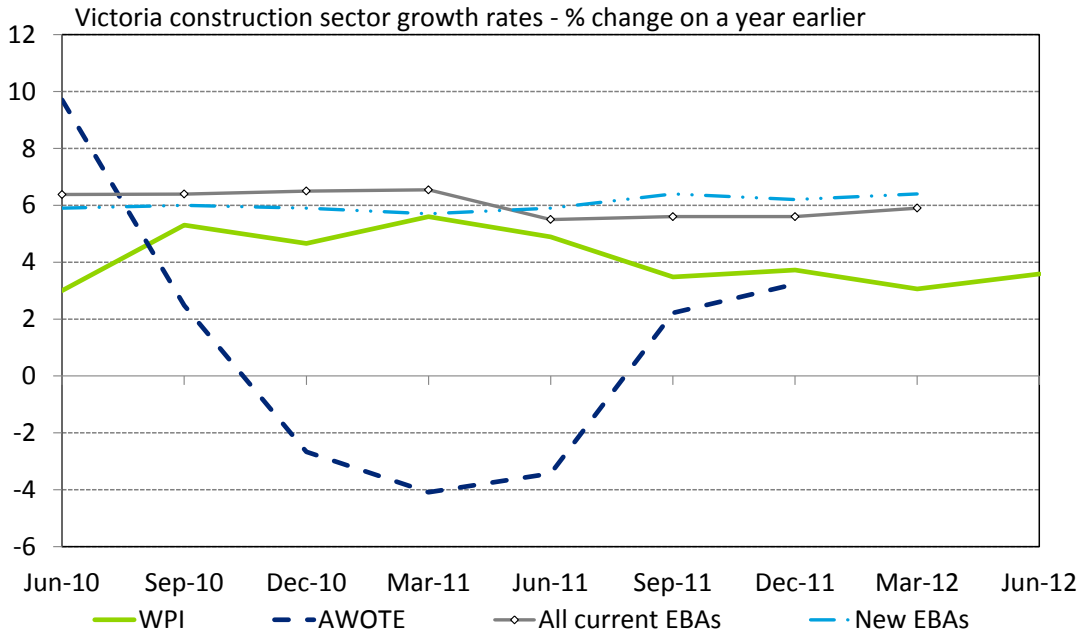
Note that this weakness in wage growth is in line with broader wage movement in the Victorian economy, but is more pronounced relative to the solid growth in national construction wages expected at present, reflecting relative strength in construction wages in the boom States of Western Australian and Queensland.

The trend is expected to continue, with WPI growth rates easing first in relative terms (with the overall Victoria WPI accelerating slightly across the next three years which construction WPI remains more stable) and then in absolute terms as the construction cycle finally turns and growth in the sector – both in Victoria and Australia more generally – falls back towards 3%.

Overall, Victoria is likely to see a sustained period of relative easing in construction wages. That outlook is assisted by the State's recent performance, which has left less (if any) pent up demand for housing (unlike some other States). That limits the potential upswing in construction once two speed pressures ease.

In the longer term, wage growth is expected to move in line with the national construction sector – largely reflecting the sector's overall cycle.

Chart 10.9: Measures of construction sector wage growth in Victoria



Source: ABS, Deloitte Access Economics, Department of Education, Employment and Workplace Relations

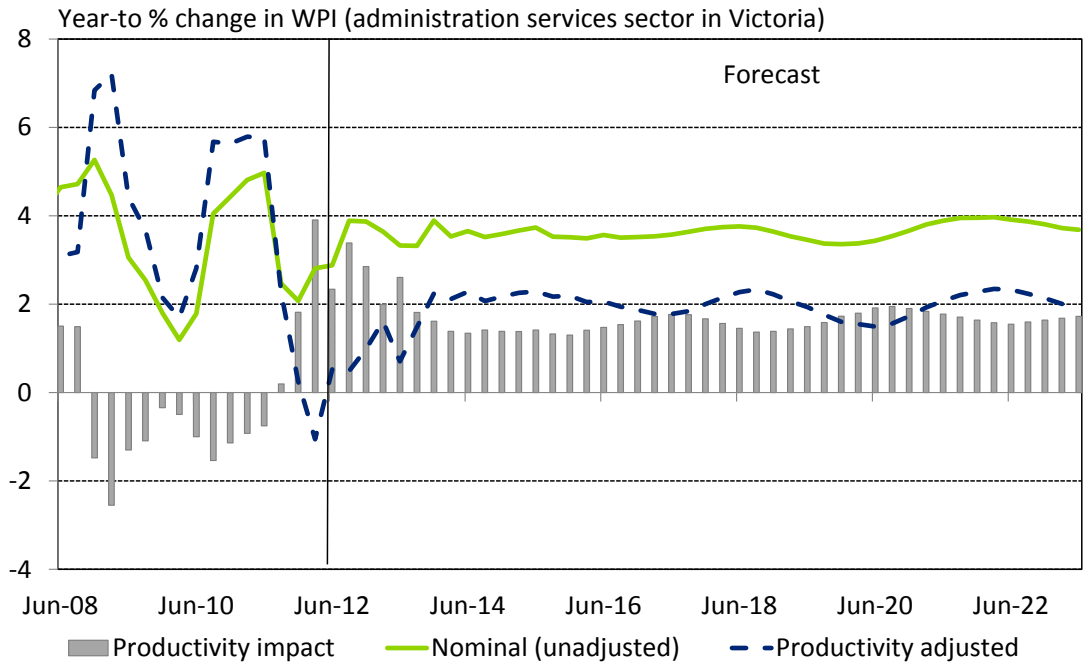
Growth in wages through EBAs has run well ahead of growth recorded in the WPI. This is partially due to the relative low level of coverage of EBAs in the sector (as noted earlier, only around 15% of construction sector employees are covered by the EBAs included here – below the national average and the lowest proportion of the key sectors considered in the report). In addition, construction sector EBAs tend to be focussed on a relatively small number of large projects, many of which are the subject of considerable industrial bargaining tension.

Some of these deals have recently been criticised by the Victorian Government as excessively influenced by union demands, and possibly at risk of preventing those involved from bidding on State Government projects.

10.3.3 The administration services sector

As Chart 10.10 shows, the administration sector's local WPI has been on something of a wild ride in recent times, with a major slowdown during the GFC followed by recovery across most of 2011, partly thanks to the rebound in wages generally, partly due to solid employment in the sector, and partly due to one-off impacts from the transition to the *Modern Awards* system which became evident in the September quarter 2010 data.

Chart 10.10: Victoria administration services WPI forecasts



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

While not as dramatic as the impacts seen in some States (most notably South Australia), this final point was a one-off event.[11] That goes some way to explaining the recent rapid drop off in the year-to growth rates seen in the September quarter of 2011. WPI growth since that point has crept up slightly – with growth in the year to March 2012 standing at a relatively modest 2.9%.

Like utilities, the prospects for wages growth in the administration services sector will be tied largely to movements in other key sectors. The two periods of weakness in recent years coincide with tougher times in Melbourne's property and business services sectors – particularly during a period where Melbourne's CBD struggled for the first time in a decade. Not surprisingly, that weakness translated into reduced demand for building services.

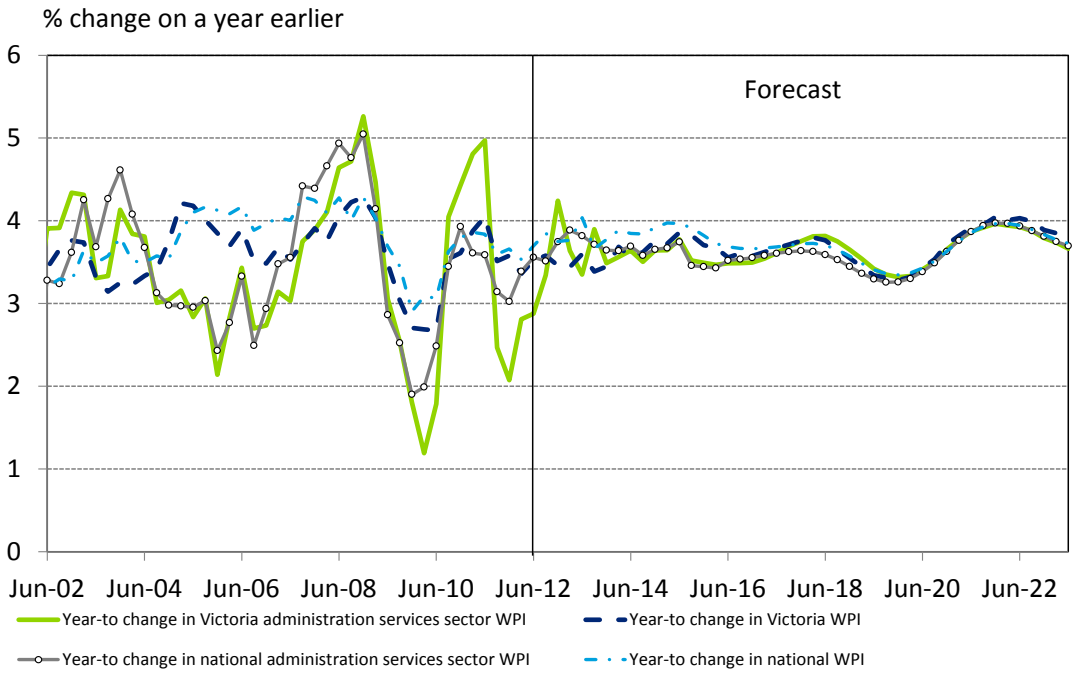
However, the outlook for those sectors has brightened across the past year – even with concerns over Europe and its implications on both these areas and for finance. So far that has only flowed through in the 'crept up slightly' description of admin sector wages, but the continued growth should soon flow through more strongly, lifting administration services sector wages above the State average for the first time since the introduction of *Modern Awards* (and if that 'break in series' jump is ignored, the first time since late 2008).

While the national administrative services sector has seen a similar pattern of growth to Victoria, local growth has seen sharper rises and periods of greater weakness that the national comparison. That has been more evident than normal under the influence of the awards changes, but with the full impact of that one-off jump now having flowed through the data, the gap should close substantially. That will be even more obviously after the end of 2012 when a surprisingly low December 2011 result passes out of the analysis.

