The Labour Market, Competitiveness, Employment and Economic Prospects

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Executive Director's Note

Welcome to the forty first issue of *Economic Issues*, a series published by the South Australian Centre for Economic Studies as part of its Corporate Membership Program. The scope of Economic Issues is intended to be broad, limited only to topical, applied economic issues of relevance to South Australia and Australia. Within the scope, the intention is to focus on key issues – public policy issues, economic trends, economic events – and present an authoritative, expert analysis which contributes to both public understanding and public debate. Papers will be published on a continuing basis, as topics present themselves and as resources allow.

This paper commences a series of papers on the international competitiveness of the South Australian economy with an overview of long-term trends in the labour market (and a reference to upgrading our skills and training system), an assessment of the competitiveness of industry sectors and trends and prospects in employment by industry.

The authors of this paper are Assoc Professor Michael O'Neil (Executive Director), Lauren Kaye (Research Economist) and Mark Trevithick (Research Economist) of the SA Centre for Economic Studies. The paper draws from a number of recent research papers prepared by SACES and our Research Associates. The views expressed in the report are the views of the authors.

Michael O'Neil
Executive Director
SA Centre for Economic Studies
June 2014

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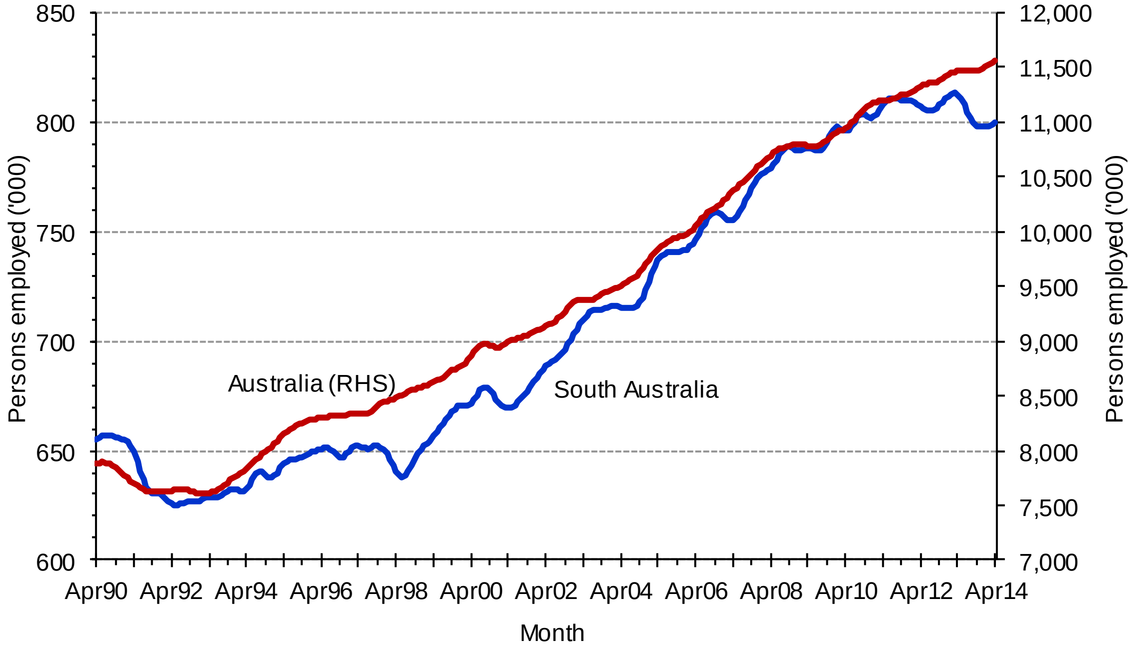
1. Employment: Historical and Current Perspective

Total employment in South Australia increased by some 22 per cent and for Australia by 47 per cent in the twenty-four years to April 2014. South Australia experienced 'several interruptions' to the long-term growth trend in employment during this period, notably as a result of the 1990/91 recession followed closely by the State Bank crisis (1993), the dip in employment in 1998/99 and the recent slowdown in employment growth in 2013 and into 2014. Figure 1 shows how employment in both South Australia and Australia has increased over this period.

Figure 1: Total Employment South Australia and Australia, 1990-2014, Trend Series



Source: Australian Bureau of Statistics, Labour Force, www.abs.gov.au

South Australia's employment to population ratio has consistently been lower than that of Australia. One contributing factor is the older than average population in South Australia relative to Australia but most significantly the stronger economic and employment growth experienced in particularly Western Australia and Queensland (and more lately Victoria) over this period.

The employment to population ratio (see Table 1) indicates that while there is some variability in this ratio over time principally due to macroeconomic/demand conditions, on average it appears that the ratio is widening for South Australia and Australia. The difference was 1.8 percentage points in 1980 rising to a high of 3.2 percentage points in year 2000 and in 2014 is 2.9 percentage points. The principal contributing factors are at both ends of the age spectrum-an older age workforce reaching retirement and a younger workforce leaving the State.

Table 1: Employment to Population Ratio: Percentage of the Civilian Population Aged Over 15 Years (Year Averages)

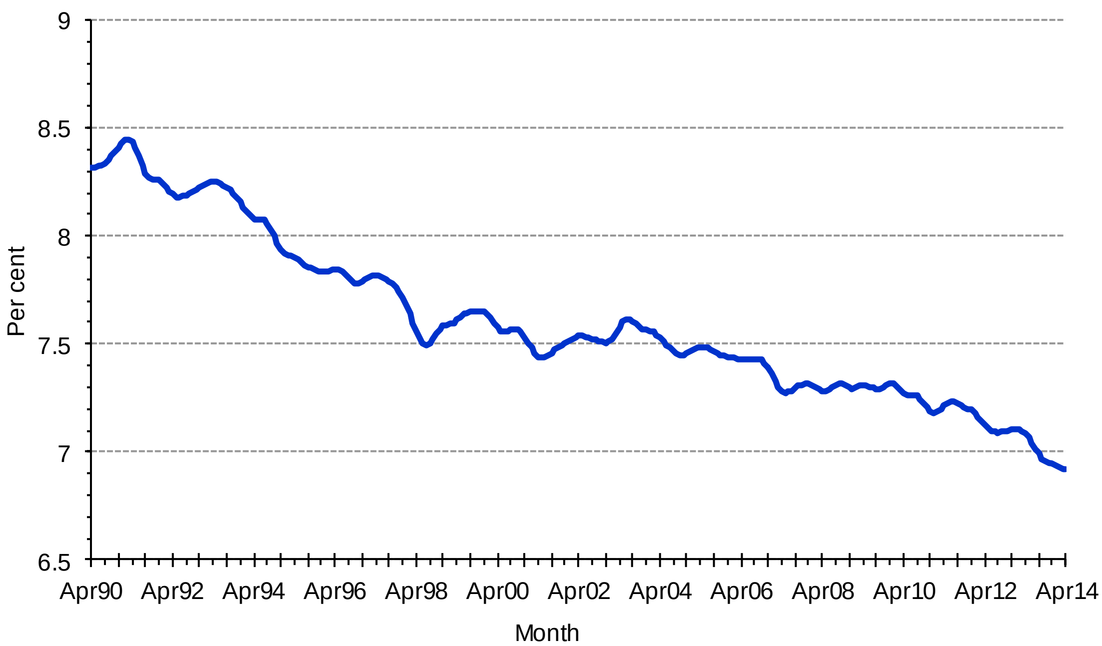
	South Australia	Australia
1980	55.8	57.6
1985	54.7	55.8
1990	57.9	59.3
1995	55.5	58.2
2000	56.0	59.2
2005	58.9	61.2
2010	60.0	62.0
2014	57.8	60.7

Source: Australian Bureau of Statistics, Labour Force, www.abs.gov.au

South Australia's Share of Australian Employment

South Australia's share of the Australian workforce has declined since 1990 (Figure 2). This decline is consistent with our declining share of the Australian population as well as our older population. South Australia's share of both population and workforce was approximately 8.4 per cent in 1990 (population: 8.4 per cent; workforce: 8.3 per cent). In September 2013, South Australia's share of population was 7.2 per cent and South Australia's share of workforce was 7.0 per cent. That the South Australian share of the workforce has declined more rapidly is confirmation of the impact of the ageing population and slower growth in workforce opportunities.

Figure 2: South Australia's Share of Australia's Total Workforce, 1990-2014, Trend Series (Per cent)



Source: Australian Bureau of Statistics, Labour Force, www.abs.gov and SACES calculations

South Australia's workforce has grown 0.84 per cent in compound annual growth rates terms, below that of Australia over this period.

Table 2 below presents compound annual growth rates for selected periods for the total number of people employed in South Australia and Australia. South Australia generally has followed the national growth trend but not as strongly.

Growth in the period 2000-2008 has been particularly strong in both South Australia and Australia (compared to the other two periods in the table); the reasons behind this strong growth include, *inter alia,* the peak of mining investment, strong export growth and significant expansion in public sector employment from 2002 and thereafter. South Australia has shared in the benefits of the expansion of the mining industry, particularly locally by mining exploration, but post Global Financial Crisis growth has slowed.

Table 2: Compound Annual Growth Rates – Average Number of Total Employed in the Year, Trend Series (Per cent)

	South Australia	Australia
1994-1999	0.78	1.88
2000-2008	1.89	2.36
2008-2014	0.57	1.33

Source: Australian Bureau of Statistics, Labour Force, www.abs.gov.au and SACES calculations.

Full-Time and Part-Time Employment

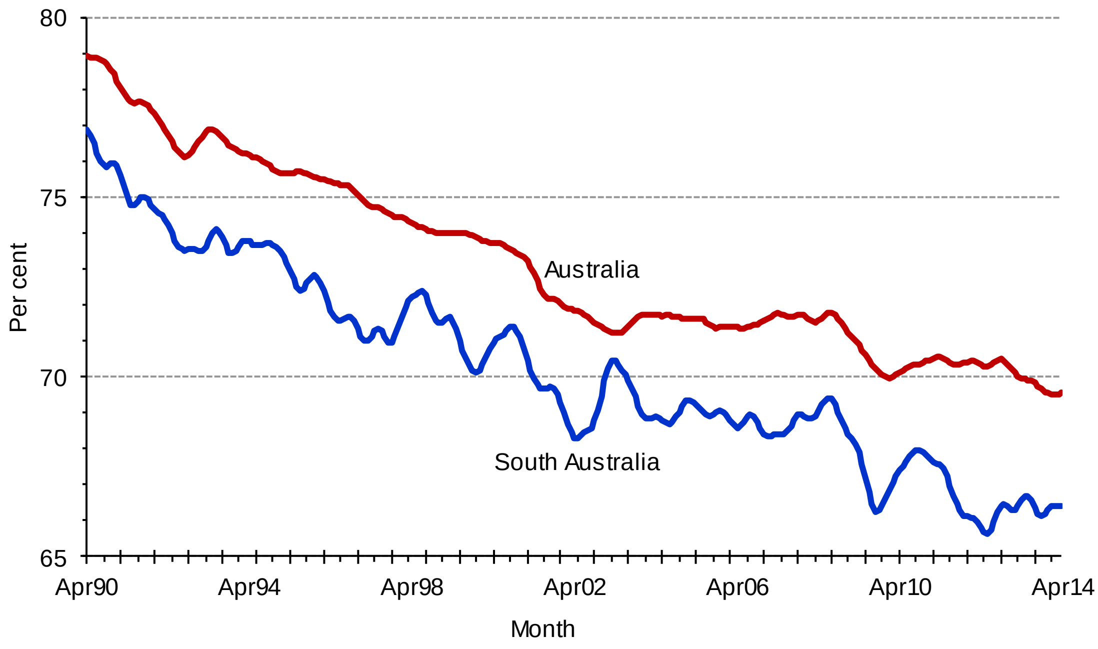
There is evidence in Figures 3 and 4 confirmation that the structure of employment, changes in industry mix, impacts of technology and changes in preferences (employer, employee and consumer expenditure patterns) combined are contributing to significant changes in the state and national labour markets.

Full-time employment's share of total employment has decreased in both South Australia and Australia – see Figure 3. The mirror opposite of this is that the share of total employment that is part-time has increased.

South Australia has consistently had a lower proportion of full-time employment than Australia, although in recent years this gap has widened. In April 1990, South Australia's full-time workforce made up 76.9 per cent of the total workforce, for Australia the proportion was 78.9. In April 2014, South Australia's full-time workforce was 66.4 per cent of the total workforce compared with 69.6 per cent for Australia, meaning that the gap between South Australia and Australia increased by 1.2 percentage points.

