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Queensland Business Outlook

December 2018

**Sunshine State shadows
southern states**
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Economic snapshot

A retrospective

Queensland has helped propel Australia into becoming the world's second largest exporter of gas. This stronger economic performance has also supported employment growth in the State, which has tracked at or above the national average since mid-2017.

Cross-border migration also boosted employment, with an increasing number of Sydneysiders heading north in search of 'liveability', great weather and cheaper housing. For the past twelve months, Queensland has been the number one destination for net interstate migration, eclipsing Victoria's spell in that spot.

Public and private sector support

Both the public and private sectors have driven the expansion of the State's economy at a faster rate than the rest of Australia. Fortuitously the lower Aussie dollar has also encouraged an increase in tourism, and delivered a boost to the consumer-related sectors given the current low wage growth environment.

Construction activity peaked in 2015 as developers flooded the market with new apartments. Since then however, housing construction has been in a sorry state. New supplies of housing hit the market as population growth slowed in 2015/16, triggering the right conditions for a fall in house prices, particularly for apartments.

However, an increase in engineering construction has been able to negate the poor performance of the housing construction sector. Due in part to the Queensland Government's big infrastructure spend, engineering continued to lift from its low in early 2017. The infrastructure pipeline of $46 billion, announced by the State Government to spread across the next four years, includes major transport projects making up a fair chunk of the 'spend'. Brisbane's $5 billion Cross River Rail and various upgrades to the Bruce Highway are key initiatives.

While this is welcome news, the fact that the private sector funded the largest contribution of this engineering activity over the past year is significant. Private interests funded electricity generation and transmission for instance, which when compared with the public sector's funding of only around a third of engineering activity in Queensland, is a real sign of confidence in the State's economy.
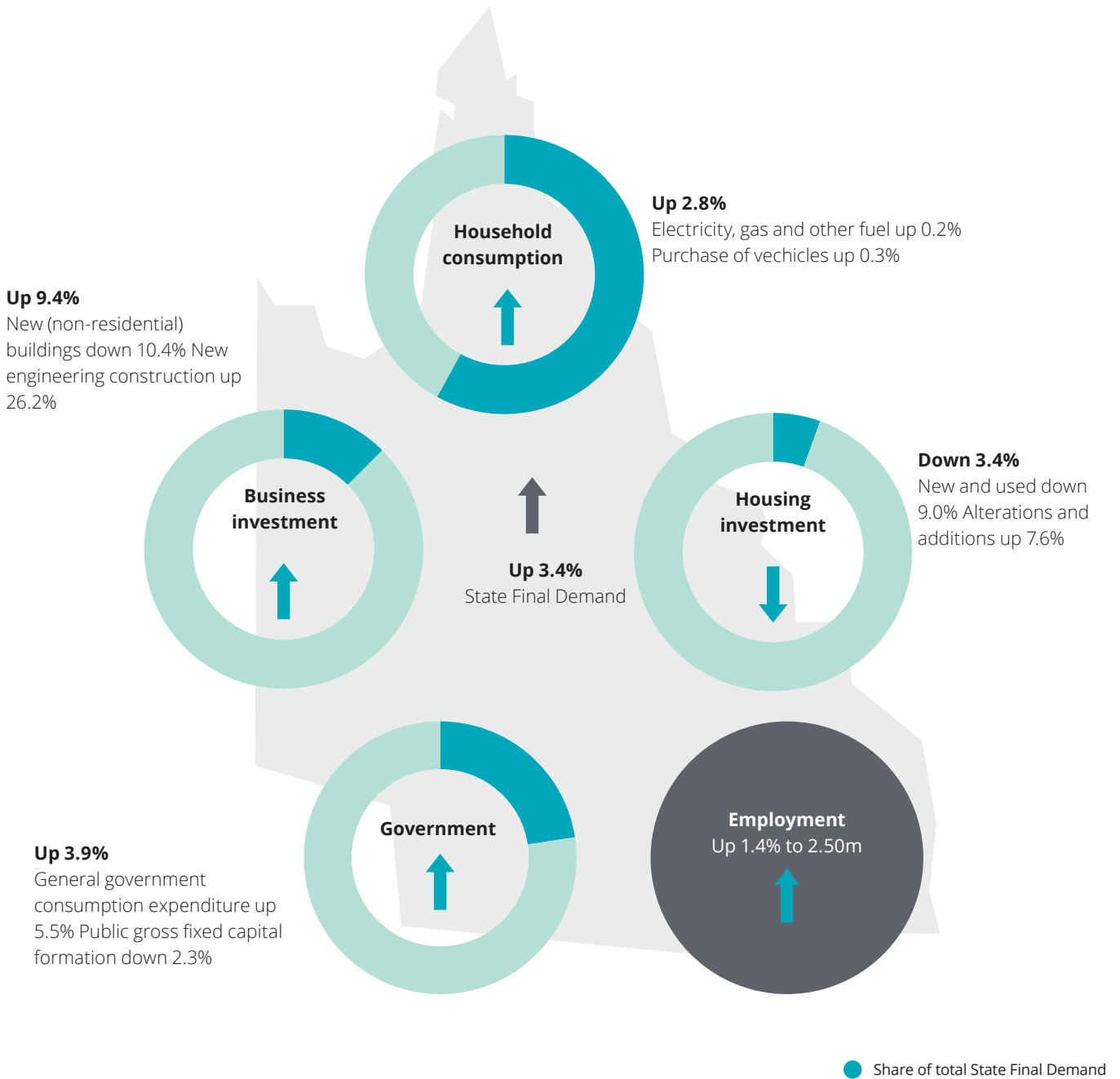
The commercial construction sector also lifted over the past year, continuing a run of gains stretching back to late 2017. A total of $6 billion worth of commercial projects are 'listed' as underway in the Investment Monitor database in Queensland. They are dominated by large retail and accommodation developments.