[11] Although, as the chart shows year-to rates of growth, it influences the rate of growth for four periods.

Wage gains in the sector peak may push above 4% at the end of 2012 (again, partly due to the low December 2011 result) before tracking between 3½% and 4% through the medium term (see Chart 10.11). Initially growth may exceed the State average, marking a relative recovery in a sectoral WPI that has consistently lost ground over recent years.

Chart 10.11: Victoria administration services forecast comparison

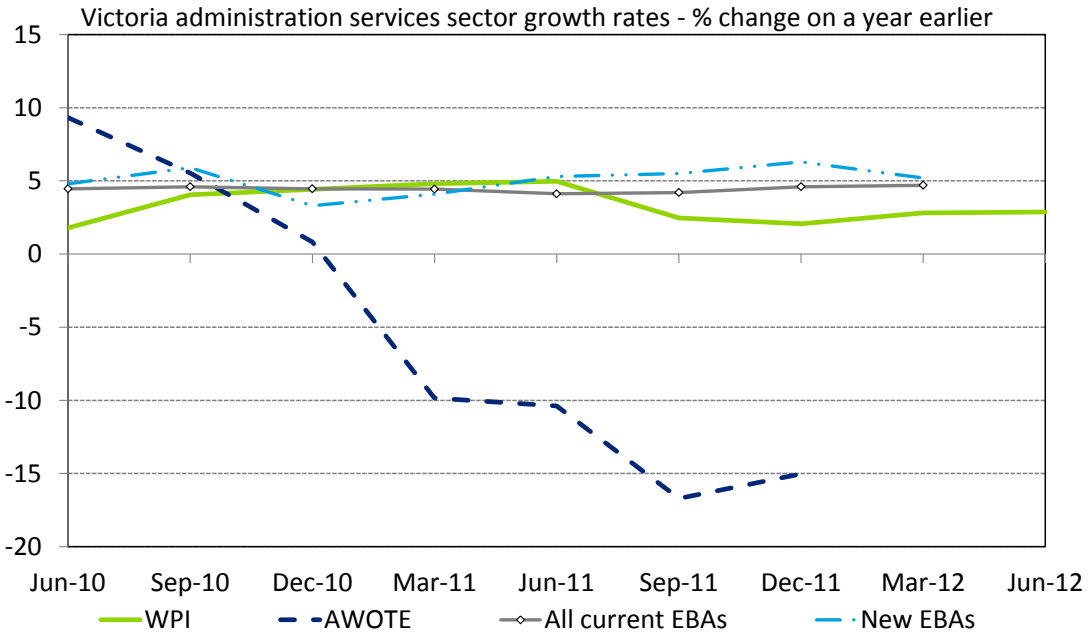


Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

Beyond that, we expect wages in the Victorian administrative services sector to be broadly in line with those at the national level, which is to say they will see wages grow more slowly than the national all industries average through much of 2015 and 2016.

Like the construction sector and administration services wages in general, Victorian EBAs have recorded considerably faster increases than the WPI (although, compared with the final AWOTE result which showed a 15% decline in wages the gap is fairly modest). This in part reflects the relatively low share of workers covered by enterprise bargaining in this area.

Chart 10.12: Measures of administration services sector wage growth in Victoria



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

10.4 South Australia

South Australia is the slowest growing mainland State in terms of population, it also has the oldest demographic structure, and it consistently loses young adults from its population to other States.

Not surprisingly, the State has lagged the national growth rate consistently since the late 1950s.

This trend is set to continue, exacerbated by an industrial structure weighted towards sectors with more modest growth, as well as the State's recent inability to take advantage of the benefits it does have in terms of mining resources – either in terms of new projects (the postponement and scaling back of any developments at Olympic Dam being a case in point) or in terms of back office functions for developments in Western Australia that may have struggled to find required workers (or office space) in the tight Perth market.

Deloitte Access Economics' forecasts for South Australia WPI growth by industry are shown in Table 10.2.

Table 10.2: South Australian wage forecasts

Financial year changes in South Australia nominal Wage Price aggregates

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
All industries	3.4	3.4	3.6	3.7	3.7	3.6	3.6	3.5	3.4	3.7	4.0	3.8
Utilities	3.0	3.4	3.7	3.4	3.4	3.5	3.6	3.3	3.1	3.5	3.8	3.6
Construction	3.8	3.9	4.2	3.9	3.3	2.9	3.2	3.5	3.5	3.6	3.7	3.5
Administration ser	2.8	2.6	3.6	3.4	3.4	3.4	3.4	3.2	3.1	3.4	3.7	3.5

Financial year changes in South Australia real Wage Price aggregates

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
All industries	0.7	1.4	1.1	1.0	1.0	0.9	1.0	1.2	0.9	0.9	1.4	1.3
Utilities	0.3	1.5	1.2	0.7	0.7	0.7	1.0	1.0	0.7	0.7	1.1	1.1
Construction	1.1	1.9	1.7	1.1	0.6	0.2	0.5	1.2	1.0	0.8	1.1	1.1
Administration ser	0.1	0.6	1.1	0.7	0.7	0.6	0.8	0.9	0.7	0.7	1.1	1.1

Financial year changes in South Australia nominal productivity adjusted Wage Price aggregates

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
All industries	1.5	1.1	3.4	2.7	2.7	2.4	2.8	2.5	2.1	2.4	2.9	2.7
Utilities	0.7	1.0	2.0	2.0	1.9	1.7	2.0	1.8	1.3	1.6	2.1	1.8
Construction	0.7	0.6	3.5	2.9	2.1	1.2	1.5	1.8	1.6	1.7	1.9	1.6
Administration ser	1.0	-0.4	2.2	2.1	2.0	1.8	1.9	1.8	1.4	1.6	2.2	2.0

Financial year changes in South Australia real productivity adjusted Wage Price aggregates

Annual % change	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
All industries	-1.1	-0.8	0.9	0.1	0.0	-0.3	0.2	0.3	-0.3	-0.3	0.3	-0.5
Utilities	-1.9	-0.9	-0.5	-0.7	-0.8	-1.0	-0.6	-0.5	-1.1	-1.1	-0.5	7.6
Construction	-1.9	-1.4	1.0	0.2	-0.6	-1.4	-1.0	-0.5	-0.9	-1.0	-0.6	5.5
Administration ser	-1.6	-2.3	-0.3	-0.5	-0.6	-0.9	-0.7	-0.4	-1.0	-1.1	-0.4	7.1

Source: ABS, Deloitte Access Economics labour cost model

10.4.1 The utilities sector

South Australia's utilities sector experienced good growth through to mid-2009, but has seen more modest outcomes since then amid a challenging backdrop. Industrial demand for the output of the State's manufacturers is currently weak, and although it has lifted recently, South Australia's population growth remains subdued relative to that in other States. In addition, global uncertainty and a weakening price outlook has increased pressure for new developments to be justifiable in terms of a possibly lower longer term growth profile for global demand for key commodities.

South Australia's outlook has been affected by that changing paradigm – with the decision by BHP Billiton not to expand Olympic Dam the key result.

The loss of that $20 billion project now means the State's utilities sector is left with:

- A less certain outlook for its output, and
- A less certain degree of competitive pressure for its workforce.

Moreover, there is the risk that a similar impact could result from the potential loss of critical mass in auto parts manufacturing if, for example, the next Falcon is not manufactured in Australia. (Although the Falcon is built in Geelong in Victoria, it helps create critical mass for the auto parts sector, with a number of small manufacturers based in South Australia. Australian car manufacturing has almost halved in eight years, down from 410,000 vehicles in 2004 to under 220,000 last year.)

Yet, as important as the loss of an early go ahead for Olympic Dam is, the State's utilities sector still has to compete for its workforce in an environment in which the continued (and very

strong) return to resource boom conditions raises the bar of the available wages in some competitor sectors between now and mid-2014.

The Olympic Dam decision, along with other recent developments, means that those competitive pressures in labour markets will continue to be rather more evident in other States (specifically, Western Australia and Queensland) than in South Australia itself in the next two years in particular.

Or, in other words, workers in the utilities sector in South Australia will still be able to at least point to the potential for making a move to stronger sectors when they conduct wage negotiations, but both sides of those negotiations will be aware that those alternatives would often require a move between States, as well as the risk that those jobs elsewhere may prove relatively temporary.

That said, South Australia's share of national utilities output (a series which Deloitte Access Economics estimates) and employment has averaged around 8% over the past two decades, but has ranged from close to 6% to just above 9% of national utilities output and employment over that period, and is currently moving above population share.

Looking ahead, the utilities sector's output is forecast to broadly move back in line with the State's falling share of Australia's population, with that transition seen taking several years.

In part that reflects the relatively modest investment agenda. In terms of known investment projects in this sector in South Australia, construction of the new $1.8 billion desalination plant at Port Stanvac is expected to be completed soon, while the SA Water Corp is spending $403 million installing the 38 kilometre North South Interconnector pipeline through Adelaide.