The decline in full-time employment reflects several underlying trends including the loss of traditional manufacturing assembly employment, changes to the traditional nine to five working day with much greater flexibility in business opening hours, trading on weekends, greater involvement and retention of women in the workforce and flexibility in part-time working arrangements. Changes in industry mix such as the growth in human service and service industries more generally have tended to support higher levels of part time employment.

Figure 3: Full-Time Employment: Proportion of Total Employment, South Australia and Australia, 1990-2014, Trend Series (Per cent)



Source: Australian Bureau of Statistics, Labour Force, www.abs.gov.au and SACES calculations.

Table 3 presents the average yearly change in full-time employment for selected years. South Australian has generally followed the same trend as for Australia, with the exception of 1995.

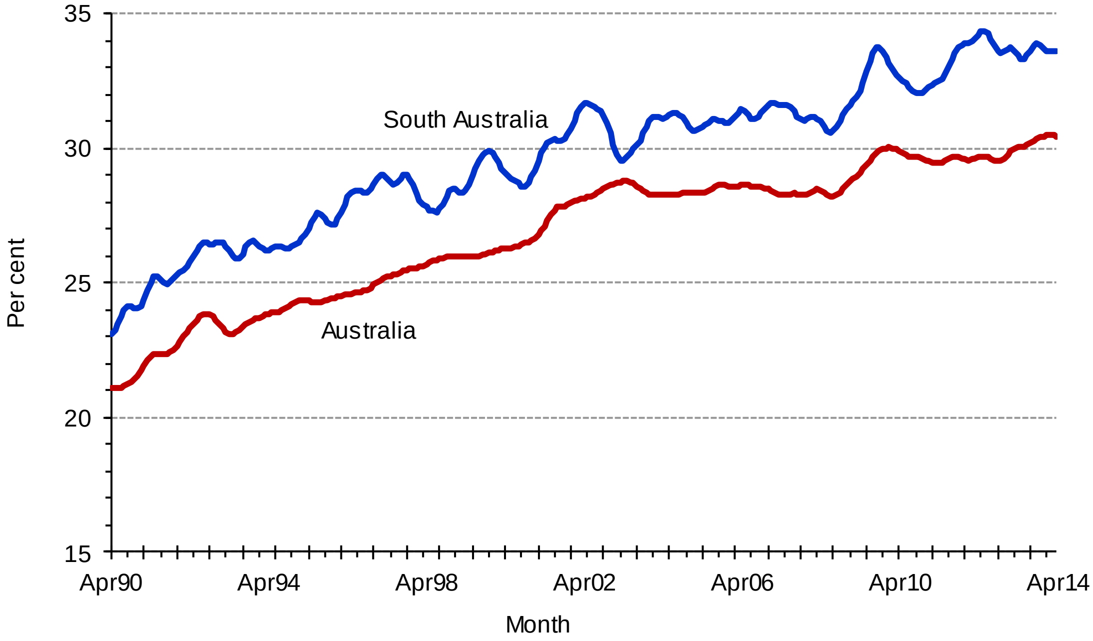
Table 3: Change in Full-Time Employment, South Australia and Australia, Year Average, Trend Series (Per cent)

	South Australia	Australia
1990	0.8	1.0
1995	0.2	3.1
2000	2.2	2.3
2005	3.3	3.1
2010	2.0	1.5
2013	0.3	0.3

Source: Australian Bureau of Statistics, Labour Force, www.abs.gov.au and SACES calculations.

The growth in part-time employment as a share of total employment is shown in Figure 4. Whereas South Australia has experienced lower workforce growth, slower growth in total employment, a more substantial decline in full-time employment and a persistently higher rate of unemployment, on the other hand, it has a higher proportion of part-time employment compared to Australia. Certainly, this in part reflects the structure of industry on a state by state basis (e.g. we have less employment in mining which is mostly full time, we have more employment in the 'helping professions', we have less in the finance sector).

Figure 4: Part-Time Employment: Proportion of Total Employment, South Australia and Australia, 1990-2014, Trend Series (Per cent)



Source: Australian Bureau of Statistics, Labour Force, www.abs.gov.au and SACES calculations.

The inexorable growth in part-time employment is shown in Table 4 with quite large percentage changes in all time periods up to 2013.

Table 4: Part-Time Employment: South Australia and Australia (Percentage change, trend series)

	South Australia	Australia
1990-1997	21.6	27.3
1998-2005	26.5	28.0
2006-2013	15.2	19.4

Source: Australian Bureau of Statistics, Labour Force, www.abs.gov.au and SACES calculations.

Share by Gender

Table 5 draws attention to the changing shares of total employment accounted by males and females and that this is a national pattern.

Table 5: Share of the workforce by gender, South Australia and Australia, Trend Series (Per cent)

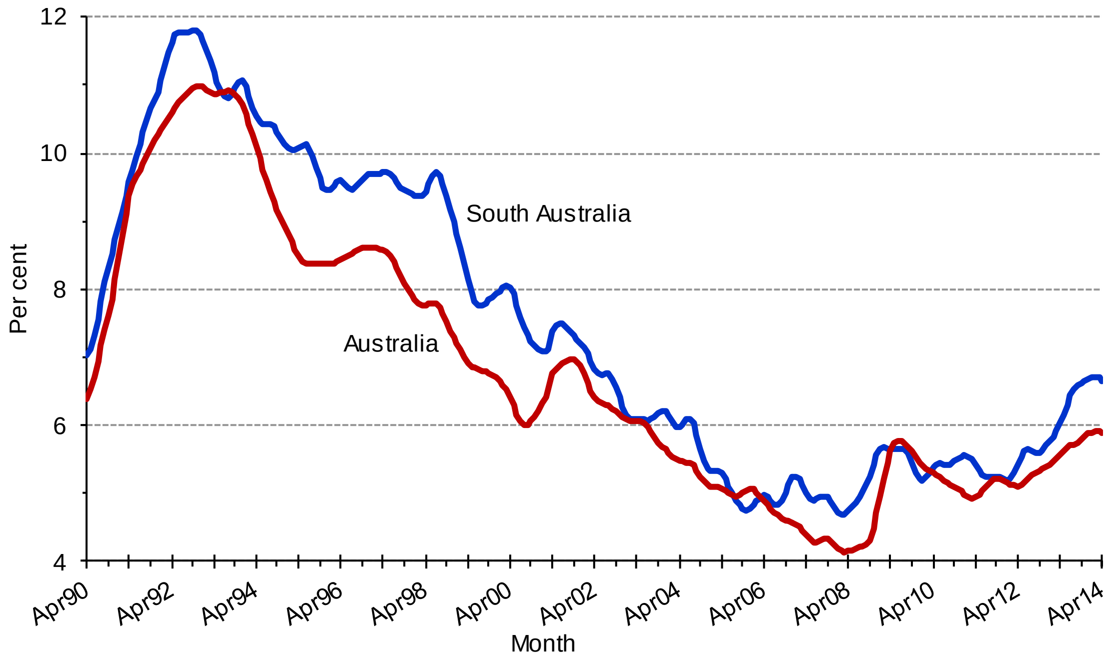
	South Australia		Australia	
	Male	Female	Male	Female
1990	58.5	41.5	58.5	41.5
1995	56.2	43.8	57.0	43.0
2000	56.3	43.7	55.9	44.1
2005	54.7	45.3	55.1	44.9
2010	54.0	46.0	54.6	45.4
2013	53.7	46.3	54.2	45.8

Source: Australian Bureau of Statistics, Labour Force, www.abs.gov.au and SACES calculations.

Unemployment

South Australia's unemployment rate has followed a similar path to the Australian unemployment rate with the peak of unemployment (South Australia: 11.8 per cent) occurring in 1992 and incidentally, the highest level of unemployment since the beginning of the Australian Bureau of Statistics' Labour Force publication (February 1978).

Figure 5: Unemployment Rate, South Australia and Australia: 1990 to 2014, Trend Series (Per cent)



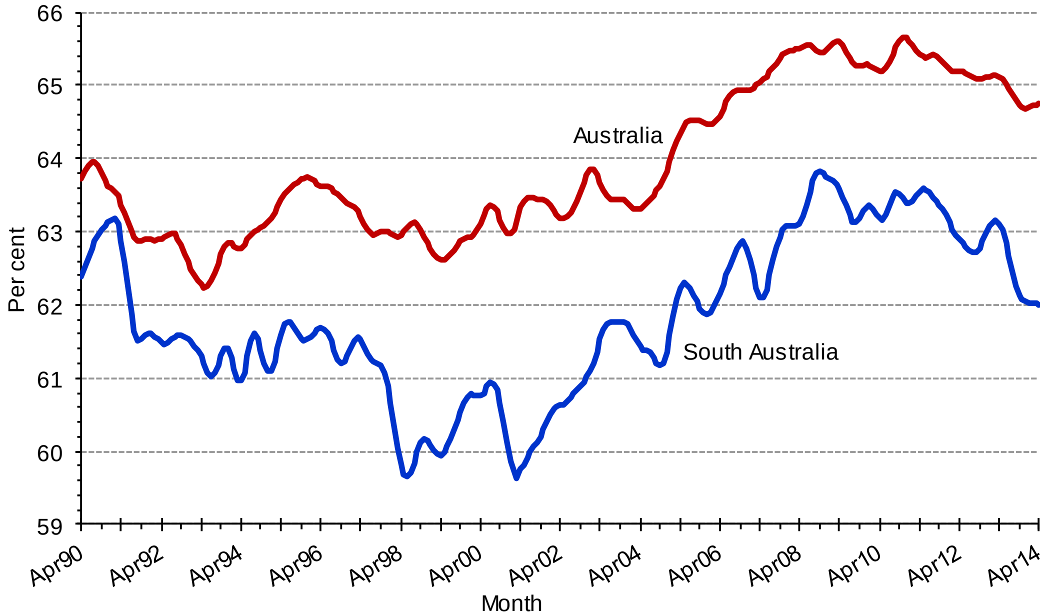
Source: Australian Bureau of Statistics, Labour Force, www.abs.gov.au.

Participation Rates

The South Australian participation rate has consistently been one and a half to three percentage points below that of Australia since the 1990s and there could be a number of contributing factors: our slightly older population, less confidence of those not in the labour force to enter the labour force and a consistently higher number of unemployed people which may also create a tendency to drop out of the labour force (Figure 6).

In April 1990, South Australia's participation rate was 62.4 per cent compared to 63.7 per cent for Australia, 1.3 percentage point difference between South Australia and Australia. In April 2014, South Australia's participation rate had not much changed at 62.0 per cent compared to the Australian rate of 64.8 per cent, a difference of 2.8 percentage points. (A note: the biggest difference was 3.6 percentage points in April of 2001 when the South Australian participation rate was 59.7 per cent.) It is not at all certain that this widening gap is solely due to our older population. Better employment prospects (perceived or real) in other states can induce higher labour force participation rates.

Figure 6: Participation Rate, South Australia and Australia: 1990 to 2014, Trend Series (Per cent)



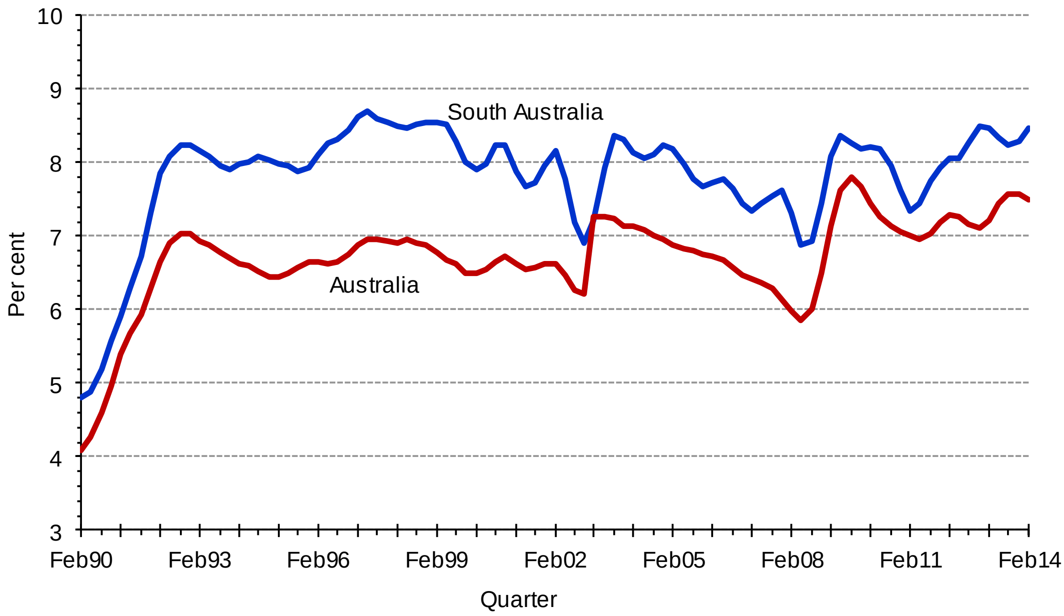
Source: Australian Bureau of Statistics, Labour Force, www.abs.gov.au.