All up, there are around $15 billion worth of projects across the various planning stages in Queensland. While these positive conditions are expected to last for a while, building approvals have been heading in the wrong direction for a few months now, warranting a monitoring eye.

State Final Demand

Year-on-year to June 2018, State Final Demand increased overall by 3.4% boosted by a healthy 26.2% growth in engineering construction and growth in household consumption, employment and general government consumption spend.

Economic snapshot

Up 9.4%
New (non-residential) buildings down 10.4% New engineering construction up 26.2%

Household consumption

Up 2.8%
Electricity, gas and other fuel up 0.2% Purchase of vechicles up 0.3%

Business investment

Up 3.4%
State Final Demand

Housing investment

Down 3.4%
New and used down 9.0% Alterations and additions up 7.6%

Up 3.9%
General government consumption expenditure up 5.5% Public gross fixed capital formation down 2.3%

Government

Employment
Up 1.4% to 2.50m

● Share of total State Final Demand

Notes: Real, year-on-year; seasonally adjusted figures; Employment yearly % change to September 2018; State Final Demand to June 2018
Sources: ABS 5206.0; ABS 6202.0

Economic outlook

Employment growth in Queensland tracked at or above the national average since mid-2017 due to Queensland's stronger economic performance. On the one hand, there has been an increase in participation as more people seek work, and on the other unemployment also increased. Despite these mixed messages, the data does suggest Queenslanders are more positive about finding a job.

In this Outlook, we provide an overview of the Queensland job market.

Both the public and private sectors have propelled an expanding Queensland economy. We believe Sydney house prices have been instrumental in helping to drive population growth. Despite the continued weakness in housing construction, there are early signs of improvement.

There is also a recent increase in owner-occupier finance commitments in the State. However the total number of building approvals has moderated in recent times (a lead indicator of construction activity). Fortunes for housing investment have been mixed with new and used investment down but alterations and additions increasing (June quarter 2018 – State final demand figures).

The Queensland economy is performing better now having moved well beyond the challenging period associated with the mining investment downturn and a period of subdued commodity prices. The big test will be to see if Queensland's economy can continue to expand, riding increased export success in particular.