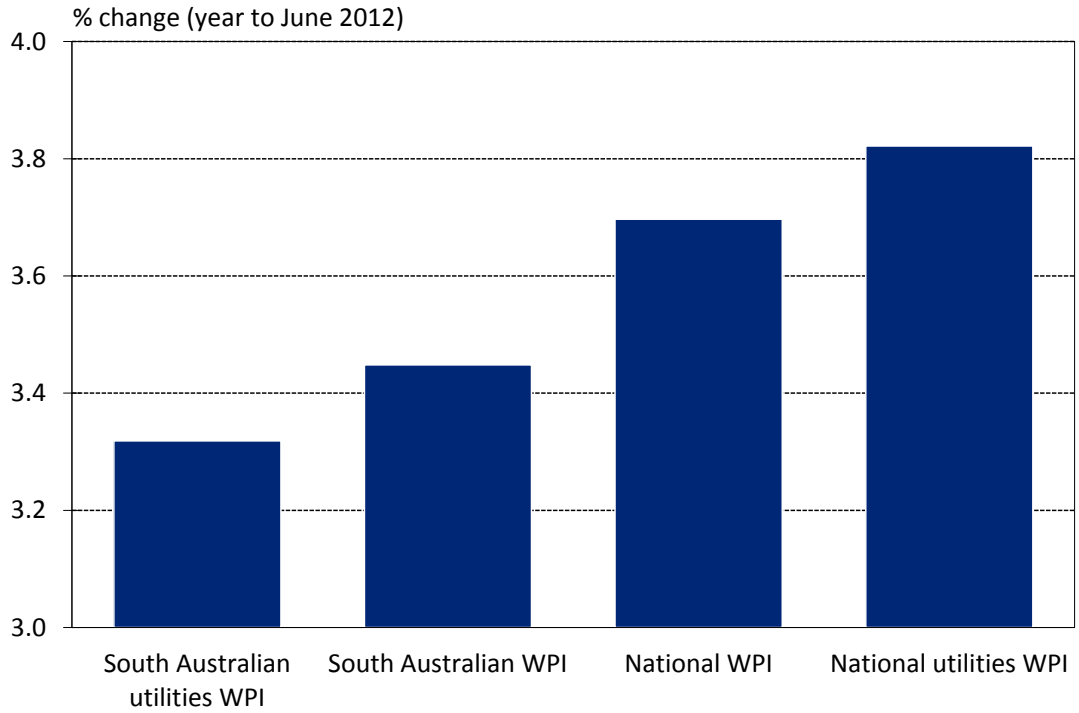
Projects in planning include a proposed $1.3 billion wind farm development at the Yorke Peninsula, along with a $300 million desalination plant at Whyalla. Various smaller projects are also on the go, including the $272 million upgrade of the Christies Beach waste water treatment plant and a range of other minor upgrades of water treatment plants across the State.

Together with the weaker outlook for the State's traditional manufacturing base due to the 'two speed' economy, that points to a period of consolidation in the pace of growth in labour costs over the next two years.

While (as noted at the start of the chapter) official ABS figures for the South Australia utilities WPI are not published, most partial indicators suggest that a degree of moderation on the wage front has occurred over the past year. This is due to the combination of:

- significant increases seen in the State over the course of 2008 and 2009. These were in line with national trends. As these national trends have moderated it is very likely State wage growth rates have as well;
- increasing relative weakness in South Australian WPI measure across the past eighteen months; and
- a relatively poor employment performance by the South Australian utilities sector.

Chart 10.13: Latest South Australian and national WPI growth rates



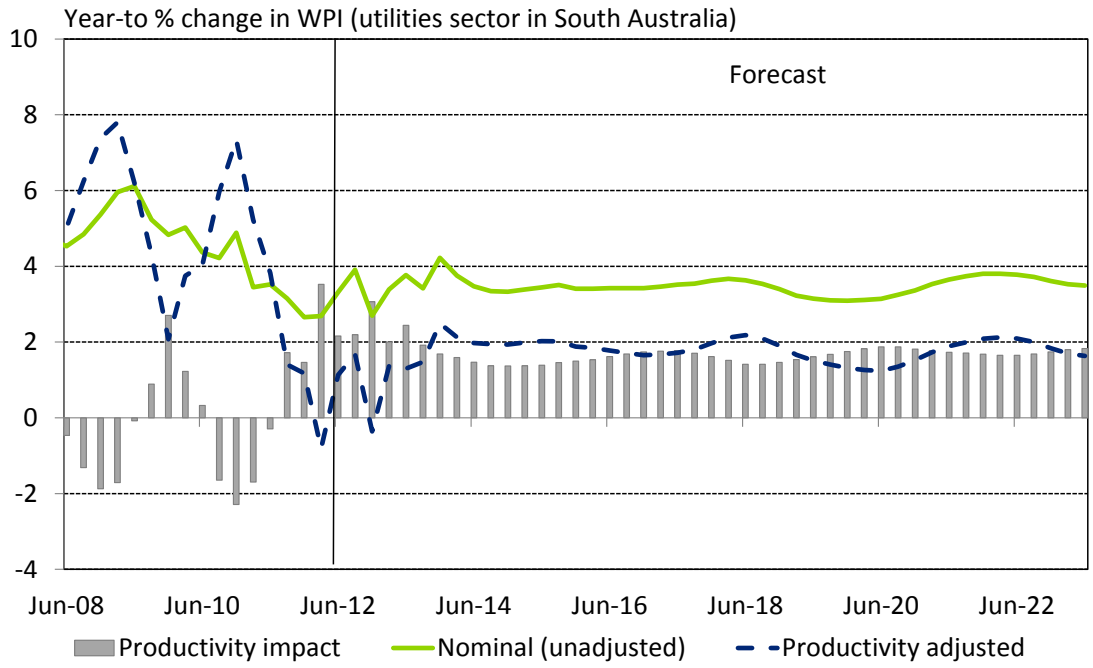
Source: Australian Bureau of Statistics, Deloitte Access Economics estimate for the South Australia utilities WPI

Some of those negatives eased in the June quarter 2012 data – with national utilities WPI moving ahead of the national average for the first time since the end of 2010 (see Chart 10.13) – but not substantially enough to suggest a sharp reversal in the State's sectoral wage growth rate.

As a result Deloitte Access Economics estimates the utilities sector saw lower wage growth than the State as a whole across the past year. Chart 10.13 shows our model estimates State utilities wage growth over the year to the June quarter 2012 at 3.3%. That is marginally below the overall State increase of 3.4%, and slightly further behind the national utilities sector growth rates of 3.8% and total WPI growth of 3.7%.

Again, it must be stressed that the ABS does not release a Wage Price Index (WPI) for the utilities sector in South Australia, and ceased its release of Average Weekly Ordinary Time Earnings (AWOTE) data for the utilities sector in the State at the end of 2011. That means our State level historical results are imputed from the known data (both other industries in the State and other States' utilities sector), total results for State and industry, as well as some partial information from EBAs.

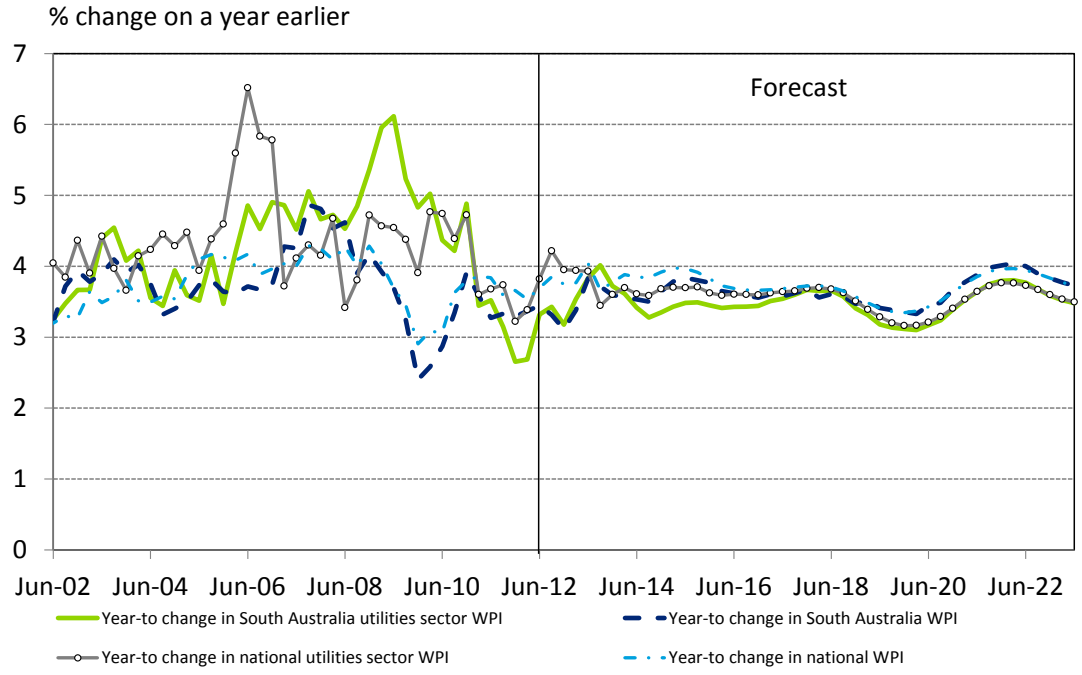
Chart 10.14: South Australian utilities WPI forecasts



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

The growth in wage costs in the utilities in South Australia is projected to lift in line with the upswing in overall State WPI. It should therefore return to close to the 4% mark during 2013. However, as the State's performance ebbs through 2014, and as utilities wages generally begin to fall behind the national average, South Australia's utility WPI will ease back (see Chart 10.15) with annual growth rates of around 3.4% in 2014-15 and 2015-16 (see Table 10.2).

Chart 10.15: South Australian utilities forecast comparison



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

The chart shows a longer term pattern of the State's utilities sector WPI lagging the State average, much as the national utilities WPI lags the overall national WPI – albeit modestly so in both cases. As a result of the declining labour market pressures from mining and construction in the medium term, utilities wages should decline marginally relative to the overall rate, partially unwinding the relatively strong increases seen over the past decade.

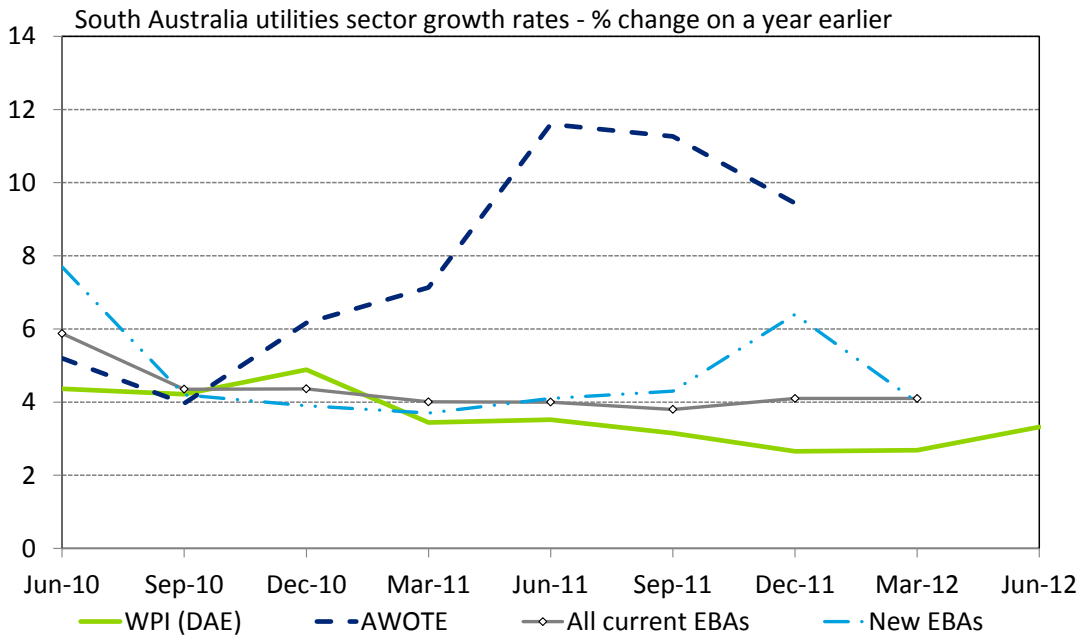
Relative to the State's wages, that process won't begin until 2014, even though compared to national measures the State's utility sector WPI has already eased somewhat since late 2010.