Labour Force Underemployment

The labour force underemployment rate is a measure of unused labour in the workforce. The underemployment rate is calculated as the number of part-time workers willing and able to work more hours and the number of people employed full-time who did not work full-time hours in the week expressed as a percentage of the labour force.[1]

The South Australian underemployment rate has generally moved in concert with that of Australia, however, the South Australian rate has again, been consistently higher than the Australian rate (Figure 7).

Figure 7: Underemployment Rate, South Australia and Australia, February Quarter 1990 – February Quarter 2014



Source: Australian Bureau of Statistics, Labour Force, www.abs.gov.au.

In Summary

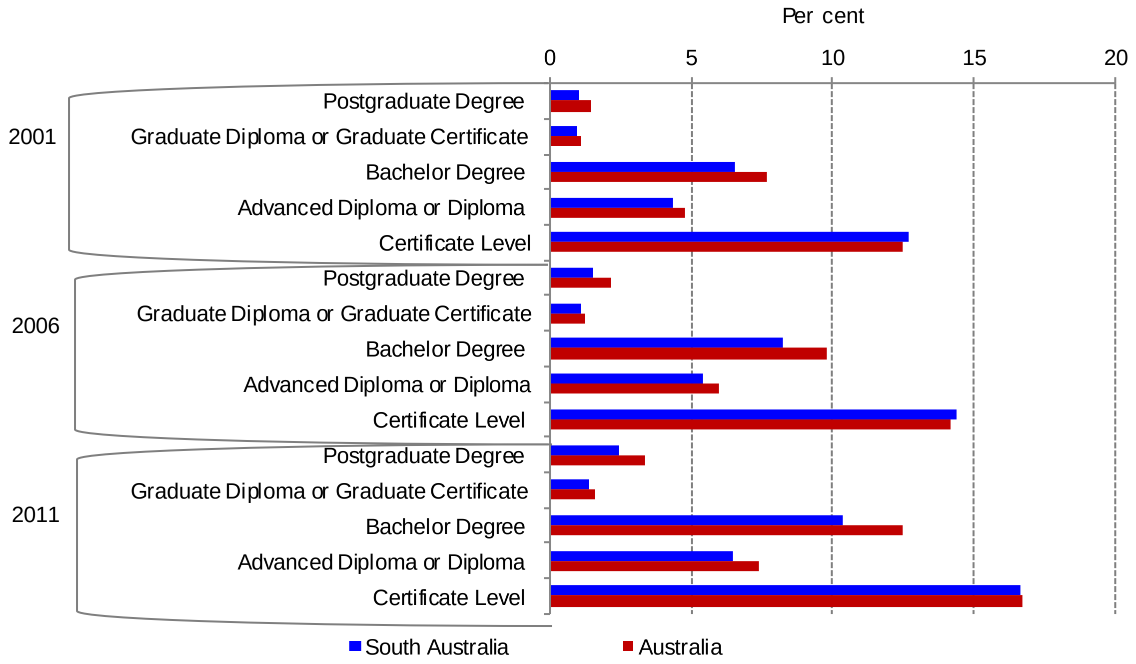
South Australian continues to enjoy the benefit of high living standards but it is slowly slipping behind the rest of Australia when measured by the growth of the local economy. The gap in the employment to population ratio is widening and can be expected to continue particularly if we are not able to retain more of our younger population. South Australia's share of the national workforce is declining as other States grow more strongly; our unemployment rate remains higher than the national average as is our labour force underutilisation rate and the labour force participation rate lower than that for Australia and the gap is widening.

There are clear challenges, not simply to raise productivity of those in the workforce – the platform for high living standards – but to review all measures including regulatory reform, duplication with the Commonwealth, public sector reform and taxation imposts that contribute to lack lustre labour market performance. It is estimated that South Australia's labour productivity is about 12 per cent less than Australia as a whole.

One of the basic fundamentals is for South Australia to concentrate on improvements in literacy and numeracy and the development of generic skills. Improving the level of skills and education/training for those at the lower levels of education is more important than increasing the number of more highly skilled people.

It is important to note our achievements in this regard, notwithstanding we have a way to go. The South Australian population with no post-school qualification was 66.4 per cent in 2001 (Australia: 63.5), it declined to 59.7 per cent by 2006 (Australia: 55.4) and to 53.8 per cent by 2011 (Australia: 48.3). This achievement should be strongly promoted to encourage and support all individuals to "invest in themselves".

Figure 8: Proportion of the Population with Post-Schooling Qualifications, (2001, 2006, 2011), Australia and South Australia



Source: Australian Bureau of Statistics Census Time Series Profiles www.abs.gov.au

Improving education levels, which in turn lead to improvements in literacy and numeracy levels, has been shown to lead to improvements in the probability of being employed and in earnings. In their report 'Literacy and Numeracy Skills and Labour Market Outcomes in Australia' Shomos and Forbes of the Productivity Commission report that an increase in literacy and numeracy skills, which is the equivalent of increasing education levels one level (e.g. from Diploma to Bachelor) will result in an increase in the probability of being employed of 2.4 percentage points for men and 4.3 percentage points for women. They estimate that up to 40 per cent of the association between education and employment is attributable to literacy and numeracy skills.[2]

To ignore the education challenge – a challenge that is deeply rooted in a meritocratic economy and society – is to fail to address the economic question of competitiveness – as low productivity relative to wage rates implies high unit labour costs – and also fails to address the civic goals of equity and opportunity.

South Australia has become a risk averse state with an unwillingness to tackle unnecessary regulations, with a "constant eye to Canberra" for salvation (i.e. defence contracts as important as they are, industry adjustment support) – it needs to measure outcomes such as, *inter alia*, increasing the volume and rate of private sector investment, the rate of small business start-ups; the cost of overheads that impact on our competitiveness; the transition of industry sectors into "high propensity exports sectors".

2. International Competitiveness of South Australian Industries

We are interested in the rate of growth of the South Australian economy, the actual and potential rate of growth (that is, the capacity of the economy to increase real net output), those industry sectors and sub-sectors that offer the potential to contribute more strongly to output and to export growth into newly emerging economies and those sectors of industry that potentially provide an absolute increase in employment. We are interested in trade flows and competitiveness of the domestic economy.

One measure of current competitiveness is to examine industry performance through the calculation of Revealed Comparative Advantage (RCA) that provides an index number less than, equal to or greater than 1 to classify an industry sector by export propensity and import penetration. The measure of 'penetration and propensity' for any single industry relative to the South Australian all industry average of exports and imports as a proportion of total output is one measure of competitiveness, trade specialisation and trade flows . Some goods and services will be classified into category 1 below –electricity and real estate estate/rental services both being good examples – because of the nature of the product or that it is clearly a local, domestic service. While RCA might be broadly thought of as a distinction between non-traded and traded goods and services this is not strictly the case. Rather, there may be industry sectors, goods or services, where current or historical domestic policies, prohibitions on trade, tariffs/non-tariff barriers significantly influence whether a good or services is traded or non-traded. For example, changes in tariff protection, export assistance policies, investment assistance and tax policies can change the stability of a measure and the Australian automotive industry is the best example of this.

Using trade related categories it is possible to classify South Australian industries according to their import penetration and export performance. The Bureau of Industry Economics (one of the three bodies that were combined to form the Productivity Commission) initially developed these categories. For the purposes of this report, import penetration ratios and export propensities are calculated using the 2011/12 Input-Output Tables.[3] The four categories are organised as follows.

Category 1: low import penetration ratios and low export propensity

Industries in this category are generally location specific; they are mostly non-tradeable because of the nature of the good or service. In an earlier SACES [4] assessment of competitiveness of South Australian industries, in this category were those basic location based services as shown below electricity, gas and water, residential and other construction, flour and bread, beverages, sawmills plywood, joinery and furniture, forestry, basic iron steel, non-metal minerals, communications and finance. This category now includes industries such as, *inter alia:*

- public services/industries (e.g. health, education and training, public administration, public safety, etc.); and
- basic location based services (e.g. finance services, food and beverage services, water and electricity supply, real estate, retail trade, etc.).

Education services has been a growth industry, it has the capacity to grow more strongly, with benefits in terms of international export income and higher local employment. Employment growth has been strongest in the public sector, essentially a non-traded sector of the economy where wage demands and regulatory policies and practices can impact on the competitiveness of the traded sector of the economy.

Category 2: High import penetration ratios and low export propensity

From an international perspective, the industries in this category have low levels of international competiveness. The industries that fall into this category include, *inter alia*:

- wholesale trade;
- motor vehicles and machinery;
- processed food products;
- paper products;
- textiles, clothing and footwear; and
- pharmaceutical and chemical products.

The sectors of the South Australian economy in this category have increased since the mid-1990s. There have been some interesting changes in the composition of the category including that the motor vehicle industry is included in this category. This is as a direct result of falling exports from the industry, increasing linkages into global supply chains and policies and facilities (e.g., earned export credits) that assisted the import of vehicle components and fully assembled vehicles. In 2012/13 passenger motor vehicles exports from South Australia to overseas were valued at $362 million compared to $646 million in imports from overseas.

Previously motor vehicles had been classified in Category 4 (high export propensity and low import penetration ratio). Over the past 20 years the motor vehicle industry transitioned from an apparently internationally competitive industry to being internationally uncompetitive.

Category 3: high export propensity and a high import penetration ratio

These industries are characterised by relatively high levels of imports into the production process in the form of production inputs (e.g. fertilisers in agriculture), machinery and equipment for mining and transport but export final products. This category includes, *inter alia:*

- agriculture products (such as poultry, fishing, grain mill and cereals, dairy cattle, vegetables, meat and wood);
- accommodation (domestic and international tourism);
- residential construction;
- some mining (iron and non-ferrous ore mining and oil and gas extraction);
- road, rail and air transport.

Category 4: High export propensity and low import penetration ratios

These industries are classified as internationally competitive. The industries included in this category are, *inter alia:*

- agriculture (sheep, pigs, fruit and nuts, grains and other livestock);
- wine and spirits; and
- some mining (exploration and mining services, basic non-ferrous metals and coal mining).

Exports of unprocessed and processed agricultural commodities and wine are two of South Australia's leading exports ($3.4 billion in 2012/13) including that they support value adding manufacture. These two sectors are also relatively R&D intensive and possess very strong growth prospects given the demand for food in the Asia Pacific, the sheer extent of the numbers of people classified as "middle class" across the region and rising incomes and consumption expenditure more generally.

The export of mineral commodities and potential future exports continues to contribute to the diversification of our export base, investment, industry structure and employment. In 2012/13, the total value of iron ores and concentrates, copper ores and concentrates and copper from South Australia to overseas was $2.85 billion or 26 per cent of our total goods exports.

3. Employment by Industry: A Snapshot

In this section we review employment trends in each industry sector in South Australia to assess past performance over the last (almost) decade and a half and future prospects for growth. The shaded box to commence each industry is a summary of the national outlook – previous five years to the next five years – taken from the recent publication, *Australian Jobs 2014* compiled by the Department of Employment. It is not always the case that employment (and the outlook for employment) follows the national trend as a discussion of the sector – Agriculture, Forestry and Fishing – demonstrates so we would not accept that employment in South Australia will decline over the next five years. Sub-sectors of the industry are internationally competitive, there are many medium sized firms diversifying in export markets, the industry has significant R&D investment and activity in diverse fields as solar technology for all year round production, the conversion of sea water to irrigation supply, methods to expand fish production and other value adding research. The rate of small manufacturing start-ups linked to this sector is also very high.

The Report of the Panels for the Reviews of the South Australian and Victorian Economies (2014)[5] considered South Australia will have "a different future in high value added manufacturing and industries … (including) … opportunities are in sectors of advanced manufacturing; food and agriculture; health and biomedical products; oil and gas; mining equipment, technology and services; tourism; and education" (p. 31).

