

Trends

November 2017

A bulletin of
economic developments
in South Australia

Manufacturing South Australia's future

Advanced technology underpins the state's industrial prospects



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Chief Executive's Foreword

Optimistic future for manufacturing



Welcome to the latest edition of BankSA's economic bulletin, *Trends*, compiled in conjunction with Deloitte Access Economics.

In this edition, we examine South Australia's manufacturing industry, including the challenges the sector has experienced in recent years, but also why there is cause for optimism for the future.

Manufacturing has long played a major role in the South Australian economy, but its contribution has declined in recent years due largely to the rise in low-cost manufacturing capabilities globally, particularly in Asia.

This edition of *Trends* outlines recent developments in manufacturing in South Australia, including the major challenges the industry has faced, but also the opportunities on offer now and into the future as we transition from traditional to advanced manufacturing.

Last month's closure of Holden's Elizabeth plant in Adelaide's north signalled the official end of car making in South Australia and again put the spotlight on the plight of the state's manufacturing industry.

It's certainly been a tough decade for the sector, with around 20,000 manufacturing jobs lost in South Australia since the global

financial crisis hit, while the industry's output has also fallen by a proportionate amount over the same period.

The globalisation of manufacturing has led businesses to increasingly seek out the lowest cost sources of supply, which has been to the detriment of developed economies worldwide – including South Australia – who simply cannot compete with regions like Asia on wage and production costs.

Making matters worse, the dramatic rise in energy costs in recent years has inflicted even more pain on the state's manufacturers and further deteriorated their competitiveness against their overseas counterparts.

Manufacturers are particularly vulnerable to increased energy prices because they generally use substantially more energy than other industries. In fact, while the

manufacturing and construction sectors account for only 15% of the nation's economy, they actually consume 27% of Australia's total energy production.

Despite all the doom and gloom though about South Australia's manufacturing industry, there is cause for optimism.

It is worth noting that manufacturing still comprises a significant share of economic activity and accounts for approximately one in 11 jobs in the state. Indeed, around 70,000 South Australians are still employed in the sector today.

Specifically, food and beverage product manufacturing remains a shining light, with the sub-sector accounting for one in three manufacturing jobs in the state. Importantly, this sub-sector enjoys relative protection from globalisation (and the associated squeeze on production costs) due to the premium quality and popularity

of South Australian produce nationally and throughout Asia.

And promisingly, there's potentially an even brighter future ahead for local food and beverage manufacturers, who are likely to benefit from the increasingly affluent Asian market, as well as via improved trade access thanks to the China-Australia Free Trade Agreement, which is already boosting our export levels. For example, following the agreement coming into effect in late 2015, wine exports to China spiked by more than 50%.

Defence manufacturing is also a strong performer and is set to continue as a good news story in South Australia over the next decade, with the \$35 billion Future Frigates Program and the \$50 billion Future Submarines Program to generate thousands of new jobs and help entrench the state as a defence powerhouse.

Already, South Australia contains a quarter of the nation's specialist defence businesses, and is the beneficiary of 32% of the country's defence spend, so its contribution to the state economy cannot be questioned.

In addition, South Australia's established technical skills base that we have developed over many years through our automotive and defence sectors holds the state in good stead. Critically, it provides a solid platform for new and existing manufacturers to grow and invest in their businesses – and in South Australia – and ultimately capitalise on the transition from traditional to advanced manufacturing.

Importantly, there is a groundswell in this state to make South Australia a centre for advanced manufacturing, both to enhance existing manufacturing industries and to create new ones.

In fact, a recent BankSA survey found that pursuing new advanced manufacturing industries was the highest ranked preference among South Australian consumers (81%) to modernise the state's economy, rating ahead of premium food, software development and renewable energy industries amongst others.

More specifically, 77% of consumers agree with developing an advanced manufacturing bio-medical industry for the production of pharmaceuticals and other medical products, as well as building high quality, low cost whole products such as driverless

electric cars, solar panels and custom-built furniture.

Furthermore, 87% of South Australian business owners want to produce graduates and workers skilled in advanced manufacturing to help develop a new homegrown industry, while using old car manufacturing sites (such as Holden's former Elizabeth plant) as modern manufacturing hubs is overwhelmingly supported by consumers (85%) and businesses (88%).

As noted in this *Trends* report, the precise definition for advanced manufacturing varies, but it is generally accepted as a subset of manufacturing industries in which research and development is a significant proportion of revenues. With that being the case, and with developed economies set to continue to struggle with wage cost competitiveness at a global level, ideas (rather than cost) appear likely to become an increasingly key component in the competitiveness stakes, which could favour South Australia.

To that end, our state is already progressing as an innovation hub, including Technology Park Adelaide which comprises more than 85 co-located bioscience and technology companies, while we are rapidly earning an impressive reputation in advanced medical manufacturing through the South Australian Health and Medical Research Institute and the new Royal Adelaide Hospital.

Crucially, South Australia has already made strides in promoting the state's advanced manufacturing credentials, and with advanced manufacturing identified as one of the state's 'Seven Strategic Priorities' to help grow our economy in the future.

So while we may not be able to compete with Asia on wage costs for manufacturing, we can compete on ideas and innovation. And given our strong skills base and cost-competitiveness relative to other states in Australia, South Australia is well placed to seize on growth opportunities in the advanced manufacturing sector – we just need to be prepared to rise to the challenge.



Nick Reade
Chief Executive, BankSA

20,000

The number of manufacturing jobs that have been shed in South Australia since the global financial crisis.

1 in 3

The current number of food and beverage product manufacturing jobs in South Australia as a share of total manufacturing jobs in the state.

100+

The current number of South Australian businesses specialising in advanced manufacturing, medical devices and pharmaceuticals.



Manufacturing South Australia's future

"No pain, no gain." - Jane Fonda

"Those who look only to the past ... are certain to miss the future."

- John. F. Kennedy

"Here comes the sun." - The Beatles

The sands have been shifting for the South Australian economy.

The first decade of the 2000s was marked by a China boom which pushed up interest and exchange rates in Australia.

As a state vulnerable to a period of high currency and credit costs, South Australia was done no favours by that boom. It left us on the wrong side of Australia's 'two speed economy', placing our manufacturers and our

farmers on the back foot amid that strength in credit and currency costs.

And the pain continues. The headline grabber is that Holden stopped making cars here last month. That closure means a direct loss of around 1,600 jobs, with further job losses likely in car parts manufacturing and elsewhere.

That risks the unemployment rate rising here in the near term.

Yet although the costs to manufacturing have been high, some of the drivers of job losses in the sector are less damaging today than they were for a long time. Today's Australian economy has a different complexion: these days interest rates are at record lows, while the Australian dollar now sits closer to its long run average.

That combination is helping the broader South Australian economy, where unemployment

now sits below 6% for the first time in several years.

While the legacy of the elevated currency is still being felt in manufacturing (Holden being a prime example), and while high energy costs are a particular problem for some in the sector, the current levels of these key economic drivers have helped to get some of South Australia's manufacturers back in the game.

Combined with increasing liveability for young professionals (given that Sydney and Melbourne house prices have gone haywire in recent years), and a strong manufacturing legacy (including the strength of the local skill base), there are reasons for optimism in South Australia's manufacturing industry – and for our economy more widely.

Most notably, the drivers of sectoral success are evolving. As manufacturing becomes increasingly capital and IP-heavy, Australia will benefit from that. That's important because while we cannot compete with Asia on wage costs, we can compete on ideas. So there are future growth opportunities in advanced manufacturing and high quality, niche offerings.