Data for local EBAs in the utilities sector – shown in Chart 10.16 below – has tracked quite closely with our estimated WPI measure over recent years, with gaps between the two similar to those seen at the national level. The final quarter of 2011 showed new agreements lodged in the State included annual average wage increases of 6.4% – well above the recent trend in rates of increase across all agreements (4.0%), although well below the strong rate of growth shown in the final release of detailed AWOTE data (which was close to 10%). That 'spike' in new EBAs did not persist in the early 2012 data, but it is reasonable to believe that the increase will have flowed through somewhat in the form of an increase in WPI growth across 2012.

The increase is further reflected in our expectation of a general upward trend in rate of local utilities wage growth over the medium term. However, it should be remembered that the agreements included in the 6.4% rise cover only 300 workers – with the more recent, rather lower, results covering twice as many workers.

As a result, unless further significant increases in EBAs are reported (or increases covering a much larger share of the workforce), the strong December result can only suggest moderate upward pressure on the local utilities sector WPI, similar to the slight upward movement in wage rises implied by all current EBAs.

Chart 10.16: Measures of utilities sector wage growth in South Australia



Source: ABS, Deloitte Access Economics, Department of Education, Employment and Workplace Relations

10.4.2 The construction sector

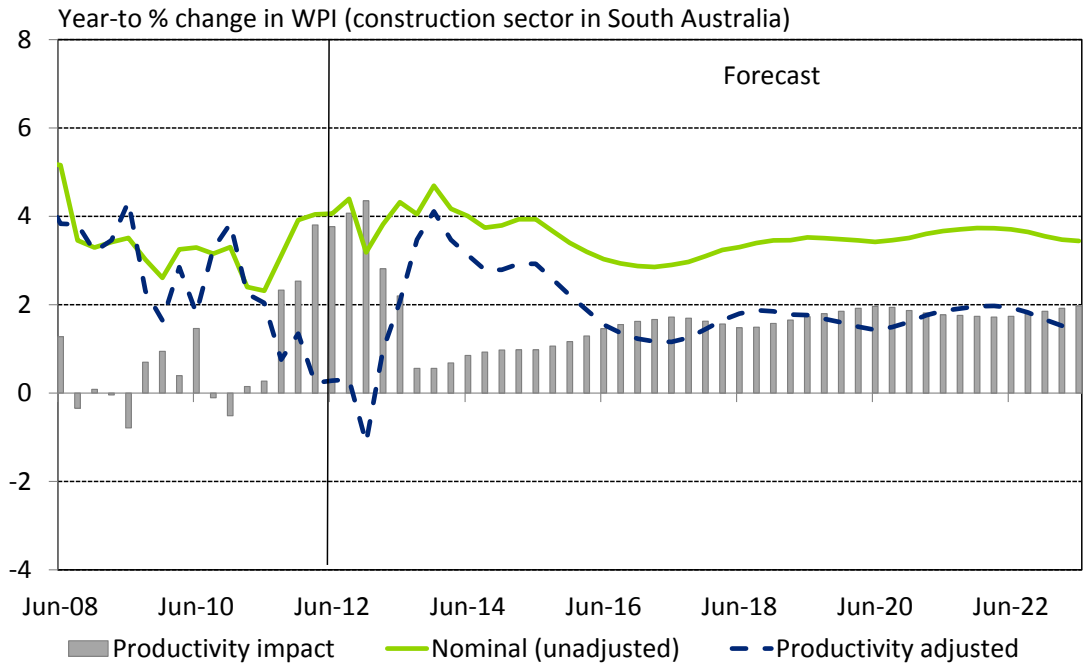
Competition for wages from other sectors is easing at present.

South Australia's housing construction sector is weaker than at any point in the last decade, with further falls in leading indicators such as finance and building approvals, as well as in numbers of housing starts. From 2000 through to 2010 housing activity displayed a surprising level of consistency, even riding out the early phase of the GFC with only a minor easing in housing starts. But the situation has deteriorated over the past two years as population growth eased back, vacancy rates lifted and the State's economic outlook clouded. Moreover, there is not much to suggest a turnaround is imminent, with both the pipeline of work left and indications of new demand relatively weak.

The value of engineering construction commencements in South Australia performed strongly across 2010 and 2011, however it was never going to step up to the next level without the commencement of BHP Billiton's Olympic Dam expansion. That didn't happen, with BHP announcing they intend to shelve the project for the moment. That dashes the prospects for South Australia's engineering pipeline joining the likes of Queensland or Western Australia in the near future. Despite the main announcement, BHP Billiton has made a formal request to extend their lease on the site from the State Government. After all, this is still a world class deposit. So the same dichotomy remains true – that of a world class resource in Olympic Dam, waiting for the economics to stack up to bring its potential to fruition.

In addition to utilities sector projects, work also continues on a number of key road projects, led by the $842 million South Road upgrade program from the Port River Expressway to Regency Road in Adelaide that is due to be completed in 2014, while improved interstate links to South Australia's Riverland, Barossa Valley and Gawler Regions will come at a cost of $546 million.

Chart 10.17: South Australian construction WPI forecasts



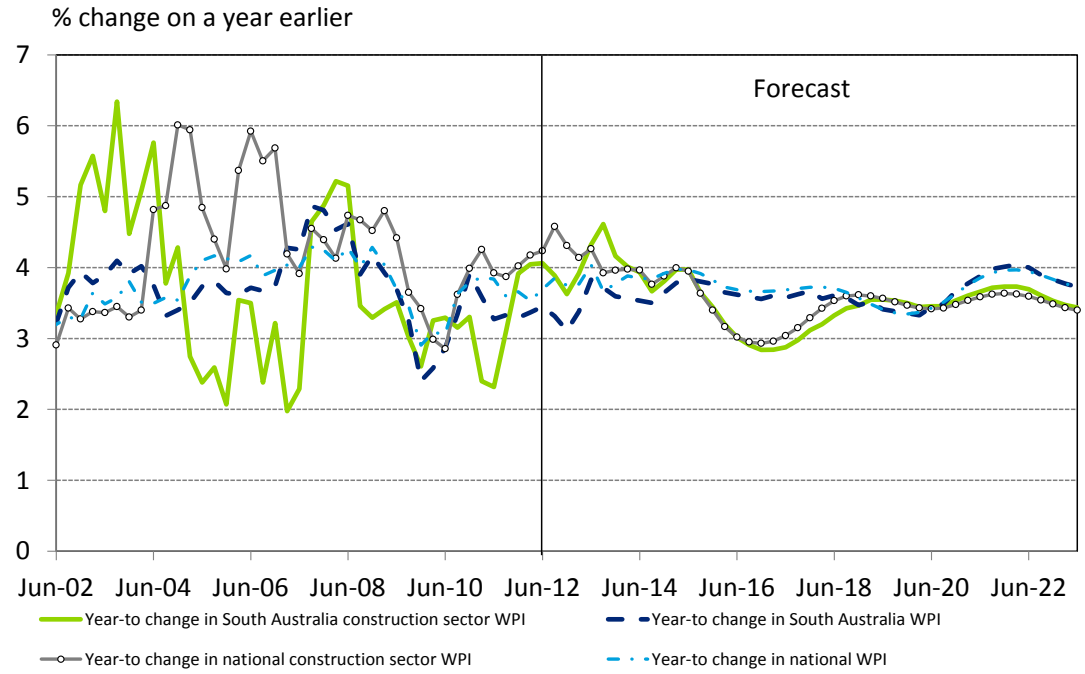
Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

Commercial construction in South Australia continues to be headlined by the new $2.1 billion Royal Adelaide Hospital, with its construction expected to continue out to 2016. Other projects currently under construction include the $400 million new science precinct at the University of Adelaide and the $535 million second stage of the refurbishment and grandstand enlargement at the Adelaide Oval, with work due to be completed there in early 2014. Greg Norman also plans to complete construction of a new golf resort near Port Hughes at a cost of $500 million and due for completion sometime next year.

Accordingly there is little scope for a rapid turnaround in housing construction outlook. with population growth continuing to lag behind that of other States and poor leading indicators, while both engineering and commercial construction have relatively modest pipelines given that South Australia's economy remains on the wrong side of the global pressures resulting from the high $A.

Hence, although construction is a competitor for workers in the utilities, that competition is less evident in South Australia than it is in some other States. Even so, WPI growth in South Australian construction has lifted during 2012 (see Chart 10.17). In the main, that reflects a rebound after weakness in 2011 (a similar pattern was evident with weak results in 2007 and a relatively strong period in 2008), and wage growth in the construction sector in the State is expected to ease back in the short term.