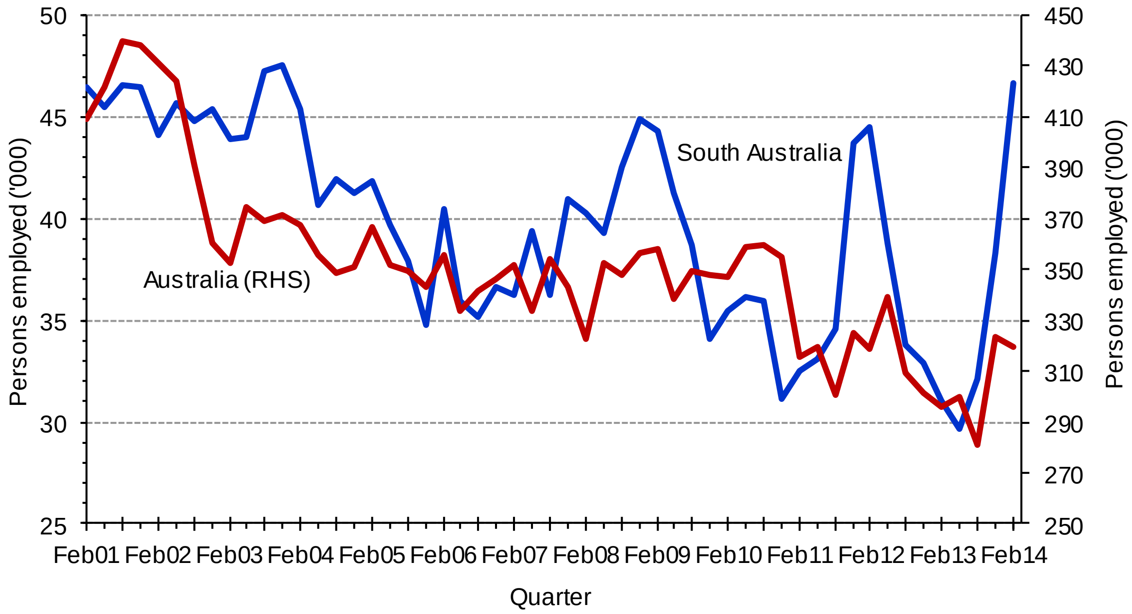
That report is an external and independent assessment of the strengths and prospects for growth (of exports and employment) in South Australia. We generally support the assessment while noting that is a "helicopter view of the economy, industries and sectors" and we now need to ask what do we need to do to facilitate the conditions for growth? Who are our target markets and what are the major conditions and factors influencing those markets? What works well in opening up market opportunities? To what extent are national and state economic, industry, tax, and training policies "a boost" to the tradable sector of the economy and have we the "right balance" between the non-tradable and tradable sectors? ("right balance" includes issues such as productivity, efficiency, regulation, labour market flexibility, support to start-up, small and medium enterprises, etc).

In essence, what do we need to create the conditions for growth? That question will be examined in forthcoming papers.

Agriculture, Forestry and Fishing: 2001 to 2014

- declining total employment over the five years to November 2013;
- total employment expected to continue to decline over the next five years;
- employees are typically older aged males, 45 years and over, without post school qualifications;
- employment opportunities exist primarily across regional Australia, 87 per cent of jobs being located outside state capitals.

Figure 9: Agriculture, Forestry and Fishing



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

Employment in the agriculture, forestry and fishing sector has continued the long-term downward trend in South Australia and Australia although an interesting picture emerges in South Australia over the last decade and a half.

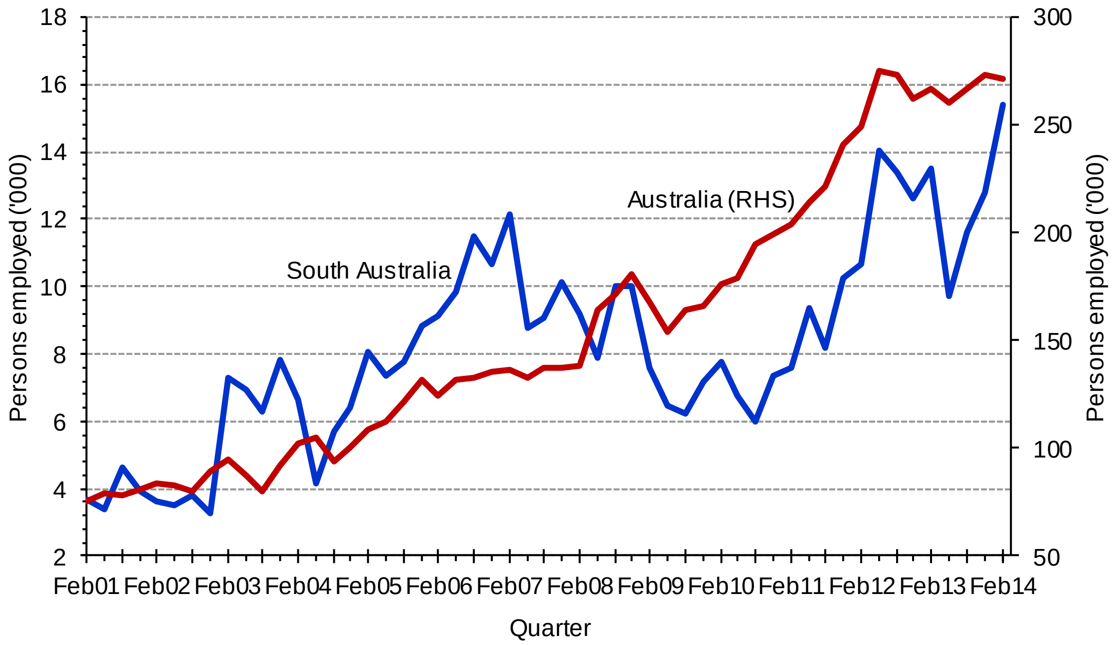
In February[6] 2001, 46,468 South Australians were employed in the industry, while in February 2014 almost the same number 46,698 of South Australians were employed in the industry, representing little change (up by 0.5 per cent) over a decade but periods of volatility within the industry over this period (see Figure 9).

For Australia, there were 409,341 people employed in the industry in February 2001 but by 2014 319,293 people were employed, representing a significant decline (fell by 22 per cent). These changes resulted in South Australia's share of total employment in this industry sector increasing from 11.4 per cent (2001) to 14.6 (2014) and there are good prospects for further growth in employment in regional South Australian in the next five years contrary to the national trend.

Mining: 2001 to 2014

- mining experienced the largest increase in total employment for any industry sector over the five years to November 2013;
- total employment expected to decline modestly over the next five years as the mining boom moderates and the mine construction phase ends;
- employees are typically male, employed full-time with post school qualifications;
- employment opportunities concentrated in Western Australia and Queensland in respective capital cities and regional areas.

Figure 10: Mining



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

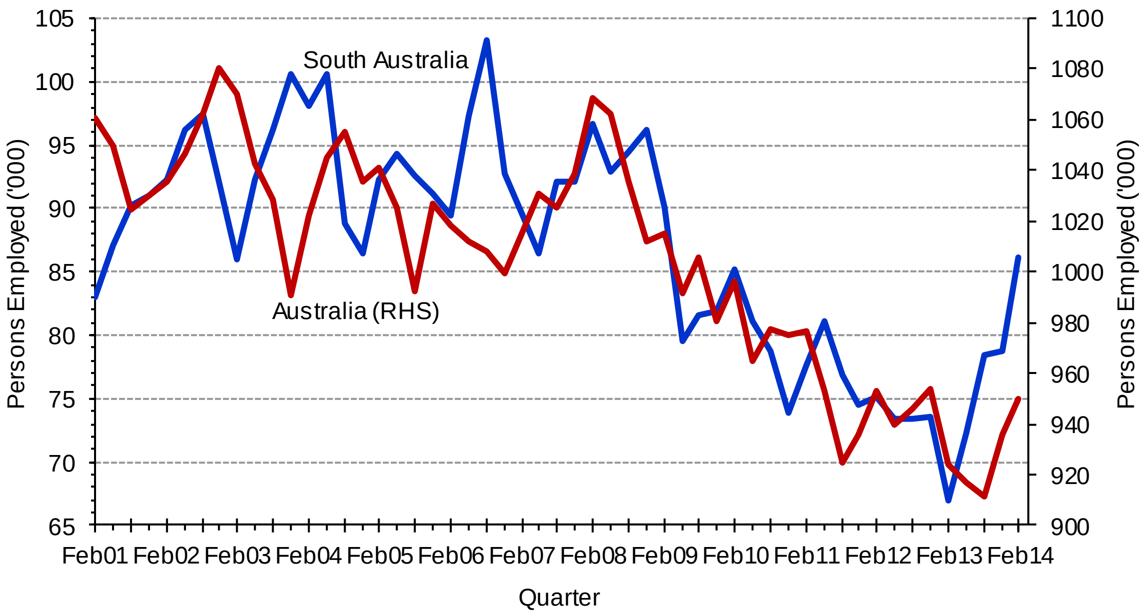
Employment in the mining industry has increased significantly in both South Australia and Australia with a compound average growth rate calculation for South Australia of 11.1 per cent and for Australia 9.6 per cent. These relatively large growth rates indicate the magnitude of the mining boom, which has occurred over the last decade and a half although in the case of South Australia the starting base of employment was small relative to other states. South Australia's share of mining industry employment grew from 4.9 per cent to 5.7 per cent.

In February 2001 there were 3,669 South Australians employed in mining. In February 2014 this had more than tripled to 15,372; for Australia, in February of 2001, 75,389 people were employed in mining and by February 2014, 271,237 Australians were employed in mining. There are good prospects for additional employment with the likely development of several mines, continued exploration on land and exploration for oil and gas in the Great Australian Bight.

Manufacturing: 2001 to 2014

- manufacturing experienced the largest decline in total employment for any industry sector over the five years to November 2013;
- total employment is expected to continue declining, albeit at a slowing rate, over the next five years;
- employees are predominantly male, employed full-time and hold VET qualifications;
- total employment in some sectors is expected to increase over the next five years, e.g., the Food Product Manufacturing sector to require additional employees to support future growth.

Figure 11: Manufacturing



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

Manufacturing employment has been quite volatile over the last two decades and more recently has been affected by the high Australian dollar, the impact of the GFC on South Australia's processed manufactured exports and loss of export contracts across several sectors of manufacturing. In the last year there is evidence of a sharp turnaround in manufacturing employment in South Australia and more strongly than that experienced by the rest of Australia. Automotive sector will contract towards 2016 and beyond.

In South Australia, 86,112 people were employed in manufacturing in February 2014, compared to 83,036 in February 2001. Employment in manufacturing in South Australian increased by 3.7 per cent over the period 2001-2014. In February 2001, 1.06 million Australians were employed in manufacturing, by February 2014 this had declined to 949,730.

The result of these different trends is that South Australia's share of total manufacturing employment increased from 7.8 per cent 9.1 per cent.

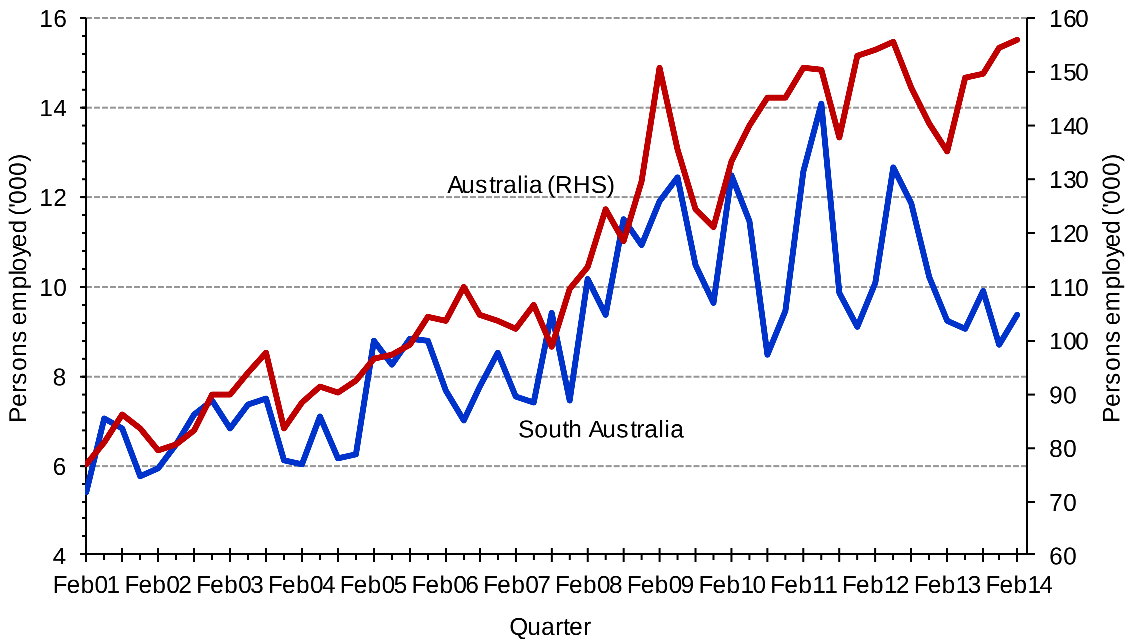
Underlying this improvement is the growth of specialist manufacturing in the food processing and alcohol/wine sector, medical instruments, advanced electronics, household and commercial water products, automotive component parts and sophisticated electronic/computerised instrument and instrumentation. Emerging product development is evident in the still in embryo, "green technology sector".