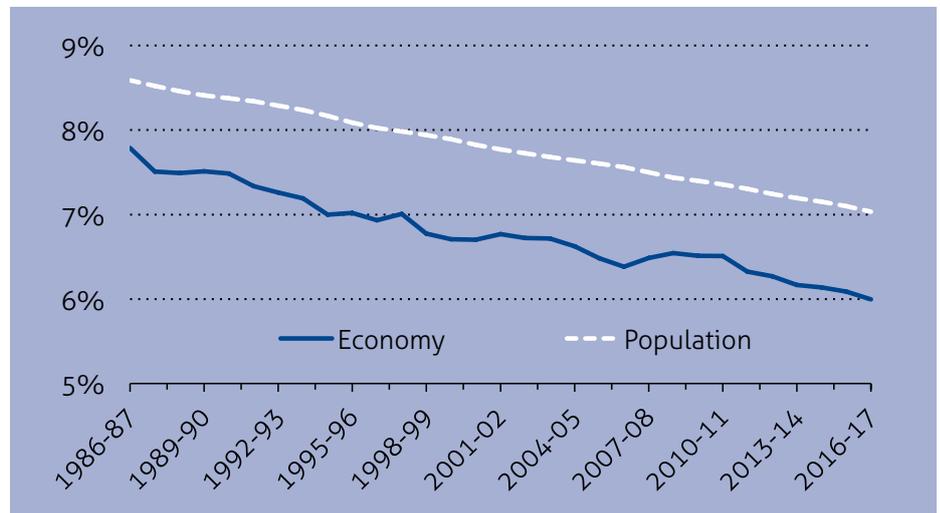
Our state is also a defence manufacturing powerhouse. Short-to-medium term prospects will be boosted by the \$35 billion Future Frigates Program and by the \$50 billion Future Submarines Program. Some of the spending on those projects will add to local jobs, beginning in the early 2020s.

Yet there are also vulnerabilities. With car manufacturing now a fond memory, South Australia will have an increased dependence on defence-related manufacturing, and hence on the Federal funding required to support such jobs. That says we will have eggs in fewer baskets than before, which could result in increased volatility in the performance of South Australian manufacturing down the road.

So despite the rise of new opportunities, it won't all be smooth sailing for manufacturing in South Australia. The structural decline of manufacturing around the world is coinciding with the current energy price squeeze in Australia.

Yet, as we'll explore in this report, while

CHART 1
SOUTH AUSTRALIA AS A SHARE OF AUSTRALIA'S ECONOMY AND POPULATION



Source: Australian Bureau of Statistics, 2016-17 as estimated by Deloitte Access Economics.

manufacturing is unlikely to drive much growth in the state (due to the structural decline of the sector), it can provide a meaningful level of diversification in our economy and support South Australia's transition to an increasingly prosperous state economy.

With appropriate agility, that means:

- South Australia can continue to punch above its weight in manufacturing, even though car making in the state has now ceased; and
- As has been true for a long time, there will be plenty of opportunities outside of manufacturing.

The pressure on South Australia's economy – and its manufacturers

Let's get the bad news out of the way upfront.

Recent years have seen some major challenges for South Australia's economy. For example, it was a blow when BHP Billiton decided that it wouldn't be expanding its Olympic Dam mine in the near future.

That \$20-\$30 billion hole in what would otherwise have been the outlook for the state's construction sector sent a shudder through South Australia. Many observers had hoped that the expansion of Olympic Dam would set the state on the road towards becoming a resource powerhouse, selling into the rapid growth in emerging Asia, thereby turning around what has long been our

shrinking share of Australia's economy and population (as seen in Chart 1).

And absent an accelerator to jump firmly into the ranks of the resource states, South Australia found itself stuck in the slow lane of a two-speed economy during Australia's mining boom years. Our state's economy was saddled with higher interest rates and a higher exchange rate, but without the matching money spinners in place that warranted these settings (at the national level).

That combination led to weaker population and economic growth than seen more broadly in Australia, a trend which has been persistent since the onset of the global financial crisis in 2008, as shown in Chart 2.

That long period of strength in exchange and interest rates increased the pressure on the state's manufacturers, who were already under pressure from the rise in low-cost manufacturing capability in Asia. That led to a range of casualties, the most headline-hugging of which was the announcement that Holden would no longer continue to make cars at its Elizabeth plant.

That decision was announced a long time ago, but the Elizabeth plant finally closed on October 20, 2017, with almost 1,600 workers in production, engineering and support roles lost. And nor is that closure the end of the story, given that a range of parts manufacturers – including some in this

state – sold their products to Holden (or to Toyota, whose own car making operations in Victoria closed down at much the same time as Holden’s did here).

Not every closure proves permanent. For example, Whyalla’s Arrium Steelworks entered voluntary administration in 2016, but has subsequently been rescued by Liberty House Group, which has committed more than \$1 billion to revitalising the works.

Yet that says more about the ups and downs of the global iron ore price than it does about the broader story of prospects for manufacturing enterprises once they’ve closed down. Sadly, for the bulk of such closures, the jobs are gone and they’re not coming back.

That’s part of the reason why South Australia has been shrinking as a share of the national economy and of its population over time. Chart 3 shows the close correlation between manufacturing as a share of the South Australian economy and South Australia as a share of the national economy.

These two have moved together. As South Australia’s manufacturing base has eroded, so has our relative importance within the national economy. This indicates the key role of manufacturing inside the South Australian economy, and the way in which its presence has also supported a range of other industries (such as service industries) in the economy.

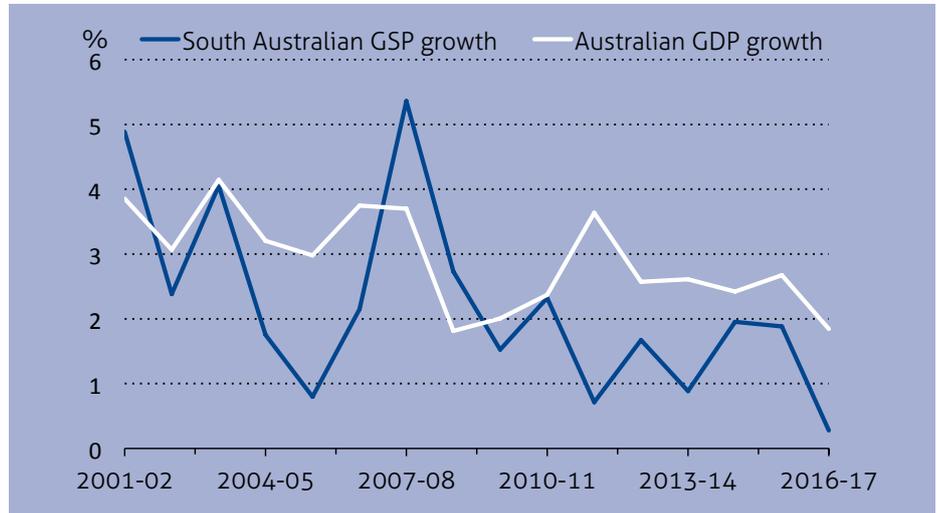
Chart 3 is worth a close look. The correlation it shows implies that losses in manufacturing have a disproportionate impact on South Australia’s economy – although manufacturing accounted for between 7% and 11% of the state’s economy over the period examined here, each percentage point loss in manufacturing was correlated with a matching loss of 20% of a percentage point as a share of the national economy.

Yet it hasn’t been all bad

Against those challenges, there have also been positives for the South Australian economy.

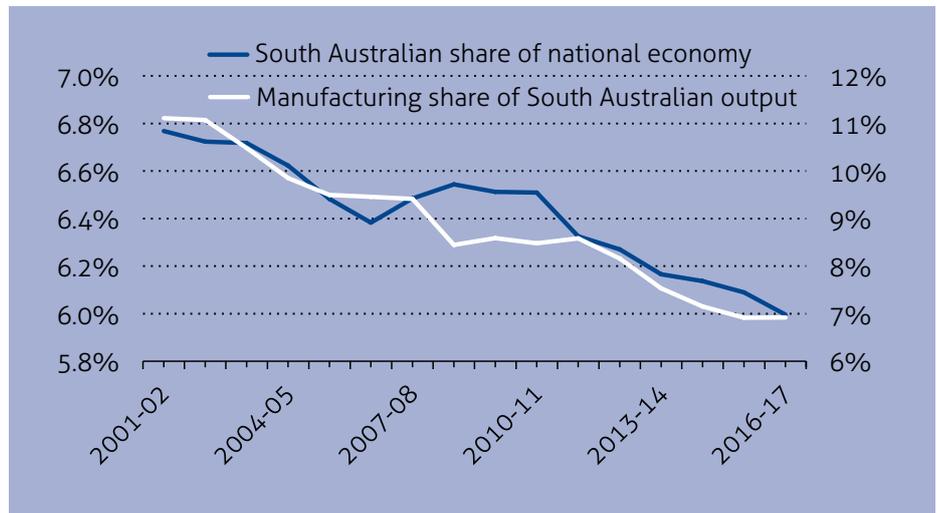
In particular, record low interest rates have helped to stimulate interest rate sensitive industries such as housing and retail. And a more accommodative exchange rate has helped exchange rate sensitive industries

CHART 2
SOUTH AUSTRALIAN AND AUSTRALIAN ANNUAL ECONOMIC GROWTH



Source: Australian Bureau of Statistics.