Chart 10.18: South Australian construction forecast comparison



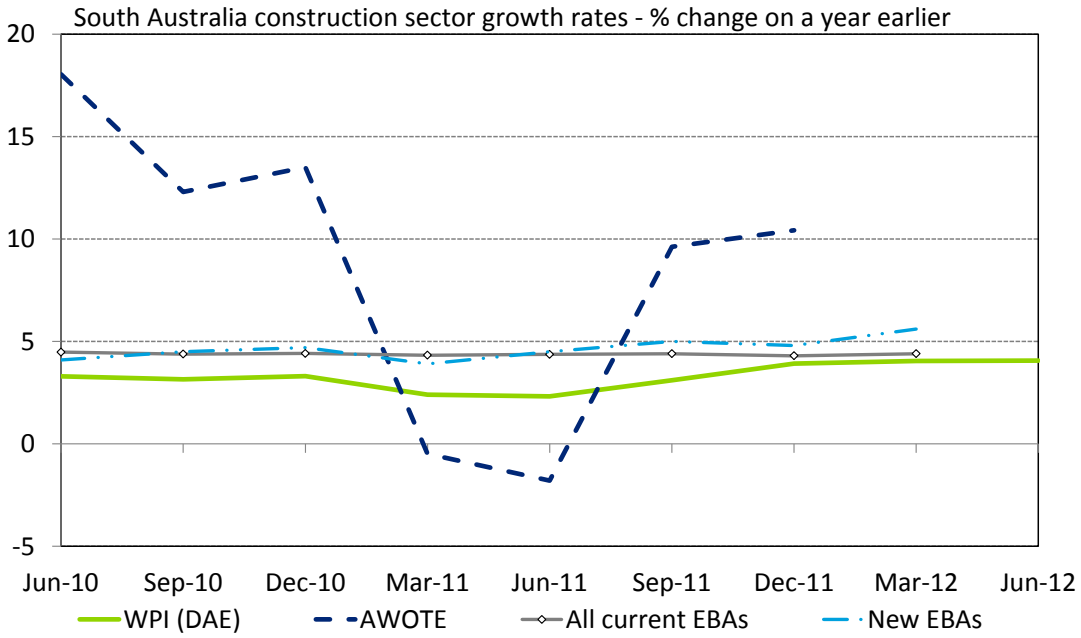
Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

That would see construction WPI growth in South Australia at around 3½% by early 2013 – ahead of the overall State wage growth rate but lower than construction wage growth in jurisdictions elsewhere. As other States see their construction sectors peak, their wage growth rates may dip for a time, lifting South Australia's above the average, but the longer term will see South Australian rises in line with or marginally below the national equivalent.

The construction sector sees relative few workers covered by EBAs, with the majority of those involved in larger projects, particularly in Victoria, Queensland and Western Australia. South Australia sees just 8% of its construction workforce using EBAs, compared with a 19% overall coverage of the workforce.

As suggested in the forecast above, growth rates for wage rises under new EBAs have ticked upwards recently, although that has had little impact on the rise seen across all local construction sector EBAs, with the increase in the year to March 2012 standing at 4.4%, compared with 4.3% in the year to December 2011.

Chart 10.19: Measures of construction sector wage growth in South Australia



Source: ABS, Deloitte Access Economics, Department of Education, Employment and Workplace Relations

10.4.3 Administration services

Administration services is one of the few sectors in South Australia for which official WPI measures are released.[12] These figures have shown fairly volatile movements in recent years, matching some of the sharp swings in employment performance in the sector.

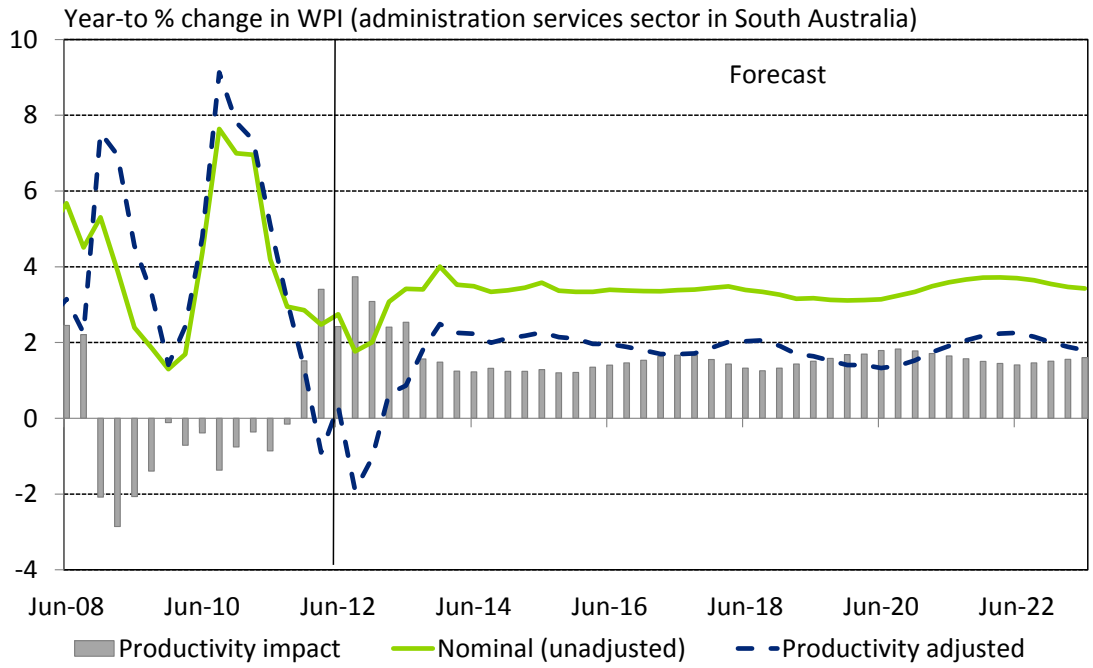
However, the key driver has been from national movements. In particular, one-off impacts from the transition to the *Modern Awards* system boosted wages in the administration services sector through 2010-11. South Australia's sector was easily the hardest hit by these changes, resulting in labour cost growth exceeding 7% for much of that period.

That also somewhat distorts the picture shown in Chart 10.20, artificially lifting wage growth measures in history. The chart shows that the sector's local WPI has eased considerably since then, but in many ways the truth is probably less dramatic, underlying pressures only increasing gradually to a peak in early 2011.

[12] The others being manufacturing, retail, public administration, education and health.

Growth rates in wages have eased consistently since, and recently dropped below 2½% before a slight improvement in the June quarter.

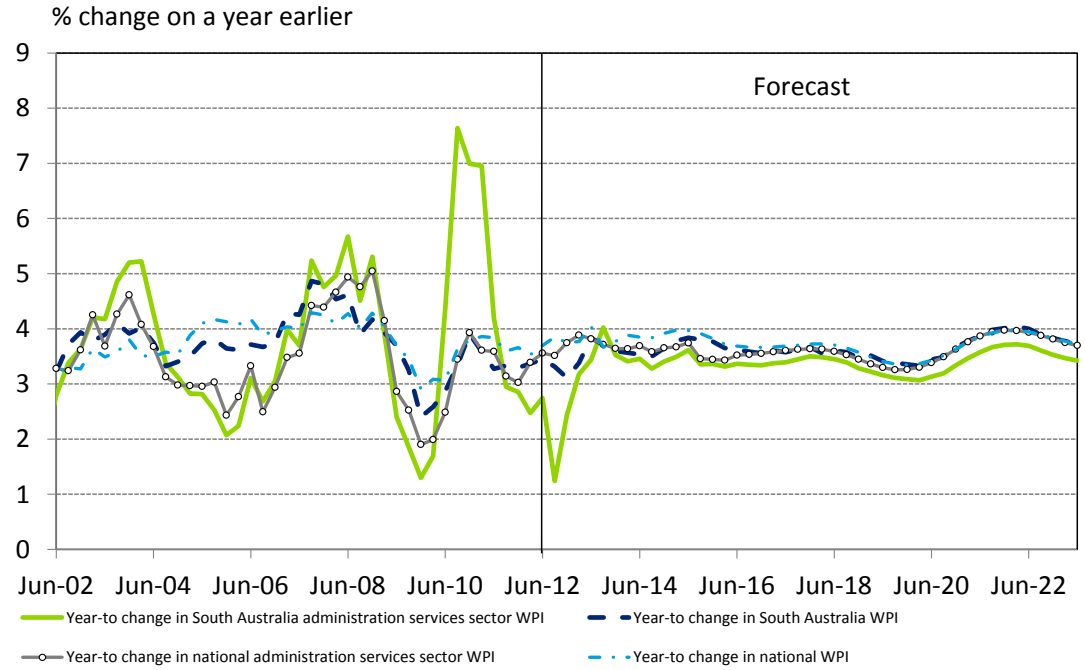
Chart 10.20: South Australian administration services WPI forecasts



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

Short term forecasts are for both the South Australian and administration services sectors of the economy to see slower wage growth through the rest of 2012 before a period of consolidation in 2013.

Chart 10.21: South Australian administration services forecast comparison

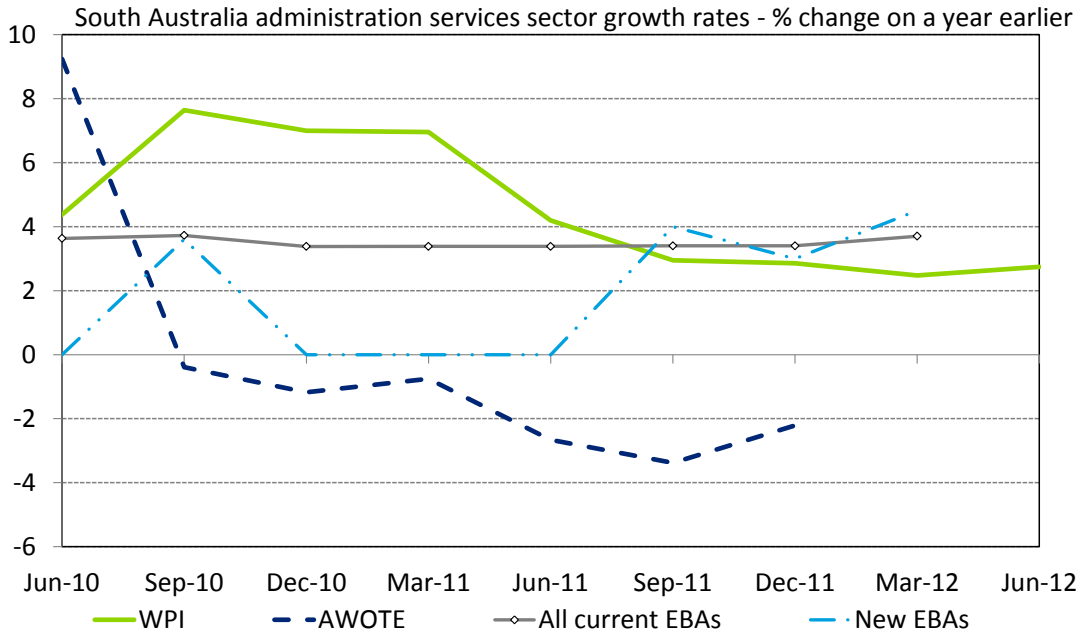


Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

Given the weakness in both this sector, and also in South Australia's professional services and finance sectors, there is a lack of competition for workers in this area. The rapid loss of back office staff in resource businesses, and the downgrading of the outlook for medium term infrastructure developments such as Olympic Dam, all conspire to limit the short term outlook for wages in administration services, leaving the latter quite weak.