Manufacturing employment – large scale, assembly line – previously sustained by high tariff barriers and/or import quotas, assisted by (at various times) a low exchange rate have been or are being competed away. This is a progressive process as industry sectors are often supported to link into global supply chains or public policies "reward" domestic production and exports with various "credits, industry support/research funding", etc. It is not axiomatic that an industry will no longer exist as a result of domestic and international trends, policies, demographics, emerging economies, etc. However, it is probably inevitable industries will re-focus, change and adapt and this has implications for employment, skills and labour demand.

Electricity, Gas, Waste and Water Services: 2001 to 2014

- strong total employment growth over the five years to November 2013;
- total employment is expected to continue growing, albeit at a significantly slower rate, over the next five years;
- employees are typically male, employed full-time, with post-school qualifications;
- employment opportunities exist in regional areas and capital cities.

Figure 12: Electricity, Gas, Waste and Water Services



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

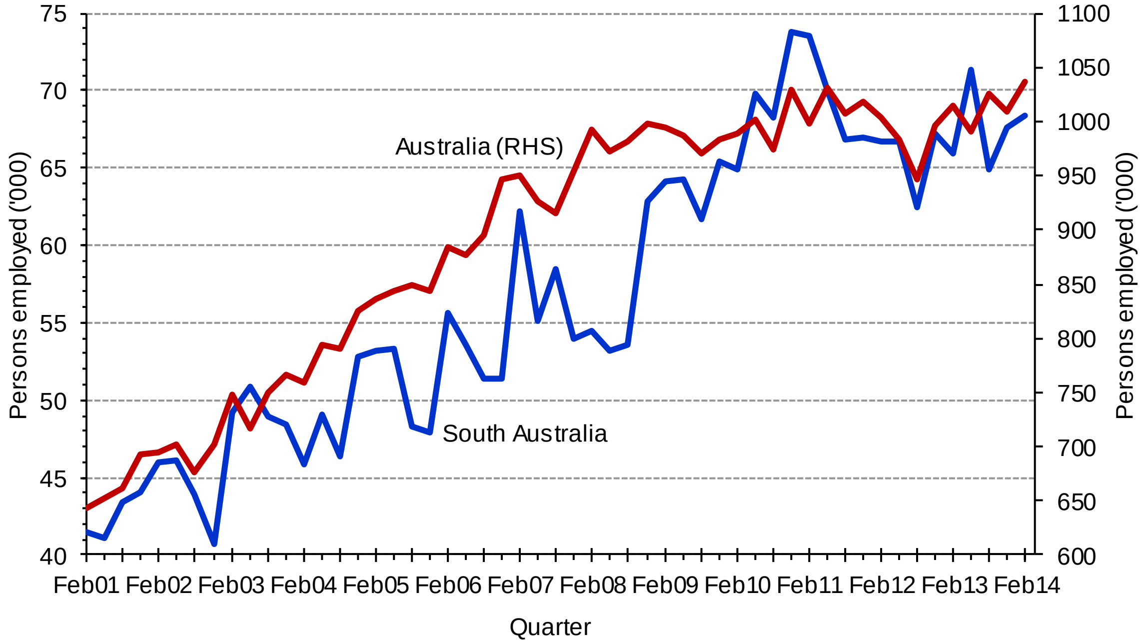
Employment in electricity, gas, waste and water services has been on an upward trend until approximately 2008 and since that time has become more volatile. Regardless, employment in the South Australian electricity, gas, and waste and water services industry has increased 73 per cent since February 2001. For Australia the increase was 103 per cent.

In February 2001, 5,400 people were employed in the electricity, gas, waste and water services industry in South Australia, by February 2014 this had increased to 9,355. In Australia there were 76,795 people employed in the electricity, gas, waste and water services in 2001, and in 2014, 156,108 people were employed in the industry. South Australia's share of employment in the electricity, gas, waste and water industry was 7.0 per cent (2001) and has fallen to 6.0 per cent in 2014.

Construction: 2001 to 2014

- modest total employment growth over the five years to November 2013;
- total employment growth of double the past rate expected over the next five years;
- employees are predominantly young males, employed full-time, with VET qualifications;
- employment opportunities exist in both capital cities and regional areas.

Figure 13: Construction



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

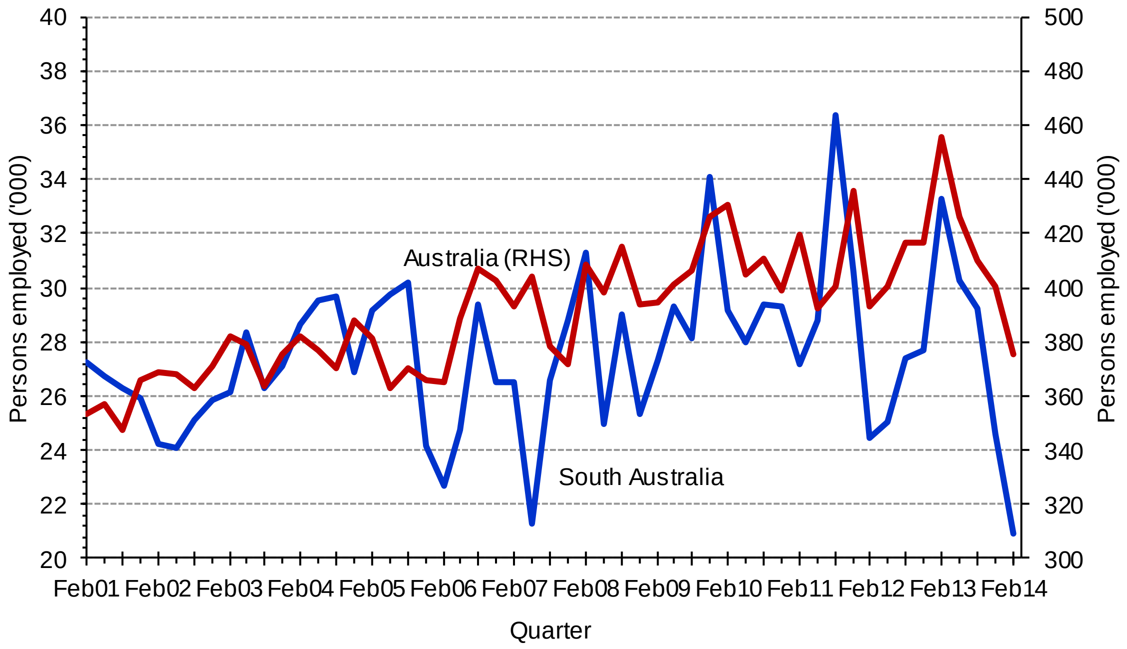
Employment in the construction sector has generally been on an upward trend in both South Australia and Australia. In February 2001, 41,412 South Australians were employed in the construction industry, by February 2014, this had increased to 68,365. In Australia in February 2001, 642,673 people were employed in the construction sector, by February 2014, this had increased to 1.04 million. In terms of percentage increases, South Australia recorded a 65 per cent increase, Australia 61 per cent.

The South Australian construction sector has been heavily dependent on government financed, large infrastructure projects which will need to be replaced by private sector investment and population growth to stimulate housing construction if current employment levels are to be maintained.

Wholesale Trade: 2001 to 2014

- no change in total employment over the five years to November 2013;
- total employment growth expected to be moderate over the next five years;
- employees are typically male, employed full-time, without post-school qualifications;
- employment opportunities are predominately located in capital cities.

Figure 14: Wholesale Trade



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

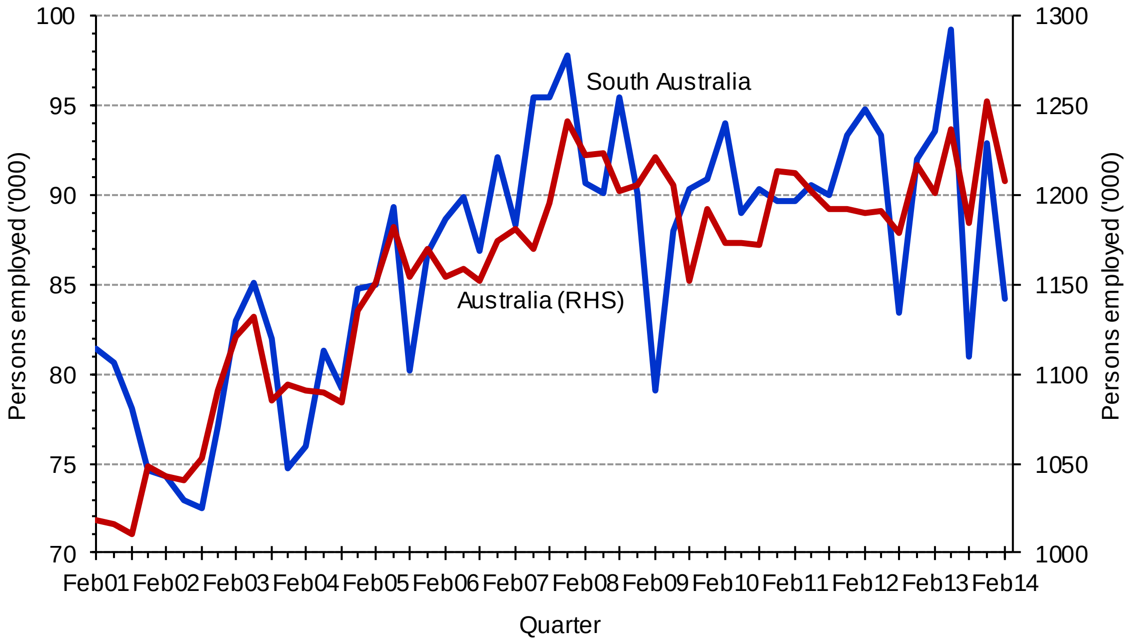
The industry in South Australia recently experienced a very sharp decline in employment to 20,937 and longer term decline from 27,258 in 2001. The trend is consistent with that for Australia of slow growth (or decline) with 353,109 (2001) and 375,571 (2014). Improvements in logistics, centralisation of warehousing and improvements in a range of technologies continue to impact this sector.

In February 2001, South Australia's share of employment in the wholesale trade industry was 7.7 per cent declining to 5.6 per cent in 2014.

Retail Trade: 2001 to 2014

- modest employment growth over the five years to November 2013, largest increases recorded in Clothing, Footwear and Personal Accessories and Pharmaceutical and other store-based retailing sectors;
- employment growth expected to strengthen over the next five years;
- employees are typically female, likely to be young, aged 15-24 years, employed part-time, without post-school qualifications;
- employment opportunities exist across all cities and regions.

Figure 15: Retail Trade



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

Employment in the South Australian retail industry has increased by 3.5 per cent in the past decade and a half. In February 2001, 81,422 South Australians were employed in the retail trade industry compared to 84,239 in February 2014. The impact of high savings rates post the GFC had a marked impact on employment in this sector.

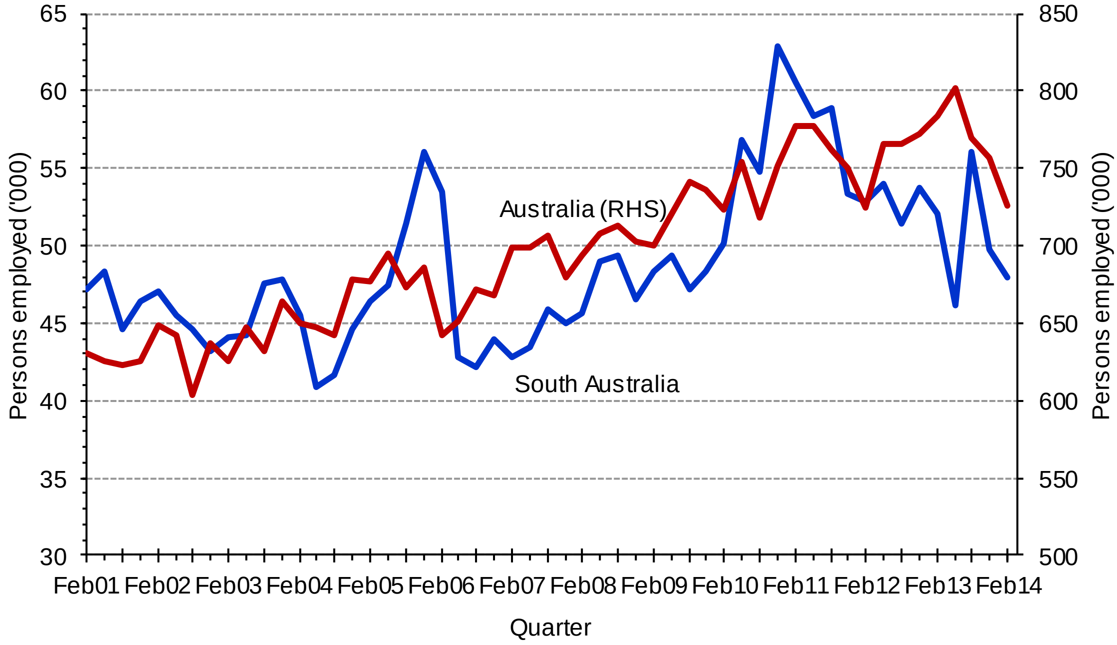
Employment in the Australian retail industry increased 19 per cent from February 2001 to February 2014 from 1.02 million to 1.21 million (2014).