CHART 3
SOUTH AUSTRALIAN MANUFACTURING IMPORTANCE



Source: Australian Bureau of Statistics, 2016-17 as estimated by Deloitte Access Economics.

such as tourism, farming, manufacturing and international education.

In turn, that combination has helped support growth and to see our unemployment rate move lower across a time in which fears about our economy have been heightened.

In fact, and as Chart 4 shows, the unemployment rate is now below 6% for the first time since 2013 and well below the intervening high of over 8%. With optimism around the global economy improving, the outlook for the South Australian economy is brightening as well, with Chart 5 showing that

the gap between the state’s unemployment rate and that nationally has eased a little of late.

Recent trends in manufacturing in South Australia

Yet most of that good news hasn’t been showing up in manufacturing – it has been showing up elsewhere within the state’s economy. Both manufacturing output and jobs have continued to disappear. Around 20,000 manufacturing jobs have been shed in South Australia since the global financial crisis (with roughly 70,000 jobs in the industry remaining

currently), with the sector's output falling by a proportionate amount over the same period.

And those data points are yet to reflect the latest round of trials and tribulations now that Holden's car making operations have closed.

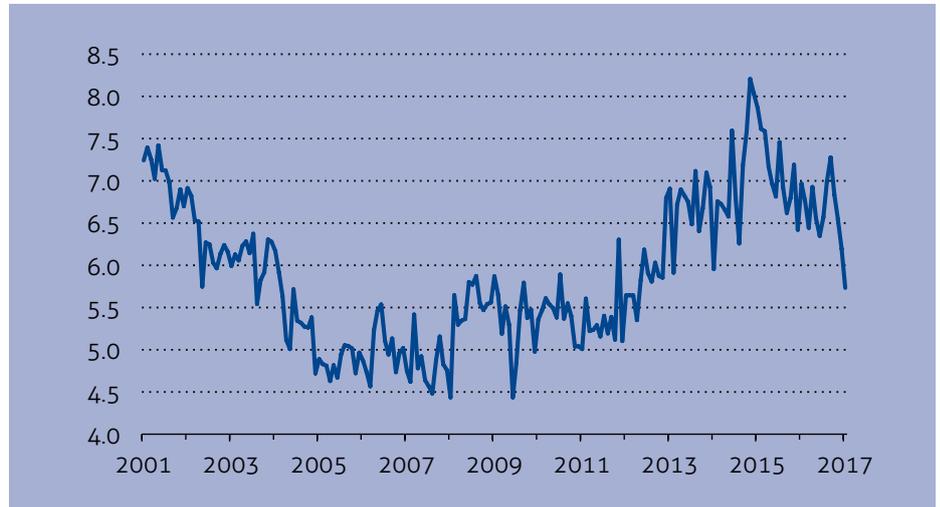
However, and despite the well-documented struggles of manufacturing in the South Australian economy, this sector still comprises a significant share of economic activity. Chart 6 shows the share of jobs and of output accounted for by manufacturing in the South Australian economy.

Despite all the years of doom and gloom, manufacturing still accounts for around one in 11 jobs here. Furthermore, with a more supportive currency in recent years, the pace of the drop-off in manufacturing intensity in the economy's job base has slowed significantly.

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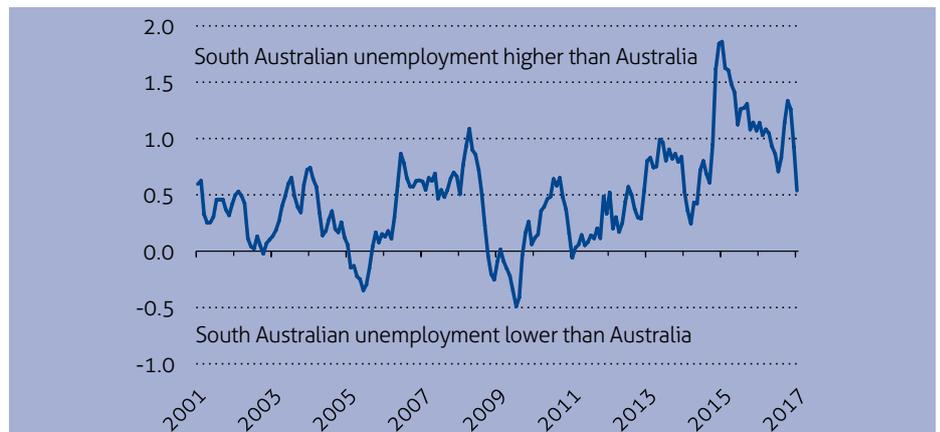
Chart 7 makes explicit the importance of the exchange rate for the state's manufacturers. As the Australian dollar rose (making imported manufactured goods cheaper and our exports less competitive), manufacturing jobs fell from around one in eight of all jobs in South Australia at the start of the mining boom, to around one in 11 today.

CHART 4
SOUTH AUSTRALIA'S UNEMPLOYMENT RATE



Source: Australian Bureau of Statistics, Deloitte Access Economics.

CHART 5
SOUTH AUSTRALIA'S UNEMPLOYMENT RATE LESS THE NATIONAL RATE (SMOOTHED SERIES)



Source: Australian Bureau of Statistics, Deloitte Access Economics.

CHART 6
SOUTH AUSTRALIAN MANUFACTURING; SHARE OF STATE ECONOMY AND JOBS



Source: Australian Bureau of Statistics, 2016-17 as estimated by Deloitte Access Economics.

However, as the Australian dollar has fallen from its 2012 peaks, the drop in the job share has eased back somewhat, as manufacturers have benefitted from a currency tailwind against the ongoing structural challenges. That said, those ongoing challenges explain why the jobs ratio simply held steady, rather than improved, despite what has been a pretty large fall in the currency in recent years.

And nor is the long since flagged closure at Holden the only devilry of the moment. Power prices are problematic in South Australia, and they're particularly problematic for manufacturers.

Energy sapping

A sharp rise in energy prices in recent years has exacerbated the structural challenges faced by manufacturers. Australia is amid an energy price crisis; reflecting a myriad of factors such as LNG export contracts, changes in energy policies and strategies, and bans on onshore gas production in some state and territory jurisdictions.

Manufacturers as a whole are hit particularly hard by rising energy costs because they tend to be more intensive users of energy than other industries. The Department of Industry estimated that, as at 2012-13, the manufacturing and construction sectors accounted for 15% of Australia's economy and 27% of total final energy consumption; indicating an energy intensity of almost double the national average.

Indeed, South Australia was predicted to overtake Denmark as having the world's most expensive electricity after major energy retailers increased their prices in mid-2017, and some estimates (see Chart 8) suggest that since that happened, the typical household in South Australia is paying more than the typical household in any other OECD country.

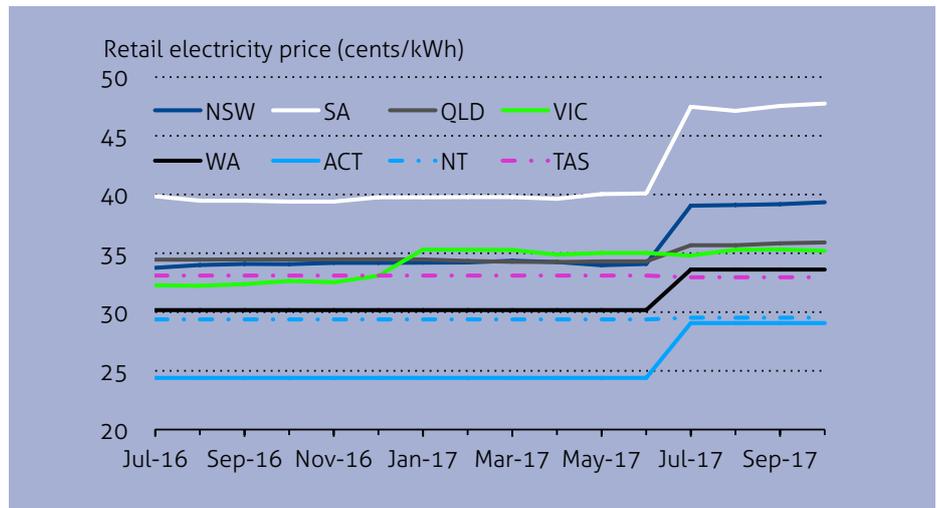
To delve into the intricacies of energy policy is beyond the scope of this report, but it is apparent that high energy costs are worsening our competitiveness compared to overseas manufacturers. In the worst case scenario, this could manifest itself in a further contraction in output and in jobs as firms exit the industry. Brickworks' Chairman Robert Millner summed up the competitive pressures:

CHART 7
SOUTH AUSTRALIAN MANUFACTURING EMPLOYMENT AND THE AUSTRALIAN DOLLAR



Source: Australian Bureau of Statistics.