Beyond that, the South Australian administration services sector can expect WPI growth to remain below the national average for some time (as seen in Chart 10.21). That expectation is also matched by recent movements in the DEEWR database on EBAs (Chart 10.22), which showed a sharp decrease in the rate of wage increase included in new EBAs towards the end of 2011 – driving it to its lowest result in two years (an increase of just 3.0%). While that decline has unwound in the latest figures, it is yet to flow through to the WPI results. We expect that will happen in the latter part of 2012, precipitating a low rate of growth through that period before an offsetting rebound in 2013.

Chart 10.22: Measures of administration services sector wage growth in South Australia

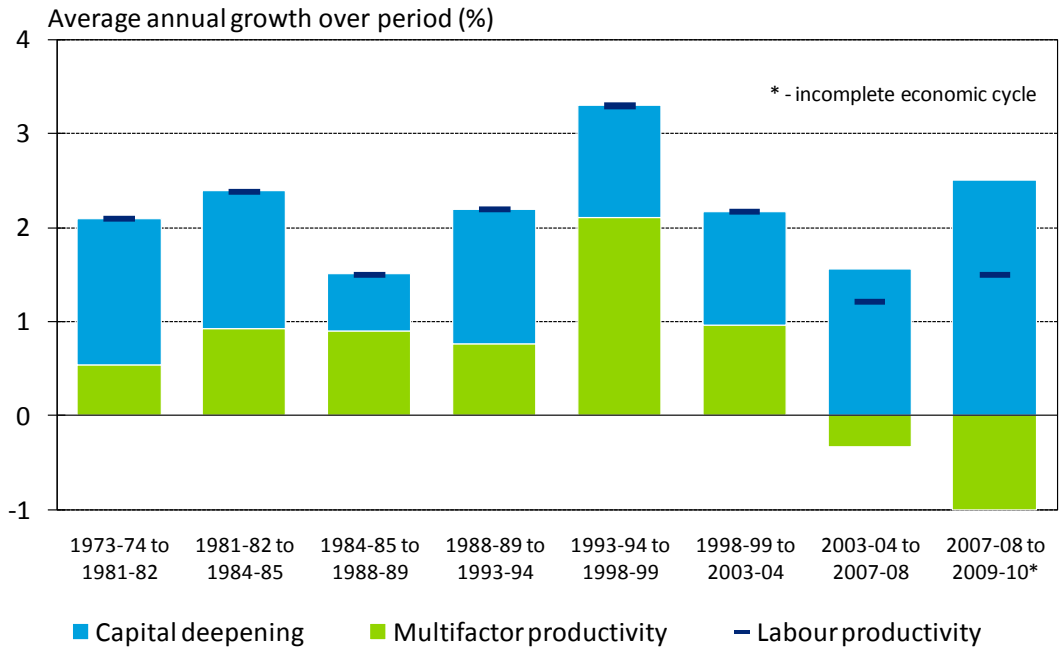


Source: ABS, Department of Education, Employment and Workplace Relations

Appendix A: Productivity trends

Australia's productivity performance faltered sharply in recent years, despite the heavy investment in capacity expansion made by those both inside and outside the resources sector.

Chart A.1: Market sector productivity growth



Source: ABS, Federal Treasury

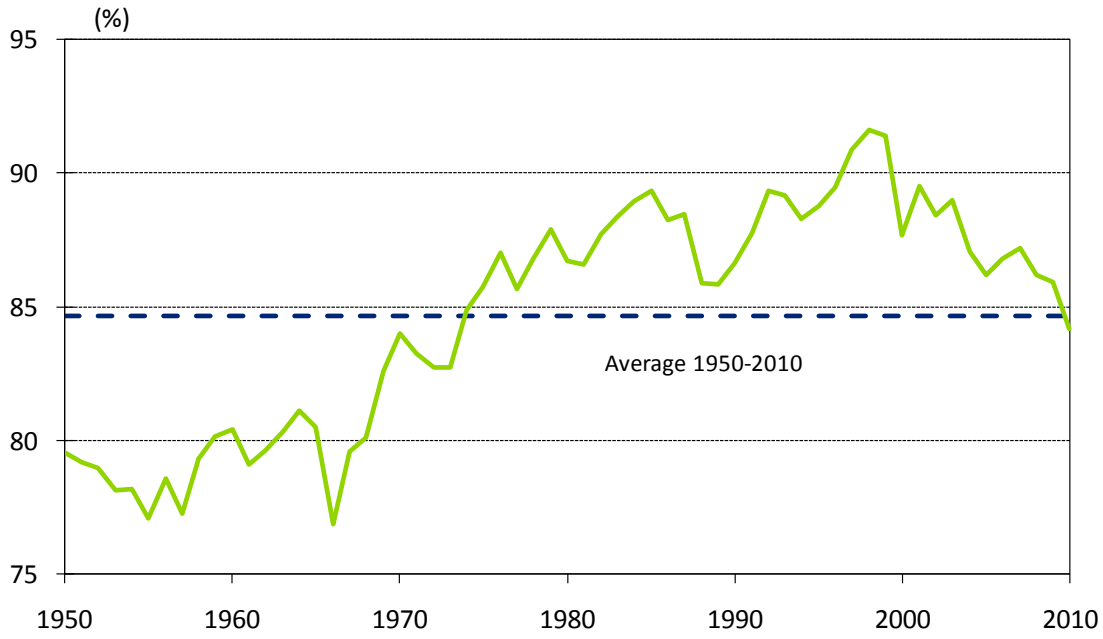
The lift in productivity Australia saw in the 1990s – generated by the reforms of the 1980s and 1990s – has since dropped off.

Moreover, Treasury Secretary Martin Parkinson sees *"little reason to believe it will improve in the immediate term. ... Indeed the rate of improvement in the living standards of Australians, at least that part measured by incomes, has already begun to deteriorate"*.

In the late 1990s, Australia's labour productivity peaked at 92% of the US level. Since then it has dropped to 84%, the lowest seen since the early 1970s. Parkinson added that *"the root causes of Australia's present productivity performance are embedded in the decisions of the last decade"*, and that failing to tackle this productivity slowdown now *"will cement poor outcomes in the future". "Australians have not yet felt the consequences of this decline."*[13]

[13] http://www.treasury.gov.au/documents/2077/PDF/Sustaining_growth_in_living_standards.pdf, 30 June 2011.

Chart A.2: Australia's labour productivity relative to the US



Source: Australian Treasury, 2011

Reports by the Productivity Commission (2009), the House of Representatives (2010) and the Treasury suggest 70% of the rapid decline in productivity since 2003-04 is accounted for by:

- Declining resource quality and large capital investment that has not yet translated into output in the mining sector;
- Capital investment and reduced rainfall in the electricity, gas and water sector; and
- Drought affecting the agriculture sector.

Other possible causes of the decline in productivity growth include capacity constraints within the economy, following the very long period of uninterrupted economic growth.

Part of the reason for falling productivity in the utilities sector in recent years has been the growing gap between peak electricity demand and average electricity demand. Installing the capacity to ensure that power blackouts are very unlikely means chasing the increases in peak electricity demand times evident in recent years (such as now occurs on hot summer days).

Ensuring that demand can be met has meant that capacity has to exist year round for the handful of days where peak capacity is required. This has lower productivity in the sector[14].

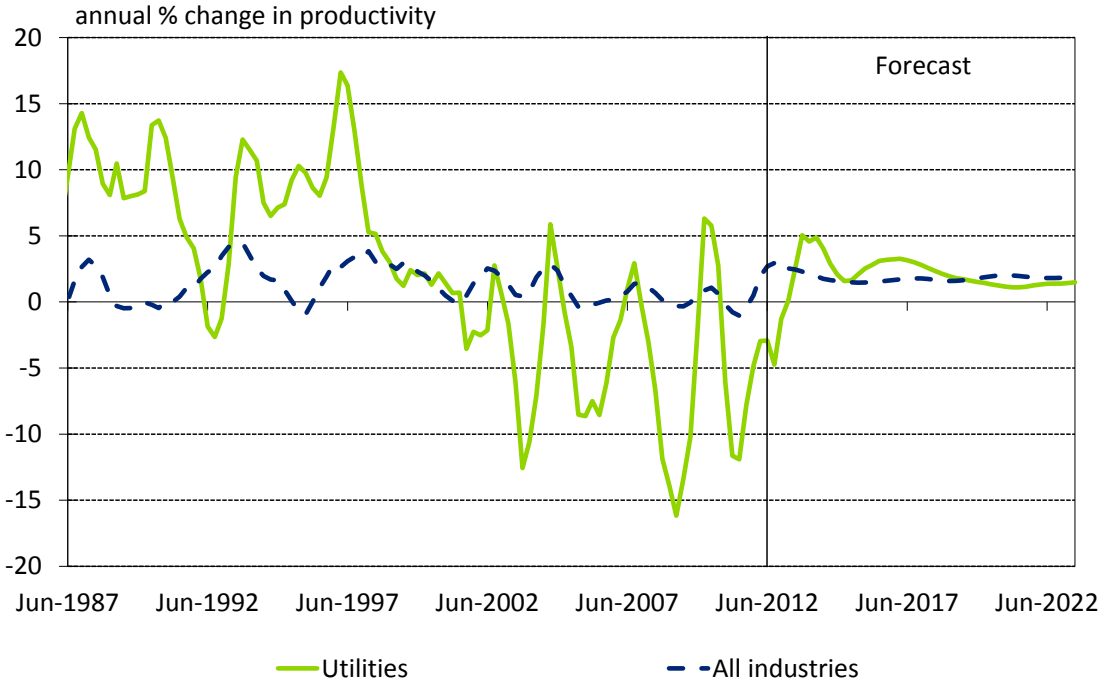
That said, Deloitte Access Economics' assumption of productivity growth is stronger in the medium term than it has been in recent years, averaging close to 1.5% per year as boosts to efficiency from the strong levels of business investment begin to be seen across the economy.