We expect the Queensland economy to be able to weather any downward pressures as the positive backdrop of continued low interest rates and the lower Aussie dollar will encourage activity in other sectors. This should see the State's share of Australia's economy continue to rise albeit over time.
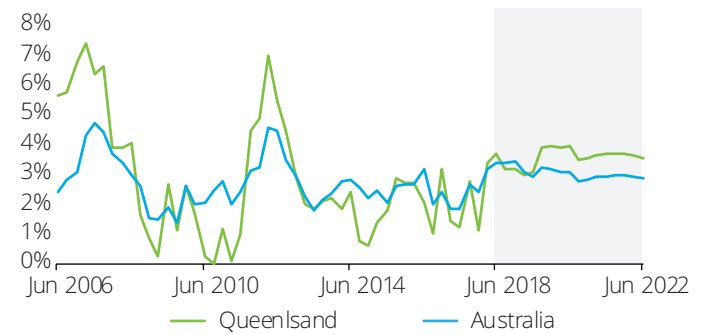
1.1 Economic growth

Gross State product

Queensland's Gross State Product will remain above the national average growing at 3.6% over the forecast period to 2022.

If this rate of growth sustains over the next four years, Queensland will outperform Victoria and New South Wales despite the state's recent uneven growth compared to its southern counterparts.

Gross State Product
Constant price annual % change

Source: ABS, Deloitte Access Economics

State final demand

Queensland's State Final Demand is forecast to grow and track above the national average, at 4.1% over the forecast period to 2022 (note: sustained growth in private investment and household consumption underpin state final demand).

**State Final Demand**
Constant price annual % change
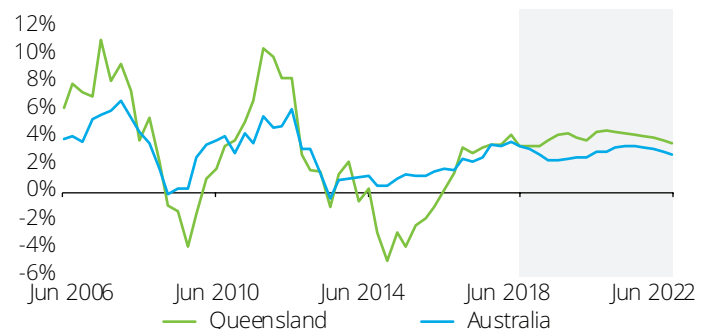
Source: ABS, Deloitte Access Economics

1.2 Labour markets

However, this is against the backdrop of employment growth with 35,500 jobs added over the year to September 2018 (seasonally adjusted)[1]. The jobs created were all full time jobs (i.e. 45,500 jobs) with a reduction in the number of part time jobs. Businesses hiring more full time workers is a sign of confidence and augers well for the future. Over the medium term, solid economic growth will intensify demand for labour and help to absorb spare capacity in the labour market and so ease the unemployment rate.

**Unemployment rate %**
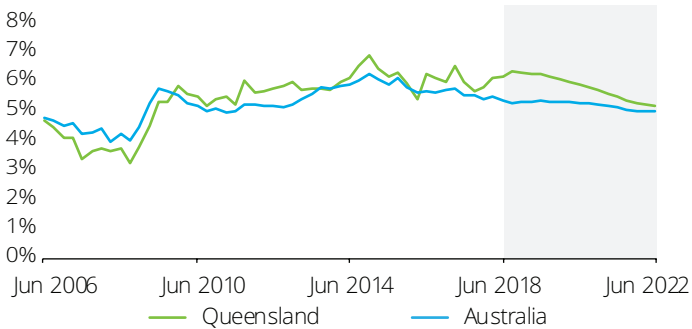
Source: ABS, Deloitte Access Economics

1.3 International exports

The value of Queensland's international merchandise exports grew by $11.6 billion (or 8.3% in nominal terms) reaching $77 billion over the year ending September 2018[2]. This largely reflects the high thermal and coking coal prices benefitting the State's miners.

Merchandise exports are forecast to grow and generate export income for Queensland, with growth of 4.3% per annum forecast out to 2022.