South Australia's share of retail employment declined from 8.0 per cent in February 2001 to 7.0 per cent in February 2014. The industry has a relatively high labour turnover rate, is being impacted by online retail activity and will continue to depend on population growth to increase activity and employment.

Accommodation and Food Services: 2001 to 2014

- strong total employment growth over the five years to November 2013;
- total employment growth expected to remain strong over the next five years;
- employees are typically female, aged 15-24 years, employed part-time, with no post-school qualifications combining work with study;
- employment opportunities exist across all capital cities and regions, the sector provides significant opportunities for entry-level positions.

Figure 16: Accommodation and Food Services



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

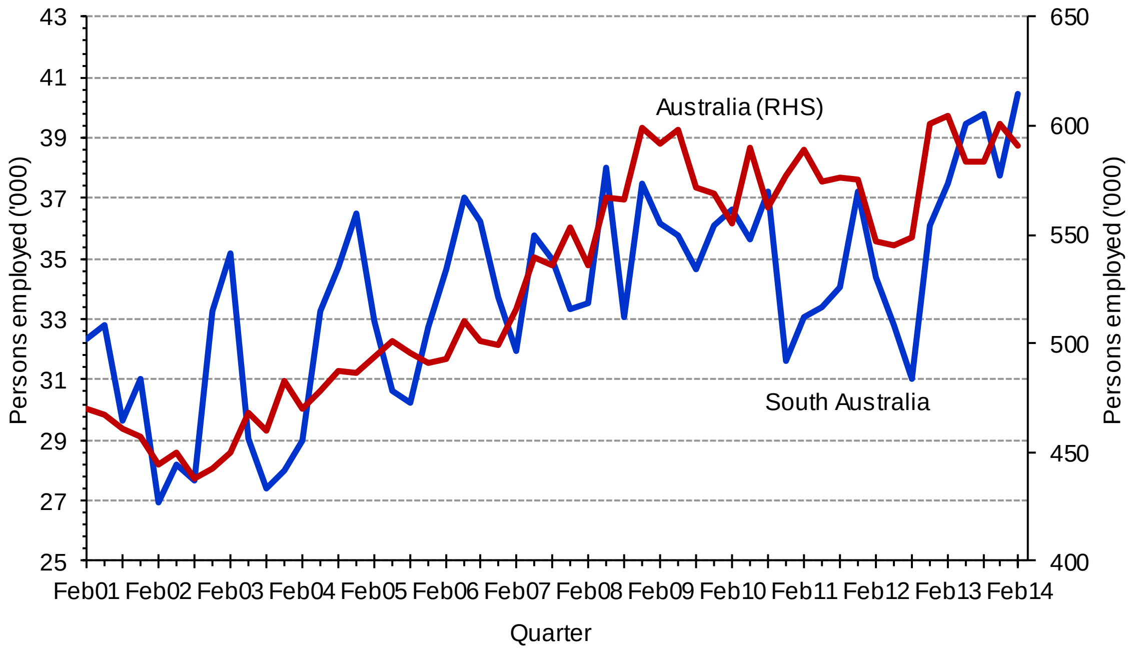
Employment in the accommodation and food services sector increased by 1.6 per cent in South Australia and 15 per cent in Australia from 2001 to 2014.

In February 2001, 47,240 South Australians were employed in the accommodation and food services industry, compared to 47,990 in February 2014. In Australia, 630,393 people were employed in the accommodation and food services industry (2001) and 726,030 in February 2014. South Australia's share of total employment in the industry declined from 7.5 per cent in 2001 to 6.6 per cent in 2014.

Transport, Postal and Warehousing: 2001 to 2014

- moderate decline in total employment over the five years to November 2013;
- total employment growth expected to be moderate over the next five years;
- employees are typically older males, aged 45 years or older, employed full-time, with no post-school qualifications;
- employment opportunities concentrated in capital cities and to a lesser extent in regional areas.

Figure 17: Transport, Postal and Warehousing



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

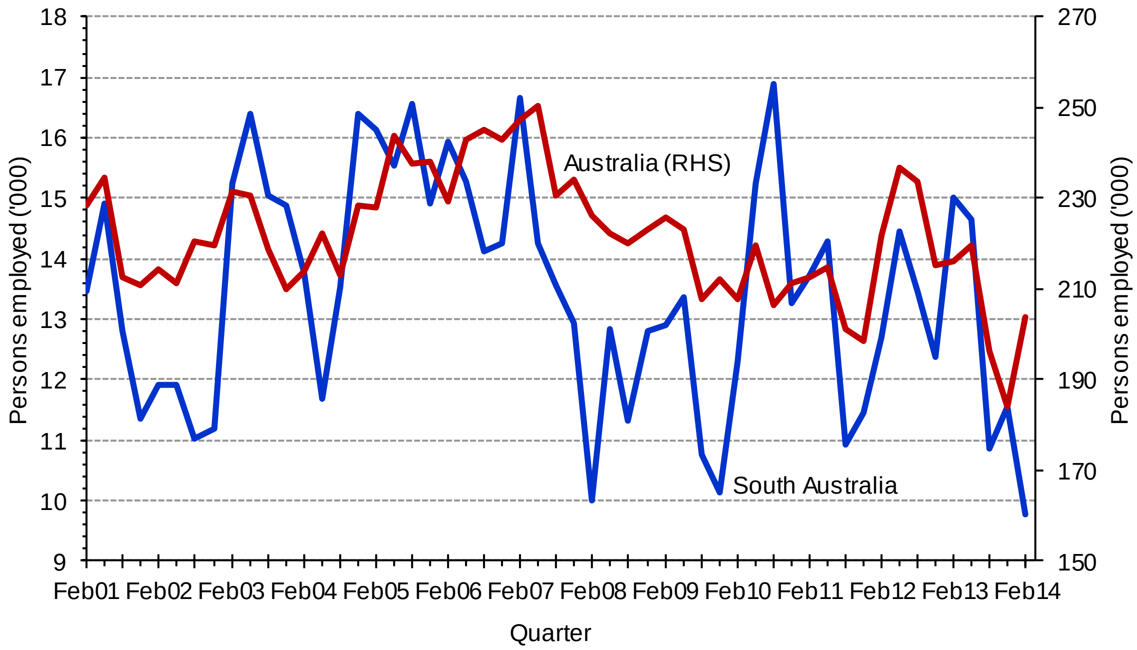
Employment in the transport, postal and warehousing sector in South Australia was 32,357 (2001) and 40,456 by 2014, an increase of 25 per cent. Some 469,750 persons were working with industry in 2001 across Australia rising to 590,658 persons in 2014, a 26 per cent increase.

South Australia's share of employment in transport, postal and warehousing declined from 6.9 per cent in 2001 to 6.8 per cent in 2014.

Information, Media and Communications: 2001 to 2014

- strong decline in total employment over the five years to November 2013;
- total employment is expected to remain unchanged over the next five years;
- employees are typically male, employed full-time, with post-school qualifications;
- employment opportunities concentrated in capital cities, with New South Wales accounting for 36 per cent of total employed.

Figure 18: Information, Media and Communications



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

Employment in information, media and communications in South Australia declined significantly from 13,470 persons in 2007 to 9,787 persons in 2014 (27 per cent fall) following on-going rationalisation, media concentration and the impact of technology across this industry.

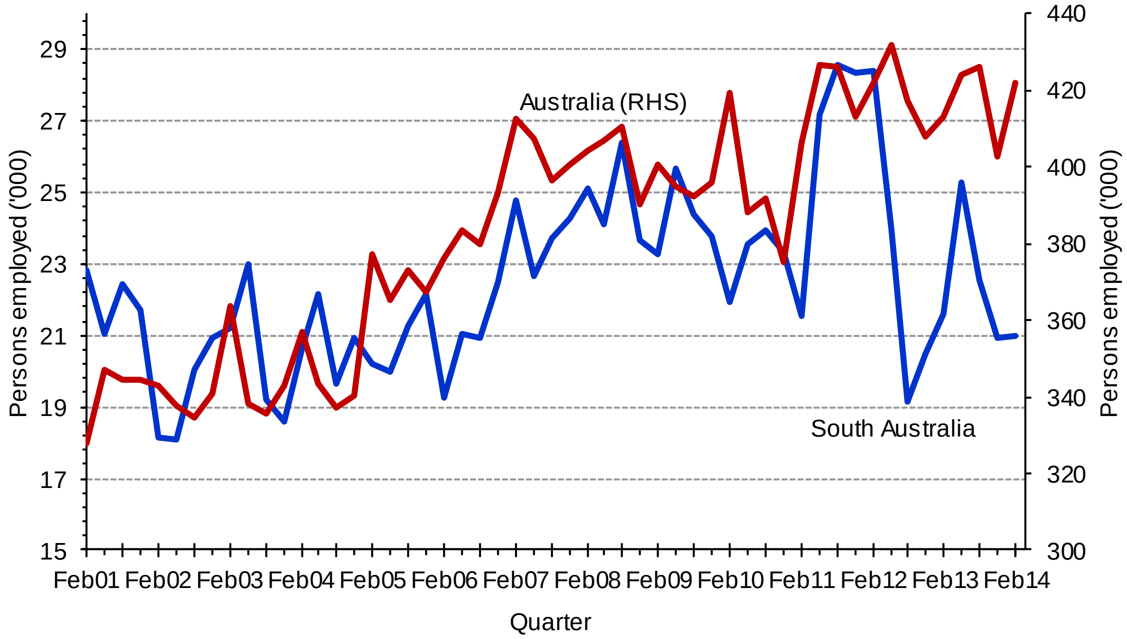
In Australia the industry employed 228,548 people in February 2001 with 203,576 persons in 2014, a decline of 10.9 per cent.

South Australia's share of employment in information, media and communications industry declined from 5.9 per cent (2001) to 4.8 per cent in February 2014.

Financial and Insurance Services: 2001 to 2014

- modest growth in total employment over the five years to November 2013;
- total employment growth expected to remain modest over the next five years;
- employees typically hold post-school qualifications, i.e., bachelor degrees, the gender employment distribution between males and females is even;
- employment opportunities concentrated in state capital cities, most notably in the head offices of financial institutions located in Sydney and Melbourne.

Figure 19: Financial and Insurance Services



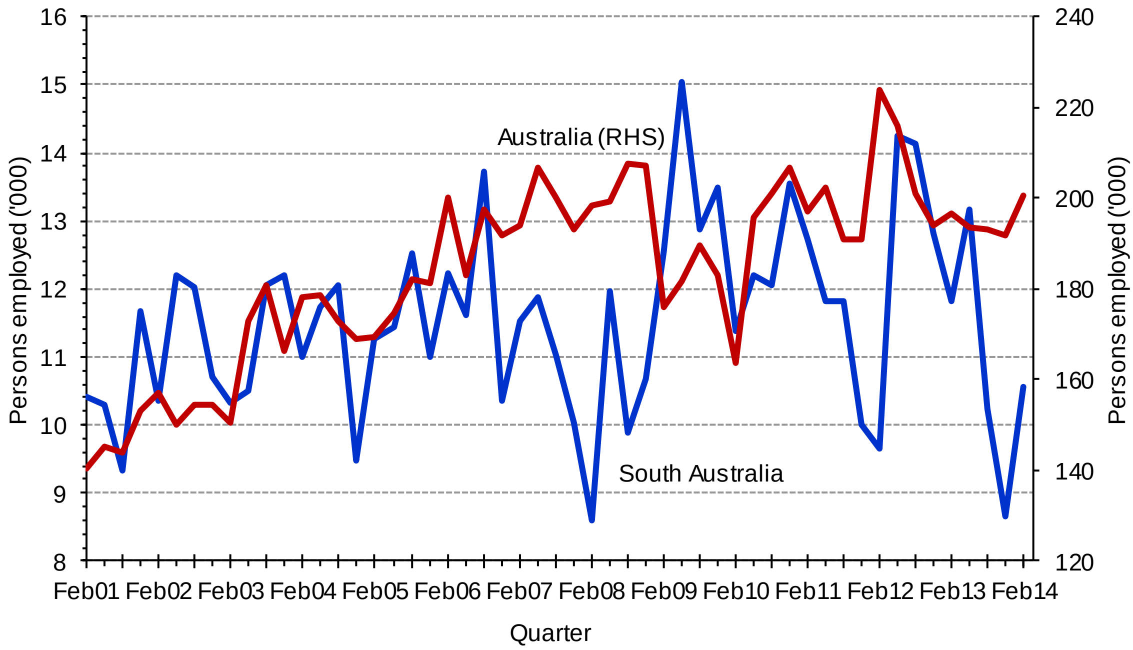
Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

In February 2001, 22,814 South Australians were employed in the financial and insurance services industry compared to 21,009 in February 2014 a fall of 7.9 per cent. This contrasts with a 29 per cent increase in employment in this sector for Australia over the same period from 327,996 to 422,176. South Australia's share of employment in this industry decreased from 7.0 per cent in 2001 to 5.0 per cent in 2014.