CHART 8
AVERAGE RESIDENTIAL ELECTRICITY PRICES (CENTS PER KILOWATT HOURS)



Source: Bruce Mountain, CME Australia.

"We've got this enormous headwind in front of us with energy costs. Nearly every company that reported in the past earnings season had a figure in the millions (for rising energy costs). Brickworks has a \$20 million adjustment to make. We're so uncompetitive in our labour rates and now we've got higher energy costs that hurt manufacturers."

If there's any good news on this front, it's that the issue has become sufficiently dire that it is achieving real attention. The Federal Government has announced a \$2 billion extension to the Snowy Hydro scheme, while the South Australian Government has

announced measures of its own.

Composition of manufacturing in South Australia

Holden manufacturing may no longer be a hallmark of the state. But exactly how big is – or was – car making as a share of the wider manufacturing sector?

Detailed job data can yield insight into the composition of manufacturing activity in the South Australian economy. Chart 9 shows the shares of manufacturing employment in South Australia accruing to the relevant parts of the sector.



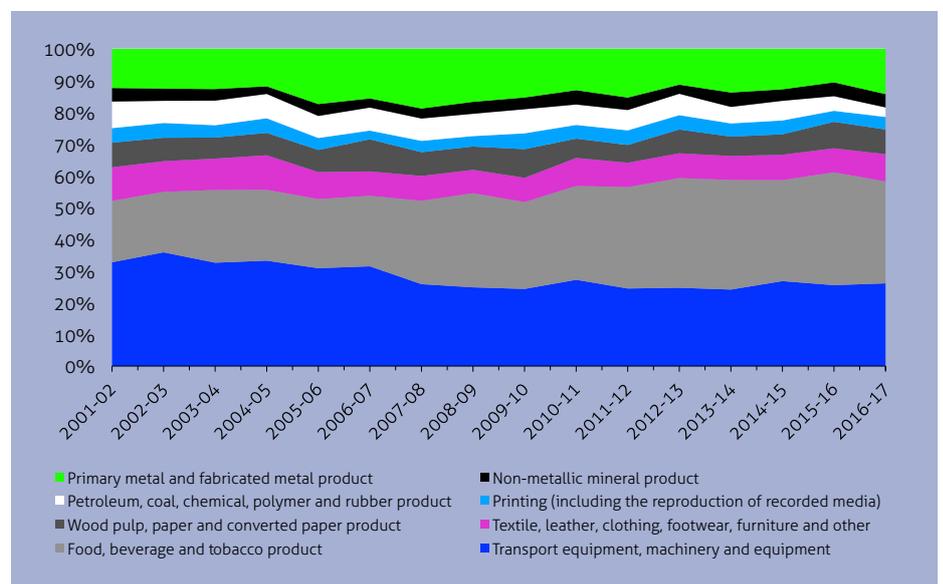
In terms of notable trends:

- Food and beverage product manufacturing has been increasing as a share of total jobs; from around one in five manufacturing sector workers back in 2001-02 to around one in three in 2016-17. Due to the quality and proximity of our farm produce (such as grapes for wine production), this part of the wider manufacturing sector is relatively more shielded from offshoring forces.
- Transport, equipment and machinery product manufacturing, which includes car making, has been falling as a share of total jobs; from around one in three workers in 2001-02 to around one in four in 2016-17.
- Petroleum, coal, chemical, polymer product manufacturing has seen its share of jobs contract significantly, from over 8% in 2001-02 to around 3% in 2016-17. This likely reflects the end to oil refinery activity in Australia and Asia's continued rise in capability in this space.

So car making (or more broadly, employment in transport, equipment and machinery product manufacturing) has itself been a shrinking share of manufacturing, whereas other parts of the sector, such as food and beverages, have done rather better.

Looking ahead, there's more of the same in

CHART 9
SOUTH AUSTRALIAN MANUFACTURING SECTOR; EMPLOYMENT SHARES BY SUB-INDUSTRY



Source: Australian Bureau of Statistics.

store. Employment in transport, equipment and machinery product manufacturing can be expected to continue to fall away with Holden's recent closure.

Indeed, the recent closure of car manufacturing will hurt car parts manufacturing as well. In a past *Trends* article, we noted that direct employment in the car manufacturing sector in South Australia (at

the time of the 2011 Census) was 3,119, with parts making accounting for a further 3,401 people. This ratio of roughly one to one indicates that job losses in car parts manufacturing, depending on how reliant this industry is on local car manufacturing, may be significant as well.

On the other hand, food and beverage manufacturing employment has been

supported by South Australia's strong farm sector, allowing for world-class wine production, for instance. South Australia accounts for almost 80% of Australia's premium wine production, while just under half of all Australian vineyards are situated in South Australia.

As Food South Australia recently noted:

"The majority of South Australian food manufacturers are small to medium enterprises, often owner-operated and family owned. Amongst these are many now managed by successive generations of the establishing family, such as Thomas Foods International, Coopers Brewery, Haigh's Chocolates, Robern Menz, Barossa Fine Foods, Spring Gully Foods and Beerenberg."

And there's more potential upside ahead. South Australia's food and beverage manufacturing sector is benefitting from an increasingly affluent Asian consumer, combined with increased trade access. For example, since the introduction of the China-Australia Free Trade Agreement (ChAFTA), wine exports to China have increased by over 50% in 2016 according to the Winemakers' Federation of Australia. Before the agreement, Australian wine exporters paid a 14-20%

tariff, but this will be completely eliminated by the start of 2019.

This has helped Australian wine producers compete in the premium wine market in China. As at 2014-15, exports to the growing Chinese market represented about one in every 13 cases of South Australian wine sold. The potential to further expand premium produce exports to China (wine or otherwise) is clear. Ensuring quality infrastructure, like transport or water, will be crucial to supporting the supply-side, in order to meet growing demand going forward.

Many food and beverage manufacturers have therefore benefitted from a three-pronged tailwind in recent years:

- A more accommodative currency;
- An increasingly affluent Asian consumer; and
- Reduced trade barriers.

That's good if you can get it, but not all manufacturing stories are of the sackcloth-and-ashes variety.

The future of manufacturing in South Australia

To assume that the history of challenge in manufacturing in South Australia will continue in the future is to miss a basic point. Yes, future

growth will tend to be more about services than about manufactured products. This will be true globally as well as locally.

The giant job losses in manufacturing in South Australia – and the entirety of the world's developed economies – over the last couple of decades was much accelerated by the globalisation of manufacturing as businesses sought out lowest cost sources of supply.

With wages bulking large in much manufacturing costs, that proved problematic.

But times are already moving on. In particular, the future of manufacturing in this state will tend to lie more in ideas and intellectual property rather than in cheap labour costs. That trend will increasingly help to bring South Australian manufacturers back into the game, as does the more favourable settings in terms of interest rates and the Australian dollar.

So despite the challenges, there's also good news for South Australia's manufacturing industry. As noted by InvestSA, South Australia's manufacturing industry has a deep, technical skills base developed from our automotive and defence sectors. That provides a solid platform for new and existing



manufacturers to grow and invest. That's a reminder that the manufacturing industry is the beneficiary of a strong accumulation in human capital. Defence manufacturing has been the historical counterpart to automotive manufacturing in South Australia.