International exports
Constant price annual % change
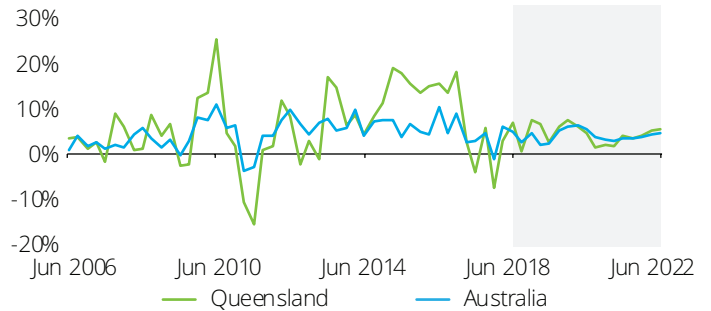
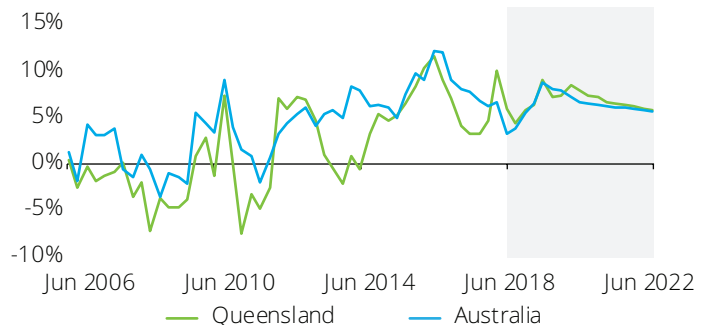Source: ABS, Deloitte Access Economics

1.4 Tourism

The lower Aussie dollar and key events, such as the Commonwealth Games held on the Gold Coast, has encouraged international tourists to choose Queensland as a destination. International arrivals increased by 6% over the year to June 2018. We anticipate this to continue over the forecast period, growing at 6.9% per annum out to 2022, encouraged by a significant investment pipeline in the tourism sector.

• Queen's Wharf development ($3 billion)
• Jewel development ($1 billion)
• Lindeman Island upgrade ($600 million)
• Laguna Whitsundays upgrade ($2 billion)
• Cairns Aquarium ($50 million)
• Brisbane International Cruise Terminal $100 million).

This investment in new tourism assets as well as renewing existing stock will revitalise the tourism experience for visitors and cater for their changing preferences.

International tourist arrivals
Annual % change

Source: ABS, Deloitte Access Economics

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[1]Queensland Government, Economic Strategy division, Labour Force September 2018
[2]Exports of Queensland goods overseas, September 2018, Queensland Government Statistician's Office (source ABS 5368.0)