[14] See Ross Gittins' analysis at http://www.smh.com.au/business/productivity-is-just-one-way-to-measure-wealth-20120729-236bo.html

In part that is because rising electricity prices generated by the need to match peak demand (as well as the introduction of the carbon price and other factors) are running into heavier political weather. That suggests – perhaps through the use of pricing to customers based on smart meters, or more likely because higher prices now mean that the existing capacity is now in place to better meet those peak demands – that this major negative for productivity in the utilities sector may have mostly run its course.

As the chart below shows, the utilities sector is projected see a more volatile version of the national productivity trend in the short term. In the shorter term, falling productivity is reflected by an increasing gap between base and peak demand for utilities. In the longer term productivity growth is projected to average a similar rate to the national, although it may be more volatile from year to year.

Chart A.3: Productivity growth in the utilities



Source: ABS, Deloitte Access Economics' macroeconomic model

Appendix B: 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 1.5% over the past three

decades, that might suggest that wages for the 'average' worker will grow by perhaps 4.0% 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 5.0% in a typical year.

Appendix C: Macroeconomic and wage forecasting methodology

Introduction

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

The macroeconomic forecasts presented in this report are based on the June quarter *Business Outlook* publication.

The following are **excerpts** from the full model documentation that cover the creation of the key driver of the detailed wage model. Full documentation for this component of the model has been provided separately to the AER.

Macroeconomic forecasting

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

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

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

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

> *"… generate higher national income without first expanding the nation's supply capacity: one of the 3Ps — population, participation or productivity. Now you might be thinking that that's all pretty obvious. It is, after all, a tautology. But one of my messages to you today is that if you understand what I have just been talking about, then you are a member of a rather small minority group."*

The redesigned model adds to the sectoral structure of the previous version, which included a business sector, a housing services sector and government sector, by netting out farm output from the business sector. Given the variable nature of farm output, this change allows us to

account for volatile changes that could not be captured when farm output was combined with non-farm output.

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

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

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

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

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

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

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

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

Finally, model parameters are estimated using quarterly data extending from September 1974 to the most recent quarter for which data are available. Quarterly data are used as annual data is too aggregated to allow analysis of turning points and interest rate movements. Monthly data is not feasible because most key ABS collections are produced on a quarterly basis – notably the national accounts, the balance of payments, CPI and international investment data. Another advantage of quarterly data over annual data is that both calendar and financial year totals can be calculated.

Domestic production

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

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

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

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

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

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

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

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

Labour market

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

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

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

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

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

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

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

Prices and wages

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

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

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

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

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

A positive shift in domestic demand that raises the gap between actual and potential output (a positive output gap) will have a direct impact on price inflation by raising the underlying CPI. Wages respond with a lag to changes in underlying CPI inflation, with the long run real wage tied to CPI inflation and labour productivity growth.

A positive output gap also has a direct and indirect effect on real interest rates via the monetary policy reaction function, with the typical reaction to a widening output gap and higher price inflation being higher nominal interest rates. Higher interest rates dampen

domestic demand which narrows the output gap and relieves upward pressure on price and wage inflation. Over time this mechanism forces the output gap back to zero, interest rates to a neutral position and inflation to return to the RBA target level.

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

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

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

Wage forecasting

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

Industry and State Labour Price Indices

Modelling of specific labour price indices (WPIs) begins with the movements in the total Australian WPI – taken from the Deloitte 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

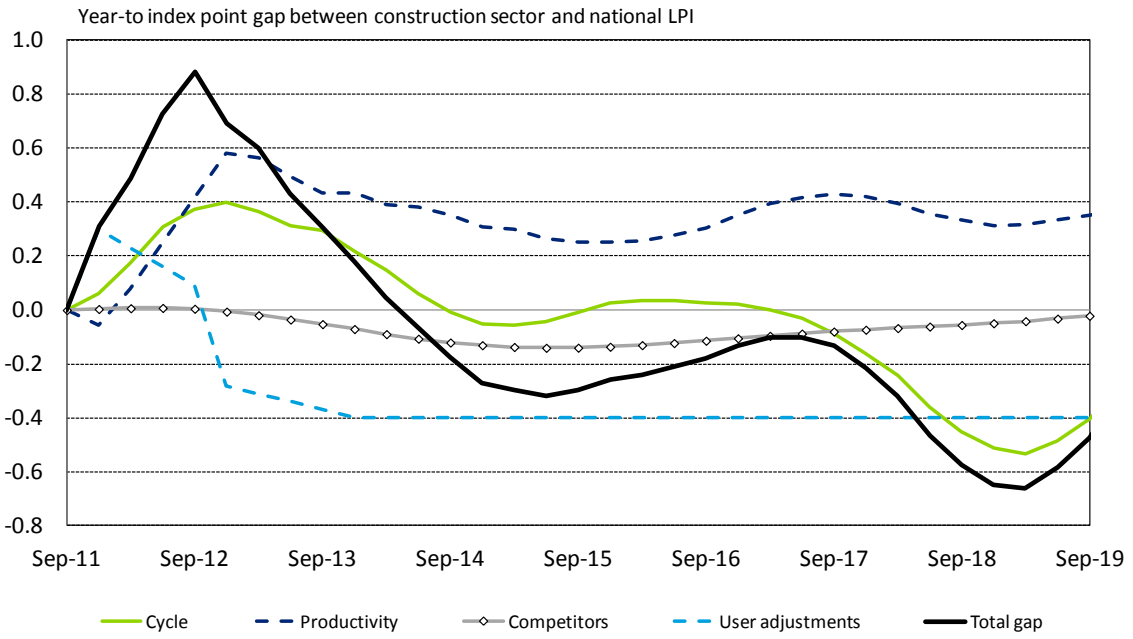
and vice versa. In this model, the key factor is how fast the industry (or State) is growing relative both to the national average, as well as to historical averages. So, while manufacturing growth in the future may be below the national average, if the gap is relatively less that has been seen in recent 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 WPI 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 WPI may not be reflective of movements in the wages of individual employees. In an extreme case, it would be possible for (say) all the workers in an industry to take a pay cut but the overall WPI measure in the industry to rise if all the low-paid workers left the industry all together – shifting the average wage towards the higher level.

Chart C.1: Sample composition chart of sectoral wage drivers (national level)



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

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

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

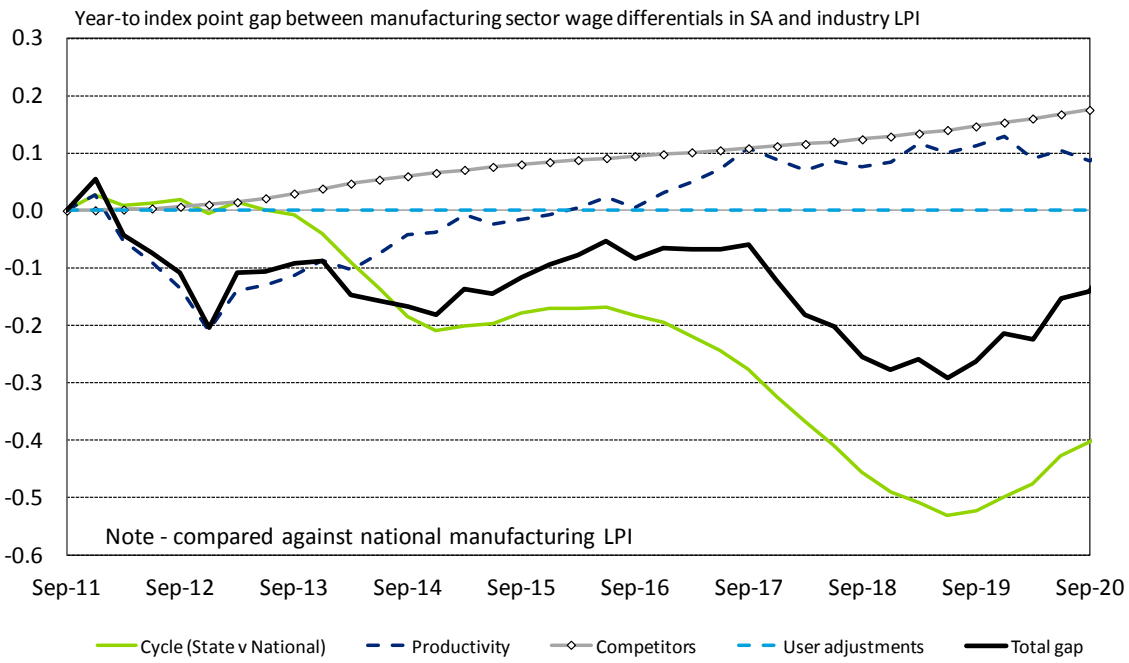
- The recent strength in the construction sector will keep upward pressure on the wages in the sector (represented here by the **Cycle** line). By the end of 2012 growth rates will begin to move in line with the overall economy and the cyclical pressure will diminish (and reverse further out); but
- The higher rate of productivity growth in the utilities sector will put upward pressure on the WPI for construction across the forecast period (the **Productivity** line). This effect will largely dissipate further out; but
- The relatively strong growth in construction sector wages implied by these first two trends (and the recent strength in the WPI) means the sector will face minor downward wage pressure from other sectors. Weakness in the manufacturing sector in particular will limit the impact from competitor industry wages (the **Competitors** line). In the longer term the otherwise stronger wage growth in the sector will not see a need for wages to rise to maintain pace with growth in competitor sectors (mining, construction and manufacturing) to prevent workers being tempted to move.