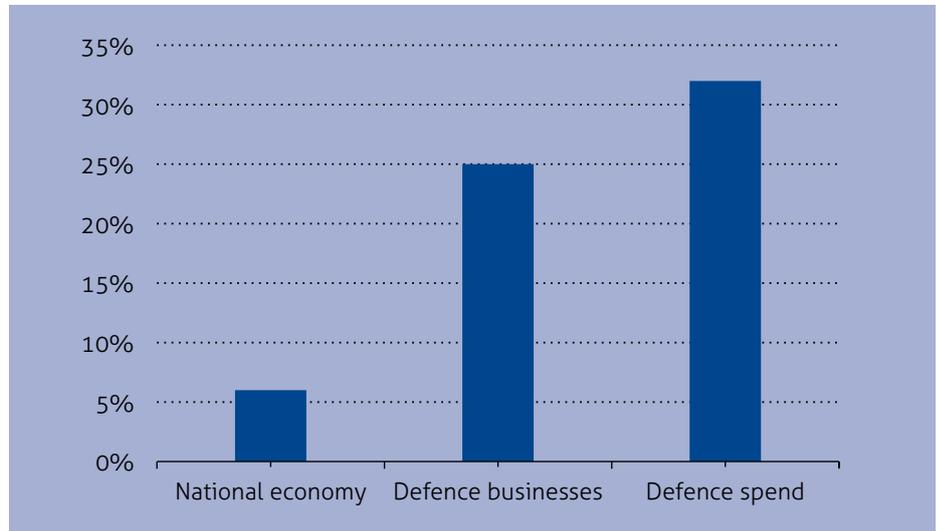
Given this, South Australia is well placed to receive further manufacturing investment. In addition, the industry is poised to receive ongoing opportunities in defence manufacturing in coming years, thanks to the Federal Government, while there are also great opportunities in advanced (or hi-tech) manufacturing in coming years.

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Defence manufacturing remains a star for this state

According to InvestSA, our state contains 25% of Australia's specialist defence businesses and is the beneficiary of 32% of the nation's defence spend. That makes South Australia a defence powerhouse relative to the size of our economy, as shown in Chart 10. And with geopolitical tensions in the region heating

CHART 10
SOUTH AUSTRALIAN DEFENCE INDUSTRY



Source: Australian Bureau of Statistics, InvestSA.

up (with North Korea at the forefront at the moment, though the South China Sea has also been a source of concern) Federal defence spending as a share of total spending is, if anything, likely to increase further – and thereby provide more opportunities to the manufacturing sector in this state.

Partly in response to the recent challenges that South Australia has faced, the Federal Government announced the \$50 billion Future Submarines Program involving the construction of 12 new submarines in Adelaide, securing thousands of jobs. French shipbuilder Naval Group (formerly DCNS) has been chosen for the project over rival bids from Japan and Germany. The project is expected to result in an estimated 2,800 jobs being created, with 1,700 of them at the ASC plant at Osborne where the submarines will be constructed. These jobs will include naval architects, marine engineers, electricians and painters. A further 600 jobs are expected to be created offsite, including mechanical and electrical engineers, along with 500 in combat system integration.

Defence manufacturing in Adelaide will also benefit from the \$35 billion Future Frigates Program. That program is currently the largest shipbuilding program of its kind in the world, according to Minister for Defence Industry, Christopher Pyne. Construction is on track to begin in 2020, with the Federal Government

announcing the successful designer for the Future Frigates in 2018. Three designers (BAE Systems, Fincantieri and Navantia) have been working with Defence since 2015 to refine their designs. The three shortlisted designers must demonstrate and develop an Australian supply chain to support Australia's future shipbuilding industry.

So defence manufacturing looks set to be a good news story in South Australia going forward. However, in contrast to the likes of car making, it is far more volatile; depending on project-by-project outcomes. As a result, the reliance on Federal Budget spending may give defence manufacturing in South Australia a more variable complexion.

To provide a reliable base of manufacturing activity, it makes it even more important that South Australia continues to diversify into other classes of manufacturing, such as advanced manufacturing.

Advanced manufacturing

Although definitions for it vary, advanced (or hi-tech) manufacturing is generally accepted as a sub-set of manufacturing industries in which research and development is a significant proportion of revenues.

Industries which fit this criteria internationally are pharmaceuticals, aircraft manufacturing, professional and scientific equipment manufacturing (including medical



technologies), and computer and electronic manufacturing.

In a global market, commercial success for Australian manufacturing companies relies on being the world's best; otherwise customers will simply move to better offerings. In high technology fields, unique offerings, whether due to patents or otherwise, provide businesses with economic moats. This can be contrasted with the production of a basic good, such as a t-shirt, which can be manufactured at a fraction of the cost in Asia. So the field of advanced manufacturing provides a more level playing field for higher cost, developed economies to play on.

In effect, ideas rather than cost become the crucial component of competitiveness.

South Australia has a significant presence in terms of advanced manufacturing: it is one of the South Australian Government's 'Seven Strategic Priorities'. The \$200 million Future Jobs Fund announced in the 2017-18 State Budget also contains a strong focus on manufacturing, whether advanced manufacturing or other forms.

The key sectors listed are:

1. Shipbuilding and defence;
2. Renewable energy and mining;
3. Tourism, food and wine;
4. Health and biomedical research; and
5. IT and advanced manufacturing.

There is obvious potential here too. Adelaide is already a bright spot for innovation, with Technology Park Adelaide comprising over 85 co-located bioscience and technology companies, including global players such as Optus, BAE Systems and Saab Technologies. The park is the state's high-end technology

precinct, with a strong focus on defence electronics, systems development and integration.

In addition, South Australia already has a notable presence in terms of advanced medical manufacturing. This form of manufacturing encompasses several areas such as medical devices, pharmaceuticals and medical life science products. The new Royal Adelaide Hospital development, in conjunction with the South Australian Health and Medical Research Institute (SAHMRI) facilities, forms the backbone of one of the largest health and biomedical precincts in the southern hemisphere.

With over 100 businesses in advanced manufacturing, medical devices and pharmaceuticals, South Australian technology companies export a range of high value products. South Australia has a proud history in this field, having developed the burner systems used in the Olympic torches, and the leading micro pipettes for IVF used by fertility clinics worldwide.

With a strong skills base and a competitive cost profile within Australia, South Australia is uniquely placed to take advantage of the future growth opportunities in advanced manufacturing. Attracting the best and brightest to come up with innovative manufacturing solutions will be key.

And as we remarked in the introduction, Adelaide may find it easier to retain or attract budding professionals given that housing affordability has deteriorated significantly in Sydney and Melbourne in recent years.

Final words

At the outset, it is worth noting South Australia has more strings to its bow than just manufacturing. And the news on what's

happening outside of manufacturing has been good.

For manufacturing itself, yes, there's been a number of challenges and a continued decline in manufacturing output and jobs. An elevated Australian dollar put pressure on an industry already in structural decline across all advanced economies. That double-whammy has seen a range of high-profile casualties, with Holden's recent closure being the last reminder of that.

Even now, as macro-economic settings have become more favourable (with a lower exchange rate and low interest rates), the state's manufacturers are battling an energy price headache.

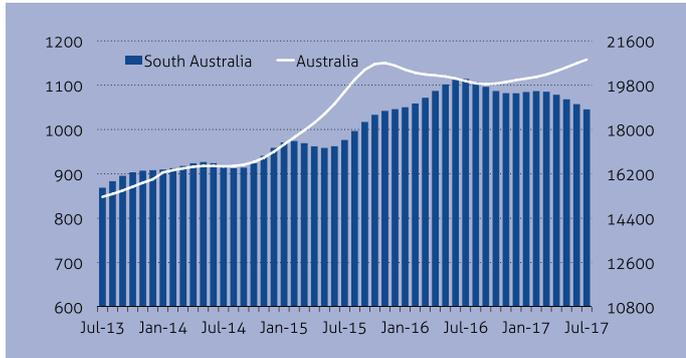
Yet there's still room for genuine optimism here. In terms of food manufacturing, we're benefitting from reduced trade barriers and an increasingly affluent Asian consumer. And South Australia has a great skills base and is cost-competitive relative to other locations in Australia. Our state is Australia's defence manufacturing hub, and short term prospects will be boosted by the \$50 billion Submarines Program and the \$35 billion Future Frigates Program.

Then there are emerging opportunities in manufacturing where advanced economies can participate. Hi-tech, advanced manufacturing will be increasingly IP and capital intensive. That will erode the longstanding 'labour arbitrage' of low-wage manufacturing hubs overseas (particularly in Asia), where manufacturing essentially relies on doing things cheaper, rather than better.

That opens the door for manufacturing in South Australia, however we've still got to rise to the challenge to step through it.