Rental, Hiring and Real Estate Services: 2001 to 2014

- modest decline in total employment over the five years to November 2013;
- total employment expected to grow strongly over the next five years;
- employees are typically employed full-time, aged 45 years and over, the gender employment distribution between males and females is even;
- employment opportunities predominantly located in cities.

Figure 20: Rental, Hiring and Real Estate Services



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

Some 10,414 persons were employed in this industry in South Australia to 2001 and 10,556 in 2014. The prospects for growth are said to be "strong" at the national level but there appears to be no basis to predict the same for South Australia based on past performance and population growth estimates.

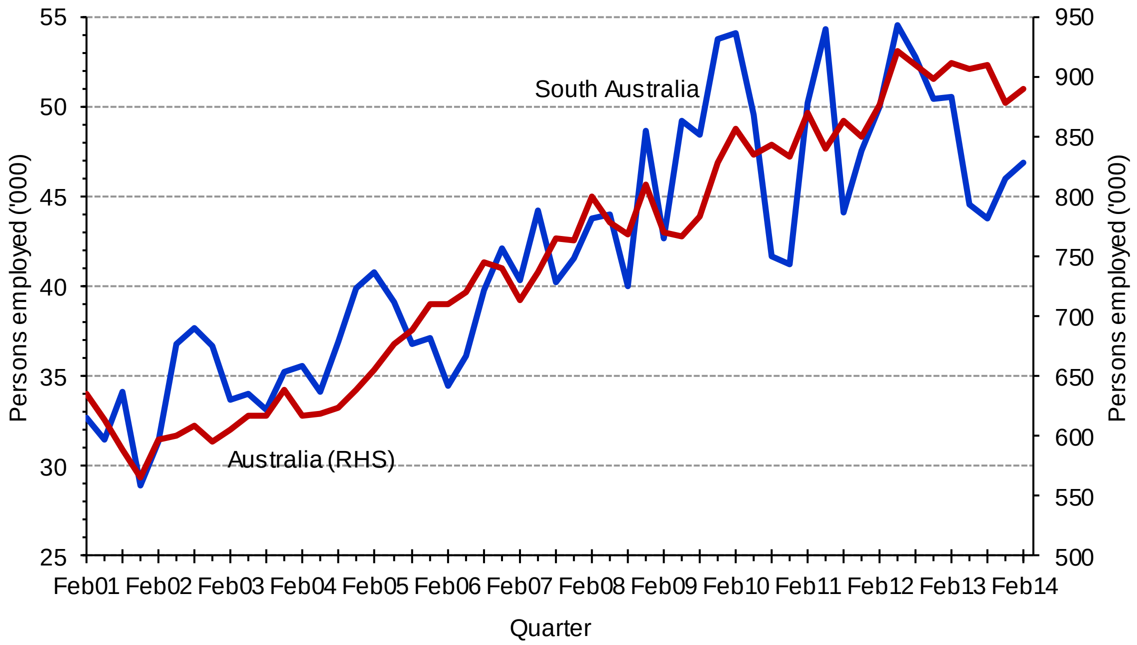
In Australia the rental, hiring and real estate services industry employed 140,431 people in February 2001 and 200,548 in 2014, an increase of 43 per cent.

South Australia's share of employment in the rental, hiring and real estate services industry decreased from 7.4 per cent (2001) to 5.3 per cent in February 2014.

Professional, Scientific and Technical Services: 2001 to 2014

- strong growth in total employment over the five years to November 2013;
- total employment growth is expected to remain strong over the next five years;
- employees are typically professionals, employed full-time, with university qualifications, i.e., bachelor degree or higher;
- employment opportunities located predominantly in capital cities.

Figure 21: Professional, Scientific and Technical Services



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

Employment in this section of the South Australian workforce was 32,739 (2001) rising to 46,887 by 2014, an increase of 43 per cent which was slightly above the national trend.

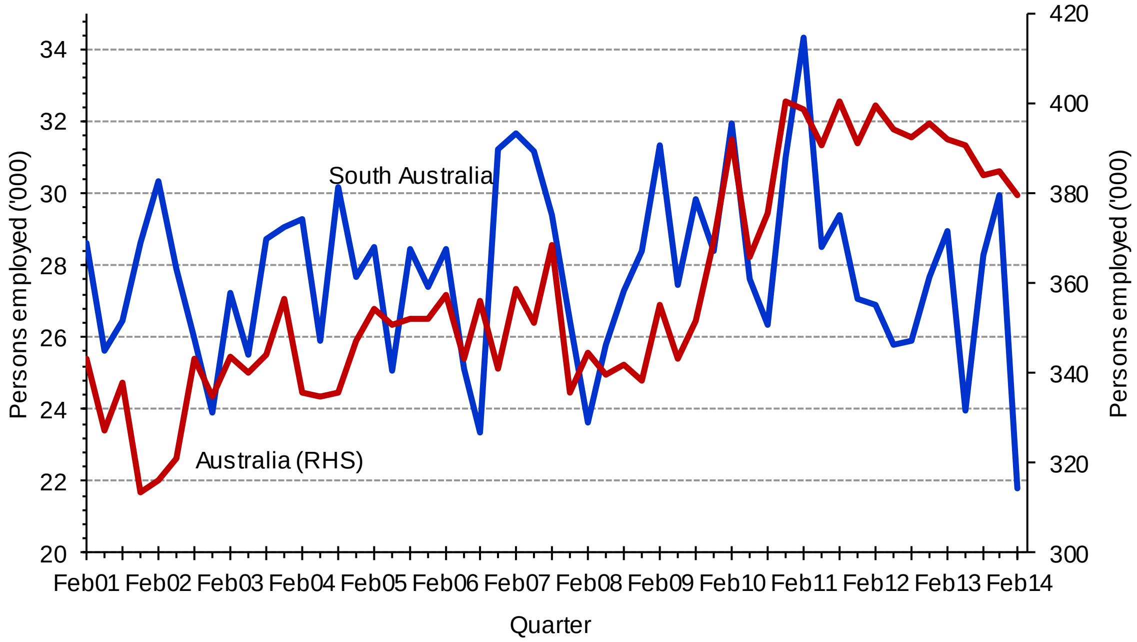
In Australia, 634,715 were employed in the industry in 2001 and 890,557 people in 2014. Employment in the industry increased by 40 per cent.

South Australia's share of employment in the professional, scientific and technical services industry has increased from 5.2 in February 2001 to 5.3 per cent in February 2014.

Administrative and Support Services: 2001 to 2014

- strong growth in total employment over the five years to November 2013;
- total employment growth expected to remain strong over the next five years;
- employees are typically female, employed part-time and less likely to have post school qualifications;
- employment opportunities predominantly located in capital cities, provides significant opportunities for entry-level positions.

Figure 22: Administrative and Support Services



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

Businesses included in this industry division are employment services, travel agency, personnel services, household maintenance services, building cleaning – that is businesses that support the day-to-day activities of other businesses.

Employment in the administrative and support services industry has been quite volatile in South Australia falling from 28,600 persons in 2001 to 21,779 persons in 2014, or some 24 per cent.

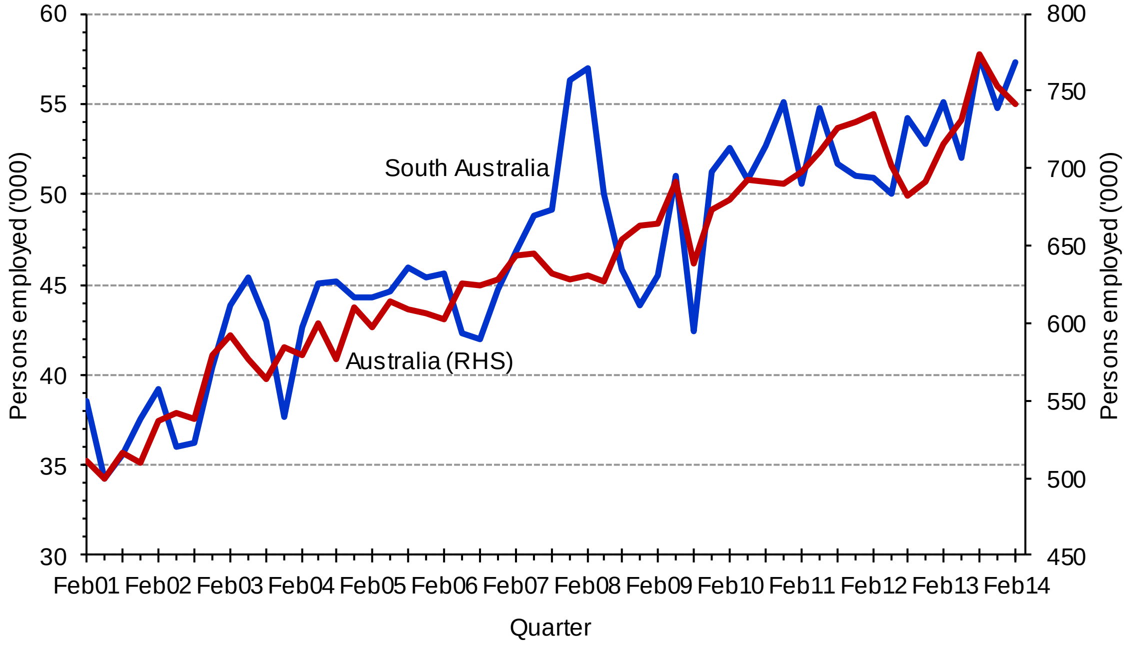
This contrasts with Australia as a whole where employment increased from 343,344 in February 2001 to 379,458 in February 2014, an increase of 10.5 per cent.

South Australia's share of employment in the administrative and support services industry decreased from 8.3 per cent (2001) to 5.7 per cent in February 2014.

Public Administration and Safety: 2001 to 2014

- strong growth in total employment over the five years to November 2013;
- total employment growth expected to slow significantly over the next five years;
- employees typically have an older age profile, employed full-time, with post school qualifications especially bachelor degrees or higher;
- employment opportunities concentrated in the Australian Capital Territory, followed by the capital cities.

Figure 23: Public Administration and Safety



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

This industry sector includes government activity of legislative and judicial nature and functions associated with "physical, social, economic and general public safety and security services" such as police, emergency and fire services, corrections, border control and regulatory services (e.g. licensing, regulation, consumer protection).

In South Australia, 38,519 people worked in the industry in February 2001 increasing to 57,301 in 2014 or by some 49 per cent.