The final result of all of these effects is construction sector WPI growth well ahead of 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 WPI. So the chart below implies that the State's construction sector WPI will:

- Grow relative fast as the State's growth will be well ahead of national averages through the forecast period;
- See a strong offset due to relatively weaker productivity growth, particularly in the latest years; and
- Will initially be boosted as the State's WPI is currently low by historical standards, but will be constrained in the longer run as the WPI soon grows ahead of the national rate.

Chart C.2: Sample composition chart of sectoral wage drivers (State level)



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

Labour prices versus labour costs

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

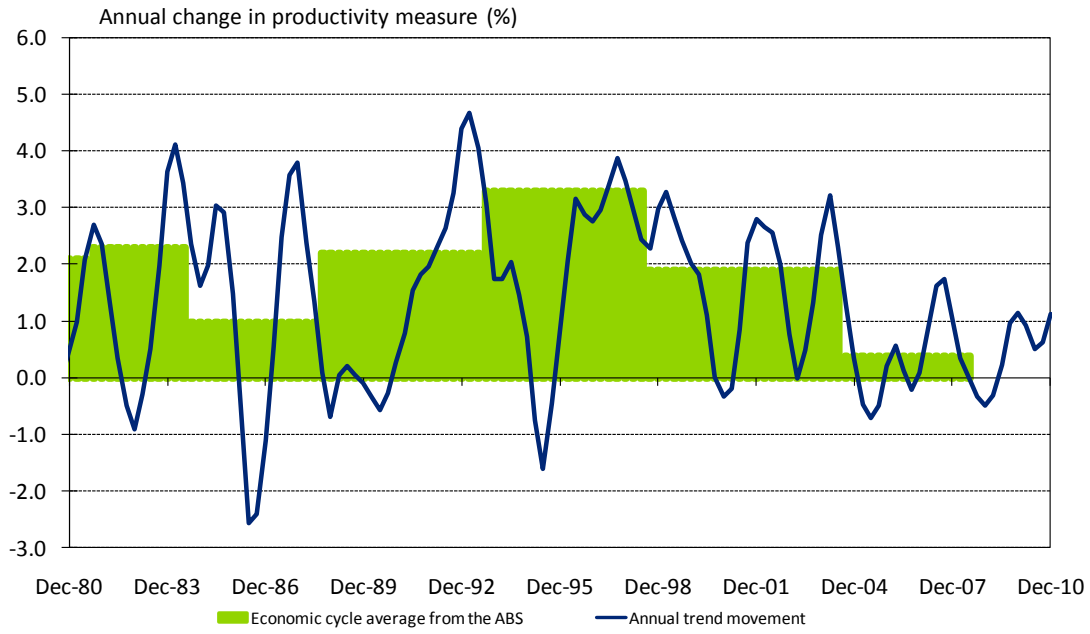
However, labour costs will rise at a different rate due to the effects of labour productivity growth. Effectively, labour productivity measure the number of units of output an individual employee can produce in a given time period. The more units of output each worker can produce, the fewer workers are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

The measure adopted for increases in labour costs is the growth in productivity-adjusted labour prices. Because so many factors can influence productivity (for example, during times of rapid expansion in employment, productivity may fall as new workers are often less productive 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 2007-08, so the last few years have no official cyclical productivity growth measure).

For the last two economic cycles (1998-99 to 2003-04 and 2003-04 to 2007-08) the ABS has produced a labour productivity measure adjusted for the quality of hours worked. This measure is closer to the basic measure (output per employee) over the cycle than the simpler output per hour worked measure over this period.

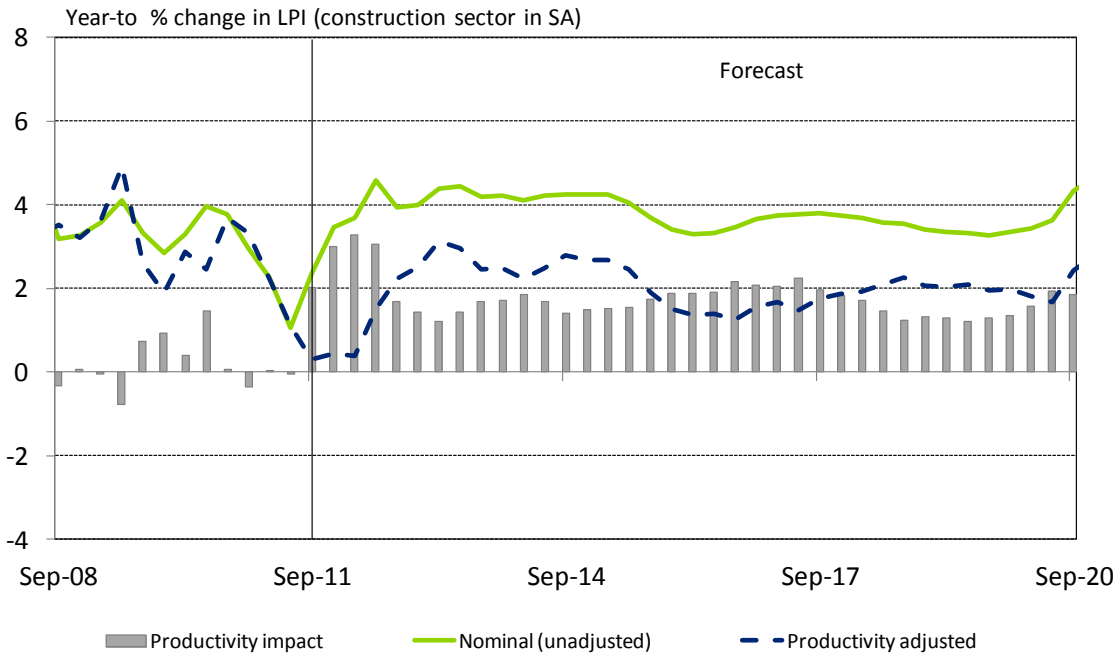
Chart C.3: Growth in productivity – annual methodology vs economic cycle methodology



Source: ABS

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

Chart C.4: Sample measure of forecast productivity effects



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

In the example above, the cyclical impact of productivity becomes clearer. Across the latter part of the forecast (from 2012 to 2018), the nominal (or unadjusted) WPI rises by 4.0% per year, while the rate of increase adjusted for productivity improvements is just 2.0% per year – the gap implying productivity improvements of 2.0% 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.[15] 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 section explores the differences between the various measures of employee remuneration.

Measures of employee remuneration

Three distinct measures of employee remuneration are discussed below: earnings; changes in the price of labour; and compensation of employees.

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

[15] See http://www.abs.gov.au/AUSSTATS/abs@.nsf/90a12181d877a6a6ca2568b5007b861c/9b6a7239b96304ddca2570930000e4bf!OpenDocument

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; 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 wage growth. 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

Table D.1 (found at the end of this chapter) 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.

Drawbacks to using the WPI measure

While Deloitte Access Economics would view the WPI as the best measure for use in the context of this report, 'best measure' is not the same as 'perfect measure', and there are also drawbacks to using the WPI:

- First, the WPI is published by State and by sector separately, but not by State and by sector. That is, the WPI for NSW is published, and the mining sector WPI is also published, however the NSW mining sector WPI 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 WPI at the 'by State and by sector' level. Appendix B discusses how Deloitte Access Economics does that. The resultant series are rather less volatile than the matching ABS AWOTE series. (Note that, not surprisingly, the ABS is reducing over time the range of sectoral level AWE data which it is willing to release. This phase will eliminate one of the remaining arguments in favour of using AWOTE or AWE over the WPI measures.)
- 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 WPI (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).

EBAs and contract rates

Deloitte 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, Deloitte 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.

Further issues

The ABS has reviewed its production of AWE and AWOTE measures at the industry by State level (e.g. the AWOTE for the utilities sector in Victoria). This information will now no longer be produced.

A key reason was the high standard errors for these series. In the case of the AWE/AWOTE publication, sample selection is stratified across States and across industries, but not both. That means that as the businesses in the sample change from quarter to quarter (and about 8% of the 5,000 do each time) there is no guarantee that the State by industry samples can be readily compared. This led to questionable comparability of detailed AWE/AWOTE results from quarter to quarter as the changes may be driven by changes in the sample, rather than changes in wages.

The WPI, by contrast, suffers as little as possible from this problem because its sample follows specific "jobs" over an extended period (at least five years). This limits the rotation problems that the AWE/AWOTE series suffered from.

Table D.1: National wage surveys

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

Appendix E: WPI sectoral history at the State level

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

The following table shows (for the key States and sectors modelled) which data is available in time series for the WPI and (for those where WPI is not available) AWOTE. These are data series provided on the new ANZSIC06 basis. In the case of WPI data this has been provided across the period from September quarter 2008 to June quarter 2012 (16 quarters of data on a consistent basis).

Where AWOTE data is shown as being available, only estimates from May 2009 to November 2011[16] have been calculated by the ABS. Beyond this point data is imputed.

Table E.1: Wage data series availability

	Utilities	Construction	Administration services
Victoria	WPI	WPI	WPI
South Australia	AWOTE	AWOTE	WPI

Source: ABS

As the table shows, the ABS produces all the required WPI data for Victoria, but only administration services in the case of South Australia. AWOTE data for the missing South Australian sectors was available until the end of 2011, but has now been discontinued. In addition, the overall AWOTE data itself is not consistent with the WPI data for Australia (as noted in the chart in the executive summary), so rather than using the raw data, to obtain a State by industry WPI we have used the deviations in the AWOTE growth from State AWOTE averages and applied a consistent ratio to the known State WPIs.

In other words, if the South Australian utilities sector AWOTE measure rose faster than the overall State AWOTE measure, then we allow the South Australian utilities sector WPI measure to rise faster than South Australia's overall WPI. Because the AWOTE data has been far more volatile than WPI in recent years, we limit the deviations that this might imply.[17]

In addition to the AWOTE methodology (and in the most recent quarters, in place of it) we have used trends from EBAs to drive deviations in WPI growth rates. In all cases where WPI data is not published, the estimated results are normalised to ensure that the totals for the States are consistent with the levels of the industry components.

[16] AWE/AWOTE measures are defined for the mid-month of quarter, so the initial AWE/AWOTE data here is from the May 2009 publication. The LPI data is referred to by the entire quarter.

[17] We do that by comparing the variations in published AWOTE and WPI measures within each State and adjust the unknown deviations accordingly.

Limitation of our work

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