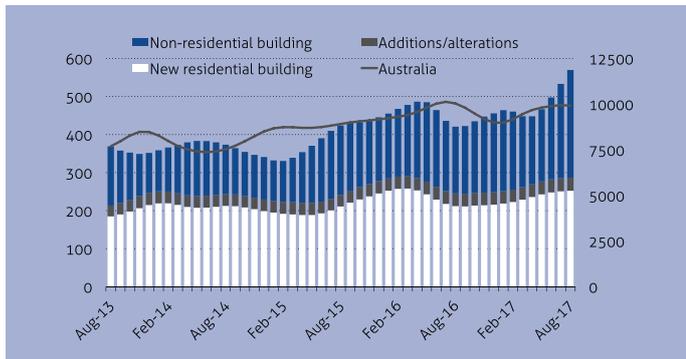
Statistics

CHART 1
SECURED HOUSING FINANCE COMMITMENTS - TREND (\$M)



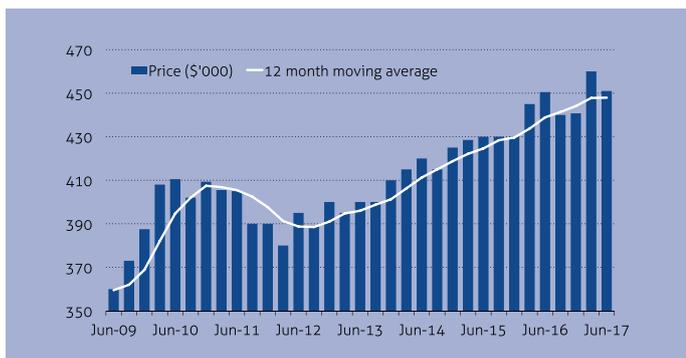
Housing finance commitments in South Australia have been flat over the past year, levelling off from the peak increase recorded in mid-2016. The local market has started to stall, with housing finance commitments declining. This is not the same trend observed nationally, with the national data getting a second wind that hasn't been evident here. One reason may be that population growth in the state remains weak, continuing to constrain the outlook for the state's housing construction sector.

CHART 2
BUILDING APPROVALS - TREND (\$M)



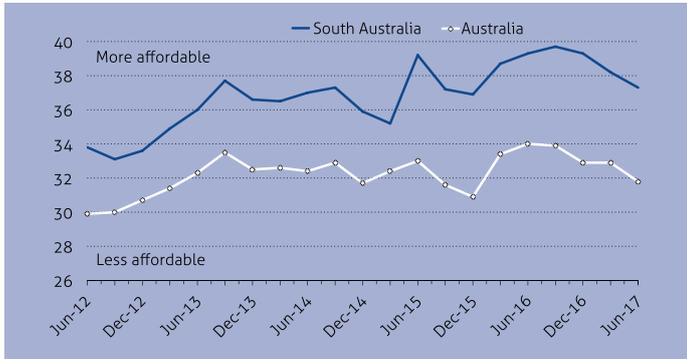
While housing finance commitments have been easing, there's been happier news in the value of residential building approvals. Even better, approvals for commercial construction (non-residential building) have also been rising, and at a faster rate. The state has a solid amount of ongoing projects and in the planning pipeline, but well shy of the matching pipelines in some other states. The State Budget's \$400 million allocation towards hospitals, schools and early learning centres adds positively to commercial construction. However, more projects will need to be added to the state pipeline to replace current projects that are expected to wrap up this year.

CHART 3
MEDIAN PRICE OF HOUSES SOLD - ADELAIDE (\$'000)



The median house price across Australia continued to rise, with the exception of Adelaide and Perth. Adelaide recorded the largest drop across the nation, with the median price declining 2.0% to \$451,000 in mid-2017. However, the overall trend remains upwards, albeit with the latest data pointing to some differing trends by district (both inside and outside Adelaide).

CHART 4
HOME LOAN AFFORDABILITY - INDICATOR STATISTIC



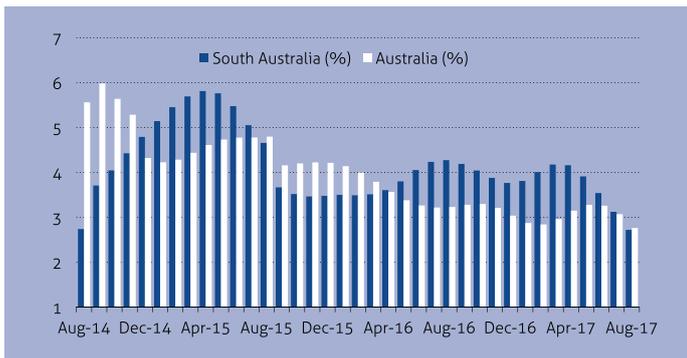
Housing prices here in South Australia did not experience the boom observed in the eastern states, leading to a more affordable housing market. However, housing affordability in the state dipped in the latest data, as was also true for the national average. Despite this, the number of loans to first home buyers was above what was recorded a year ago from this same quarter.

CHART 5
INDEX OF DWELLING RENTS - % CHANGE ON PREVIOUS YEAR



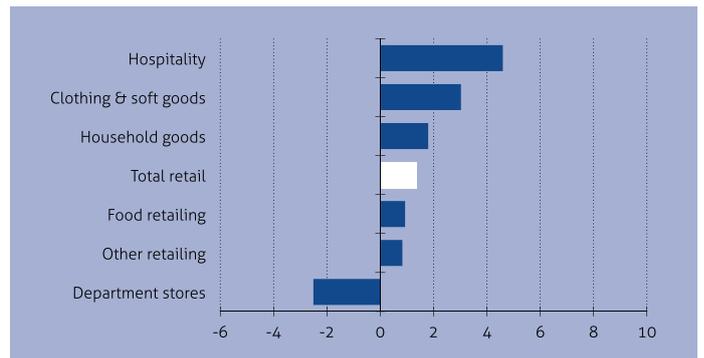
The rate of increase in rents across all markets has continued to slow. This is partly explained by relatively low inflation, and weak income growth. In response, landlords have not raised rents by much. In the latest data, Adelaide rents grew at a slower rate compared to national rents – the first time since late 2015.

CHART 6
RETAIL TRADE - % CHANGE OVER PREVIOUS YEAR - TREND



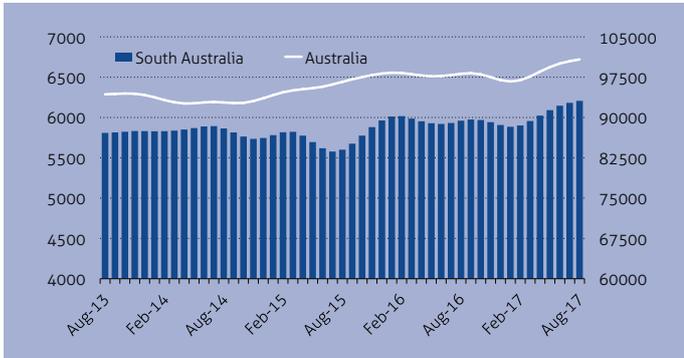
Growth in retail has been outperforming the national average since mid-2016. However, it has slowed from its peak in early 2017. The national average now leads the state by a small amount despite national retail trade also easing back (the annual growth of retail spending was the lowest rate recorded over the past four years, reflecting soft household income growth). Similarly, South Australia's annual growth in retail trade is the lowest it has been in four years, as a combination of modest population growth and weak wage gains has an impact.

CHART 7
SOUTH AUSTRALIAN RETAIL - % CHANGE AUGUST 2016 TO AUGUST 2017 - TREND



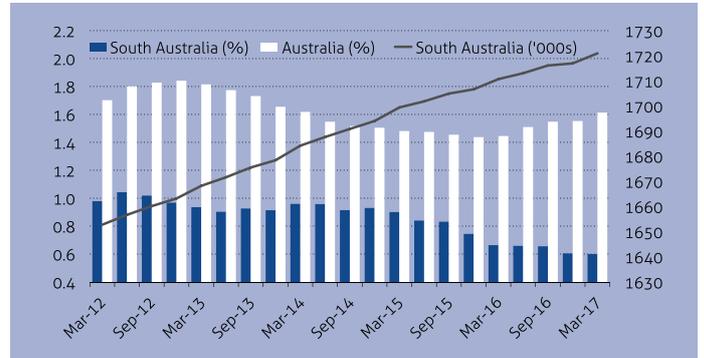
A breakdown of overall retail trends provides more insight across different spending categories. Local hospitality continues to lead as the fastest growing component of the industry. That said, its growth has slowed down considerably, dropping by almost half on what was observed earlier this year. Despite this, it still grew at a rate above the national average. The department stores category continues to lag behind, with sales falling.