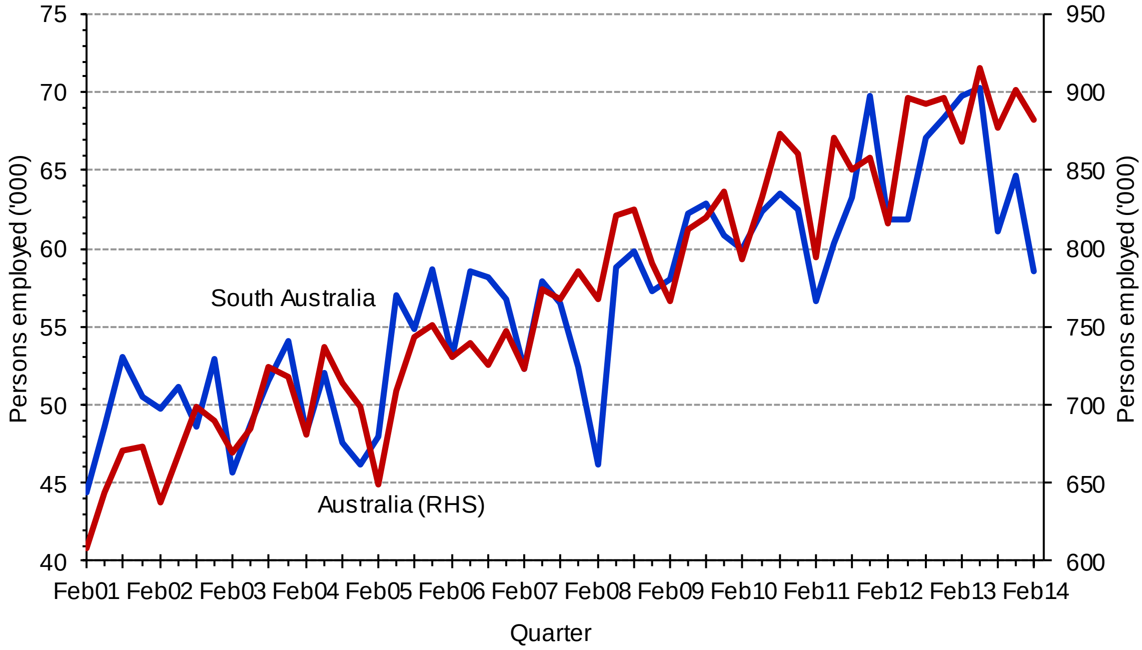
In Australia, in 2001, 510,986 people were employed in public administration and safety and in 2014 some 741,516 persons were employed, an increase of 45 per cent.

South Australia's share of employment in the public administration and safety industry increased from 7.5 per cent (2001) to 7.7 per cent in the February quarter of 2014.

Education and Training: 2001 to 2014

- strong growth in total employment over the five years to November 2013;
- total employment growth expected to remain strong over the next five years;
- employees have an older age profile, are typically female, employed full-time with part-time work common, have post-school qualifications especially bachelor degrees or higher;
- one in every eight new jobs nationally is projected to be in education and training.

Figure 24: Education and Training



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

In South Australia, the education and training industry employed 44,404 people in February 2001, increasing to 58,587 in 2014. Employment in the industry in South Australia increased by 32 per cent.

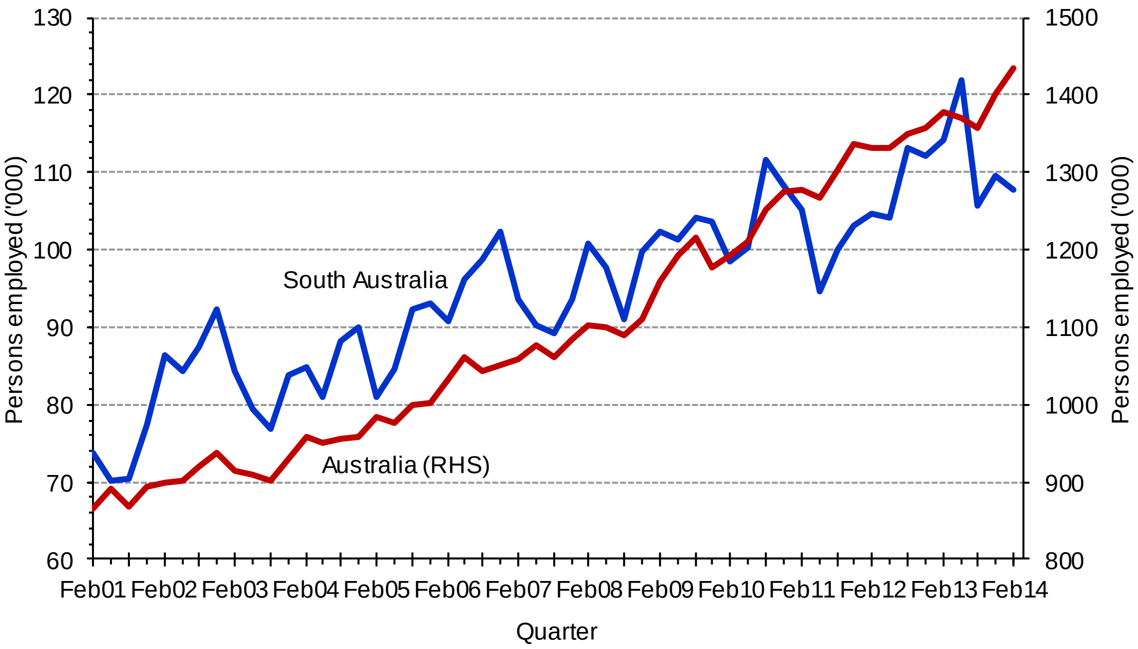
In Australia, the industry employed 608,123 people in February 2001, increasing to 882,375 in February 2014. Employment in the industry in Australia increased by 45 per cent.

South Australia's share of employment in the education and training industry declined from 7.3 in February 2001 to 6.6 per cent in February 2014.

Healthcare and Social Assistance: 2001 to 2014

- strong growth in total employment over the five years to November 2013;
- total employment growth rate expected to remain strong over the next five years;
- employees have an older age profile, are predominantly female, employed full-time with part-time work common, have post school qualifications especially bachelor degrees or higher;
- projections indicate Health and social assistance to provide more new jobs than any other sector over the next five years.

Figure 25: Healthcare and Social Assistance



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

The healthcare and social assistance sector has grown substantially. In South Australia, the industry employed 73,784 people in February 2001 and 107,827 in 2014. This is an increase of 46 per cent.

Australia also has seen large increases in employment in the healthcare and social assistance industry with 866,650 people employed in the industry in 2001 and 1.4 million by 2014. This is an increase of 65.5 per cent.

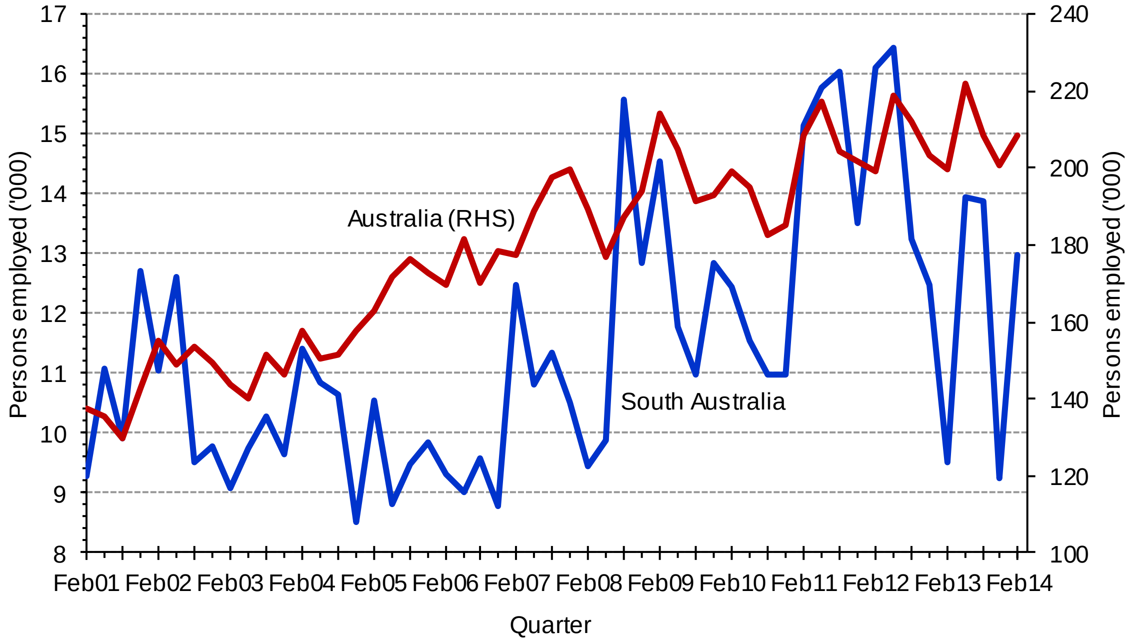
South Australia's share of employment in the healthcare and social assistance industry has declined from 8.5 per cent (2001) to 7.5 per cent in 2014.

Increases in employment in the healthcare and social assistance industry are being driven by an ageing population, particularly in South Australia, which not only places more demand on aged care services but on healthcare services more generally as there is a rise in age related health and hospital services.

Arts and Recreation Services: 2001 to 2014

- increasing total employment over the five years to November 2013;
- total employment growth expected to continue increasing over the next five years;
- employees have a young age profile, are typically employed full-time with part-time work common, less likely to have post school qualifications;
- employment opportunities predominantly located in capital cities with some employment opportunities in regional areas.

Figure 26: Arts and Recreation Services



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

In South Australia, employment in arts and recreation services is much more volatile than for Australia as a whole with a peak in the local industry in the first quarter of each year. In 2001, 9,269 people were employed in the industry and 12,961 in 2014 (40 per cent increase).

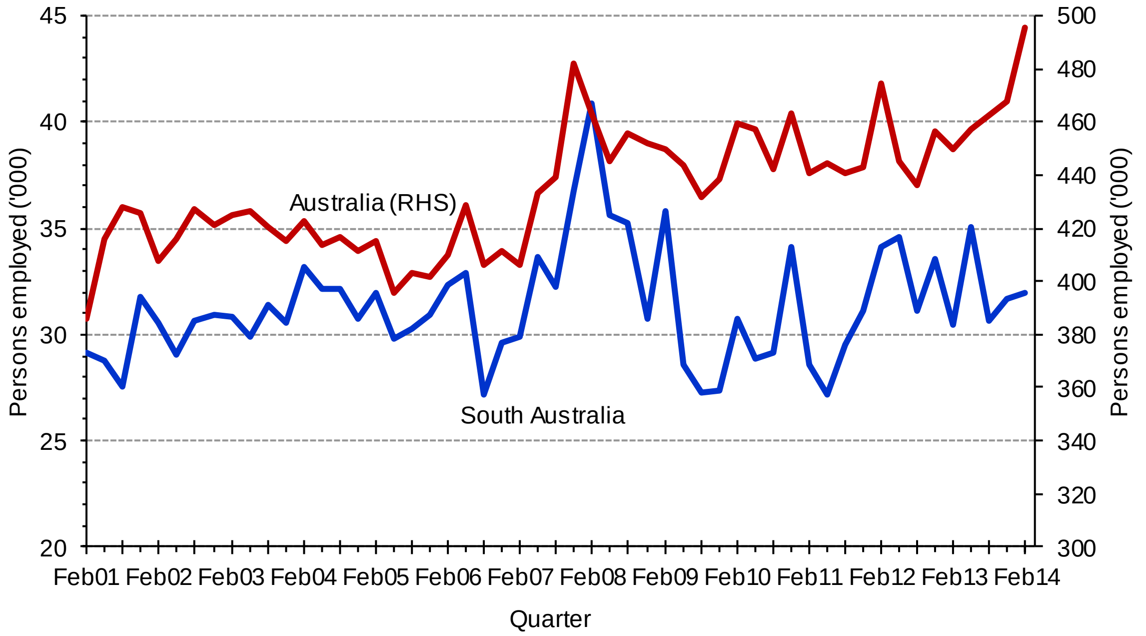
In Australia, employment in the industry has been much less volatile with 137,416 people employed in the industry (2001) and 208,530 (2014), an increase of 52 per cent.

South Australian employment in arts and recreation services was 6.7 per cent in 2001 and 6.2 per cent in 2014.

Other Services: 2001 to 2014

- modest growth in total employment over the five years to November 2013;
- total employment growth expected to remain modest over the next five years;
- employees typically have a young age profile, are employed full-time with part-time work common, likely to have a post school qualification at Certificate III level or higher VET qualification;
- new employment opportunities projected for the Personal and Other Services sector.

Figure 27: Other Services



Source: Australian Bureau of Statistics, Labour Force, Detailed, Quarterly, www.abs.gov.au.

The industry comprises a range of personal services, including religious services, and some selected repair and maintenance services.

For Australia 386,197 were employed in other services in 2001 and 495,854 in 2014, an increase of 9.8 per cent.

In February 2001, 29,105 South Australians were employed in this sector and 31,961 in 2014, an increase of 28 per cent.

South Australia’s share of employment in other services declined from 7.5 in February 2001 to 6.4 per cent in 2014.

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Endnotes

1 Another measure is the underutilisation rate which is a broader measure of unused labour. The underutilisation rate is the sum of the underemployment rate and the unemployment rate.

2 Shomos and Forbes (2014).

3 EconSearch (2013), "Input-Output Tables for South Australia and its regions 2011/12", commissioned by Department of Premier and Cabinet, November.

4 South Australian Centre for Economic Studies (SACES) (1993), "Assessment of Competitiveness: Tradeable and Potential for Import Replacement in the South Australian Economy", report commissioned by the Economic Development Authority, July.

5 Report of the Panels for the Reviews of the South Australian and Victorian Economies, April 2014.

6 February data refers to the February quarter.