CHART 8
NEW MOTOR VEHICLE REGISTRATIONS - TREND



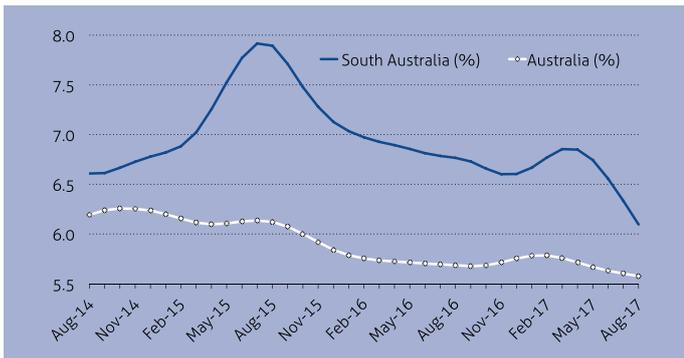
Car sales in the state increased in recent months, though that recovery follows a period since early 2016 when they had dropped away. Sales in 2017 have been notably higher compared to recent years. The same uptrend in growth is also evident nationally.

CHART 9
POPULATION TRENDS - % CHANGE ON PREVIOUS YEAR AND LOCAL LEVEL ('000S)



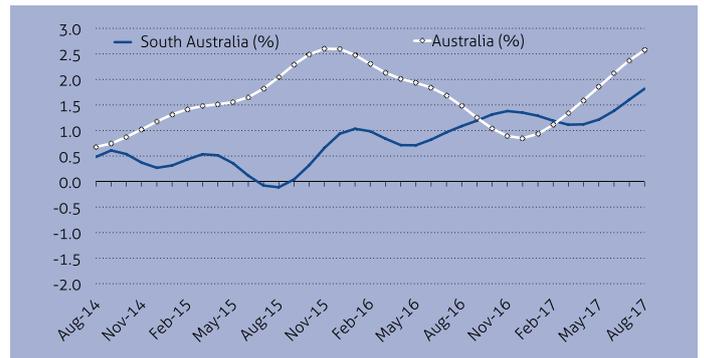
South Australia’s population growth eased back a little further of late – though only a little. Even so, South Australia’s population growth is now the weakest it has been in some years. The growth trend for this state differs from the rise in growth currently being recorded for the nation overall.

CHART 10
TREND UNEMPLOYMENT RATE (%)



The trend unemployment rate for the state has been dropping through 2017. It is now well below its 2015 peaks, and is sitting at its lowest level in years. However, and despite the extent of those falls, South Australia’s unemployment rate is still among the highest in the nation.

CHART 11
EMPLOYMENT - % CHANGE ON PREVIOUS YEAR - TREND SERIES



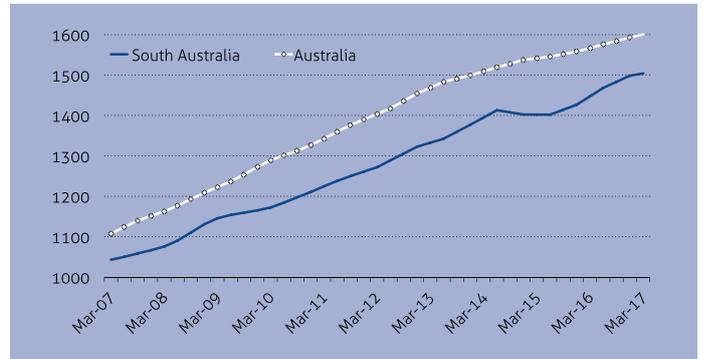
Growth in employment for the state has been impressive, with the news on that front consistently improving from late 2015 onwards. That improvement has been in line with the improving trend in employment growth across the nation, albeit most recently at a lower level. There is improved confidence surrounding the state’s employment, with growth recorded as the strongest since mid-2011. Given South Australia’s weak demographics in the form of slower-than-average population growth, and an older-than-average population, the latest employment outcomes are excellent.

CHART 12
ROOM OCCUPANCY RATE - TREND SERIES



Room occupancy rates have been on the rise since mid-2013. There has been an increase in the number of international visitor arrivals, with South Australia recording a stronger upswing in room occupancy rates, compared to the nation. While occupancy rates are important, tourism spend should also be considered. Importantly, South Australia's share of the national markets' tourism spend is just under 5% – above its share of international visitor numbers.

CHART 13
TOTAL AVERAGE WEEKLY EARNINGS (\$) - PERSONS IN FULL-TIME EMPLOYMENT



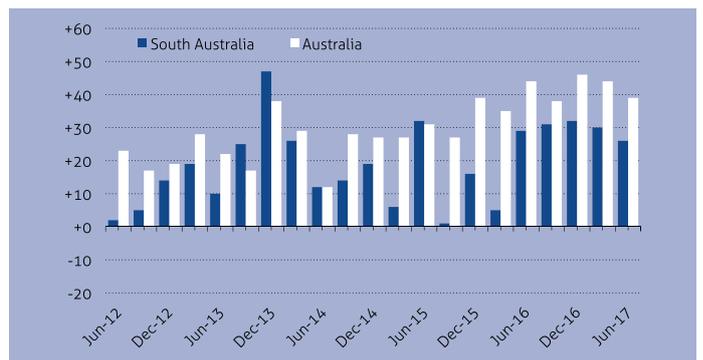
Local wage levels have continued to rise at a faster clip than evident nationally, although the recent recovery follows a slump across 2014 and 2015. Now, however, the state's average wages are increasing faster than the national average, and the gap between local wage levels and the nation's is now the smallest seen for almost a decade. Despite South Australia's solid recovery in weekly earnings, they still remain notably below the national average.

CHART 14
CONSUMER PRICE INDEX, ALL GROUPS - % CHANGE ON PREVIOUS YEAR



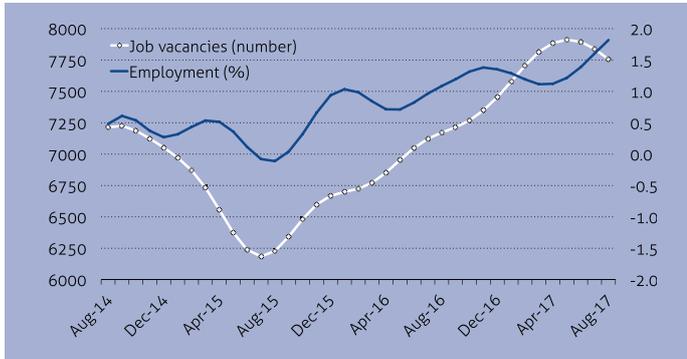
Inflation has slowed since mid-2014. This holds true for the state, nation, and more broadly, the global market. Local inflation dipped of late, but it is still higher than it's been since early 2015. Additionally, South Australia's inflation has continued to remain below the national inflation level, with both the national and local outcomes being well below the Reserve Bank's target rate of 2-3%.

CHART 15
SMALL BUSINESS CONFIDENCE - NET BALANCE



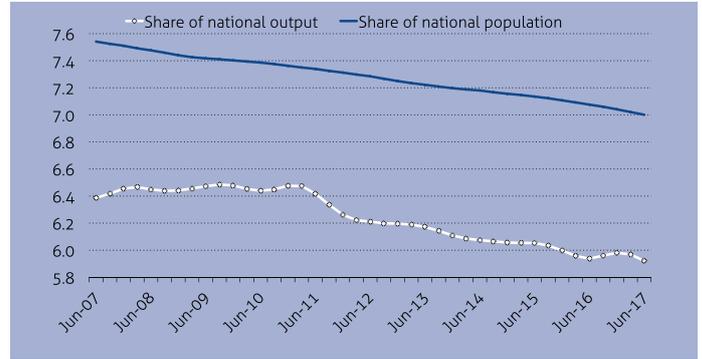
Small business confidence improved across 2016-17 in both South Australia and the nation overall, though it weakened in the latest available data. South Australia's small business confidence index has consistently lagged the national average for some time. Despite the fall in local small business confidence, the trend has remained relatively stable compared to what was observed in earlier years.

CHART 16
EMPLOYMENT GROWTH AND JOB VACANCIES



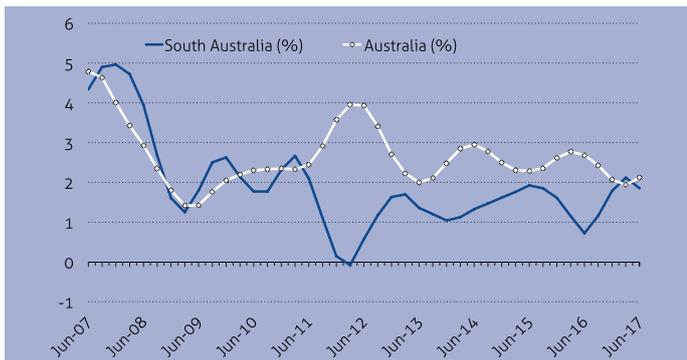
Job vacancies in the state have levelled off from their peak in mid-2017. This was to be expected given that job growth has increased, thereby filling up more vacant job spots. Despite the drop in vacancies, the number of jobs available is at some of the highest levels observed in recent years. The recent strength in the state’s vacancies have been driven by demand for managers (particularly corporate managers) and for professionals (particularly IT workers).

CHART 17
SOUTH AUSTRALIA - SHARE OF NATIONAL OUTPUT AND POPULATION (%)



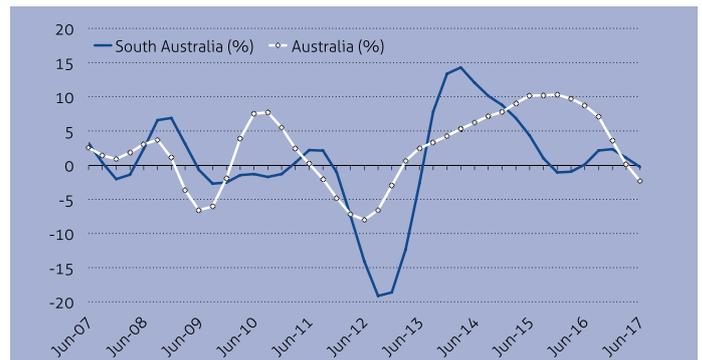
Population growth has lagged the national average due to South Australia’s loss of younger people interstate, as well as a lower number of international migrants, plus a population that is older on average. The long term trend of an easing in the state’s share of national population is continuing. This trend is also being observed for the state’s share of the nation’s economy.

CHART 18
OUTPUT - % CHANGE ON PREVIOUS YEAR



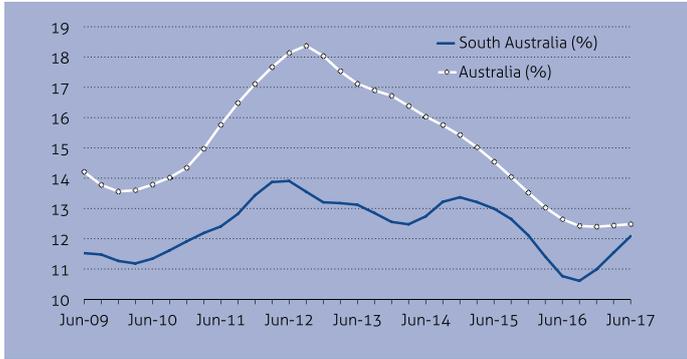
Economic growth in South Australia has picked up to largely match the national average. The driving factors for growth in the state has been from relatively strong retail trade, increased numbers of international visitors, and good job growth. Looking ahead, the state’s growth is expected to remain slower than the national average, as the state’s population remains weak and the manufacturing base continues to be under pressure.

CHART 19
DWELLING INVESTMENT - % CHANGE ON PREVIOUS YEAR



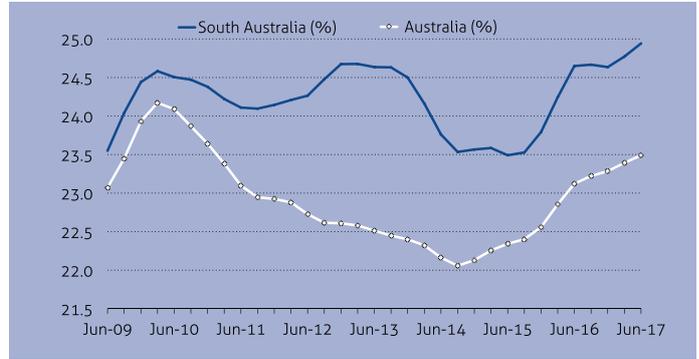
South Australia’s housing construction activity levels have been relatively flat over the past year. Nationwide, housing construction activity fell by a greater rate, albeit from a period of strong growth (driven by high levels of apartment construction in Sydney and Melbourne). Locally, weak population growth has constrained housing demand, and hence housing construction.

CHART 20
BUSINESS INVESTMENT - % OF OUTPUT



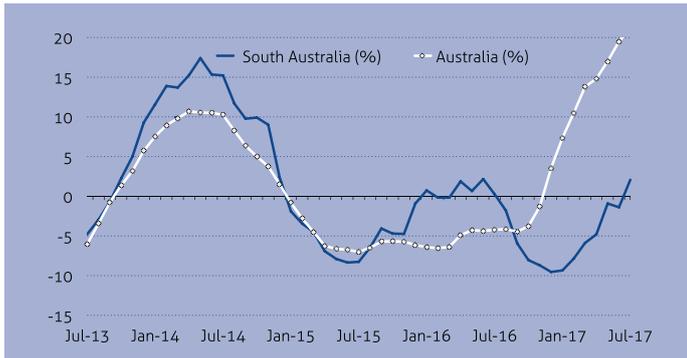
South Australia reported a pick-up in business investment as a share of output in the past year. The same increase was not observed nationally. It is good news that the state's business investment as a share of output is now largely in line with the nation's. In part, the recent increase reflects a scramble in the energy sector. South Australian utilities investment has increased as an array of gas, renewable and battery storage projects have been added to the investment pipeline.

CHART 21
PUBLIC SECTOR OUTPUT - % OF TOTAL CONSUMPTION AND INVESTMENT



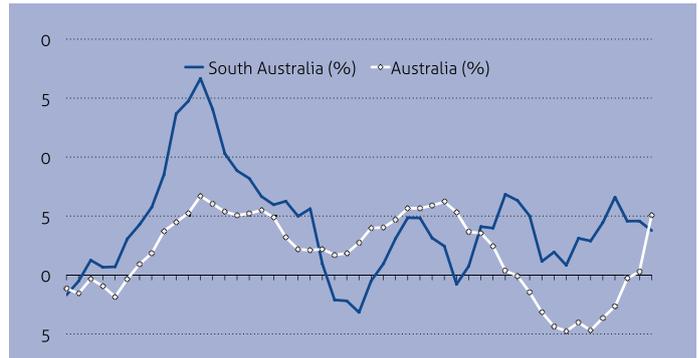
The state's public sector share has increased, and continues to make up a larger share of the economy compared to matching share for the nation as a whole. Nationally, public sector output as a share of national economy has also increased, to make up for the drop in business investment, and as reflected in the current State Budget, the State Government has increased spending on utilities and transportation projects.

CHART 22
MERCHANDISE EXPORTS - % CHANGE LAST TWELVE MONTHS TO PREVIOUS



Merchandise exports have increased for both South Australia and the nation. However, the divergence between the two lines above has widened. The nation's exports have increased in response to China's renewed stimulus in early 2016, which was implemented to counter a slowdown in China's industrial sector. As that led to higher prices for iron ore and coal in particular – exports where this state is relatively less well positioned – South Australia's exports remain relatively flat, growing just over 2% over the last year.

CHART 23
MERCHANDISE IMPORTS - % CHANGE LAST TWELVE MONTHS TO PREVIOUS



The nation's import volumes rose over the year, driven by imports of capital goods. This increased demand for capital imports is from mining and energy-related construction projects, that although are wrapping up, still require imported capital goods. South Australia's imports have not increased in line with the nation, though they remain relatively solid compared with recent years.

The background of the advertisement is a photograph of two men in an industrial setting. The man on the left is wearing a white hard hat, a dark blue suit jacket, a white shirt, and a dark tie. He is looking upwards and to the right with a focused expression. The man on the right is wearing a white hard hat, a plaid shirt, and a bright orange high-visibility safety vest. He is also looking upwards and to the right. The background is blurred, showing industrial equipment and structures.

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