In focus: QLD job market

Over the year to September 2018 jobs growth in Queensland outpaced the nation at 3.6% compared to 3% for the nation overall.[1] This section presents the analysis of where in Queensland job were created, which industries performed strongly over the year to September 2018, and whether they outperformed their national counterparts.
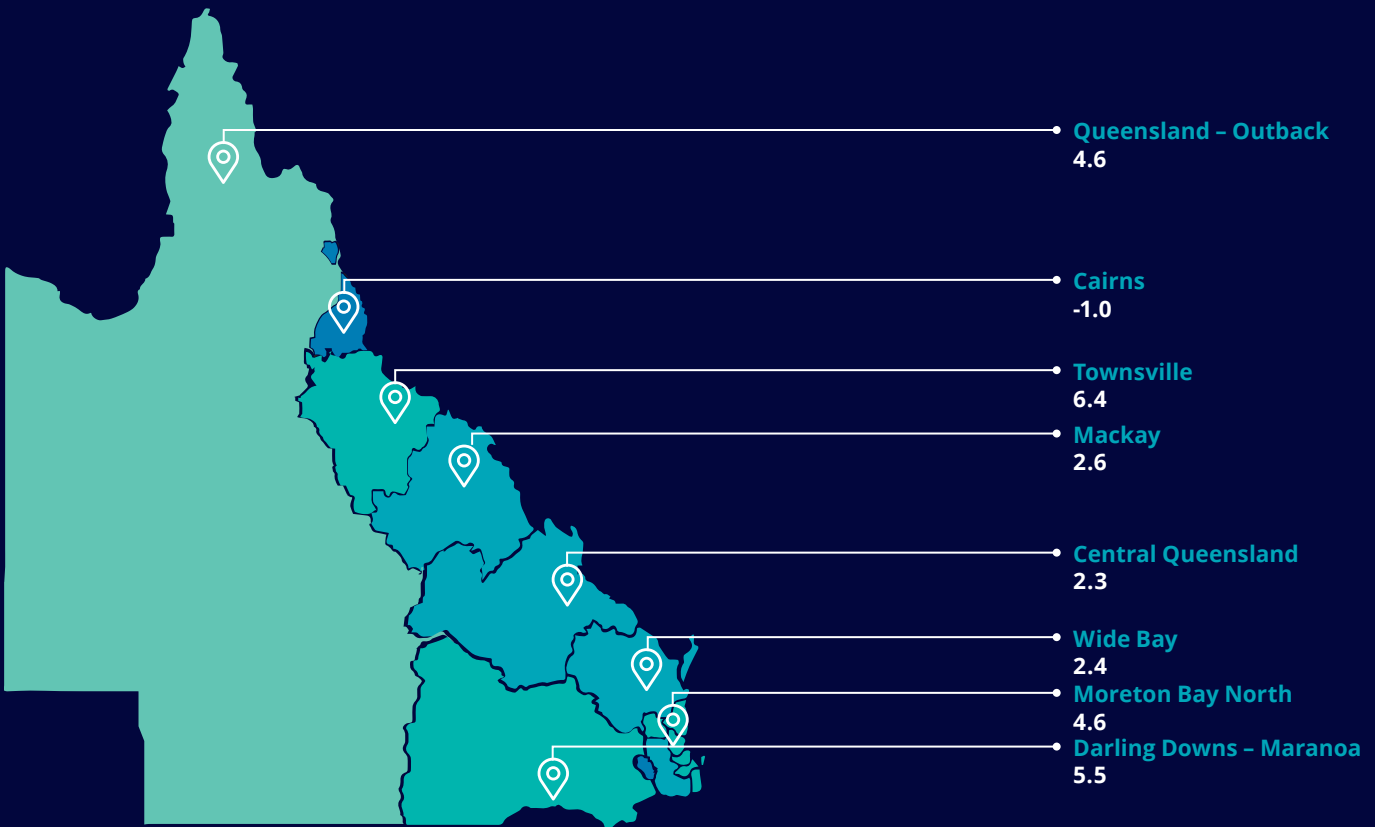
Jobs growth

Health and education (39,200 jobs), manufacturing (15,100 jobs), agriculture (7,900 jobs), utilities (7,200 jobs) and mining (6,100 jobs) were key drivers of employment increases over the year, as well as a number of other service industries including trade and transport.

This is likely to reflect strong growth in agriculture commodity production, the rebound in mining prices, strong export performance, and solid growth in food & beverages and non-metallic minerals. These sectors also have upstream linkages to agriculture and mining sectors.

The ongoing rollout of the National Disability Insurance Scheme (NDIS) and Queensland Government election commitments such as the increase of teacher numbers, have also supported employment growth.

While jobs growth (by location) in Queensland is traditionally driven by the South East (with a concentration of population and services sectors that are more labour intensive), several regional areas have experienced more than 5% growth over the year to September 2018, including Townsville (6.4%), Gold Coast (5.8%) and Logan – Beaudesert (6.2%). However, in many cases this partly reflects the steady restoration of jobs to previous levels following a period of more subdued employment growth in some regional areas.

Queensland – Outback
4.6

Cairns
-1.0

Townsville
6.4

Mackay
2.6

Central Queensland
2.3

Wide Bay
2.4

Moreton Bay North
4.6

Darling Downs – Maranoa
5.5

Source: ABS Labour Force, September 2018, Deloitte Access Economics

[1]Based on a 12 month average

Unemployment

Outside the South East, the highest unemployment rates were Queensland – Outback (12.0%) and Townsville (9.1%) followed by Wide Bay (8.8%). These regions are behind the pack and both cyclical and structural factors are affecting their labour market performance relative to the State average. In Queensland overall, the forecast is for the unemployment rate to fall over the medium term as strong economic growth sustains labour demand.
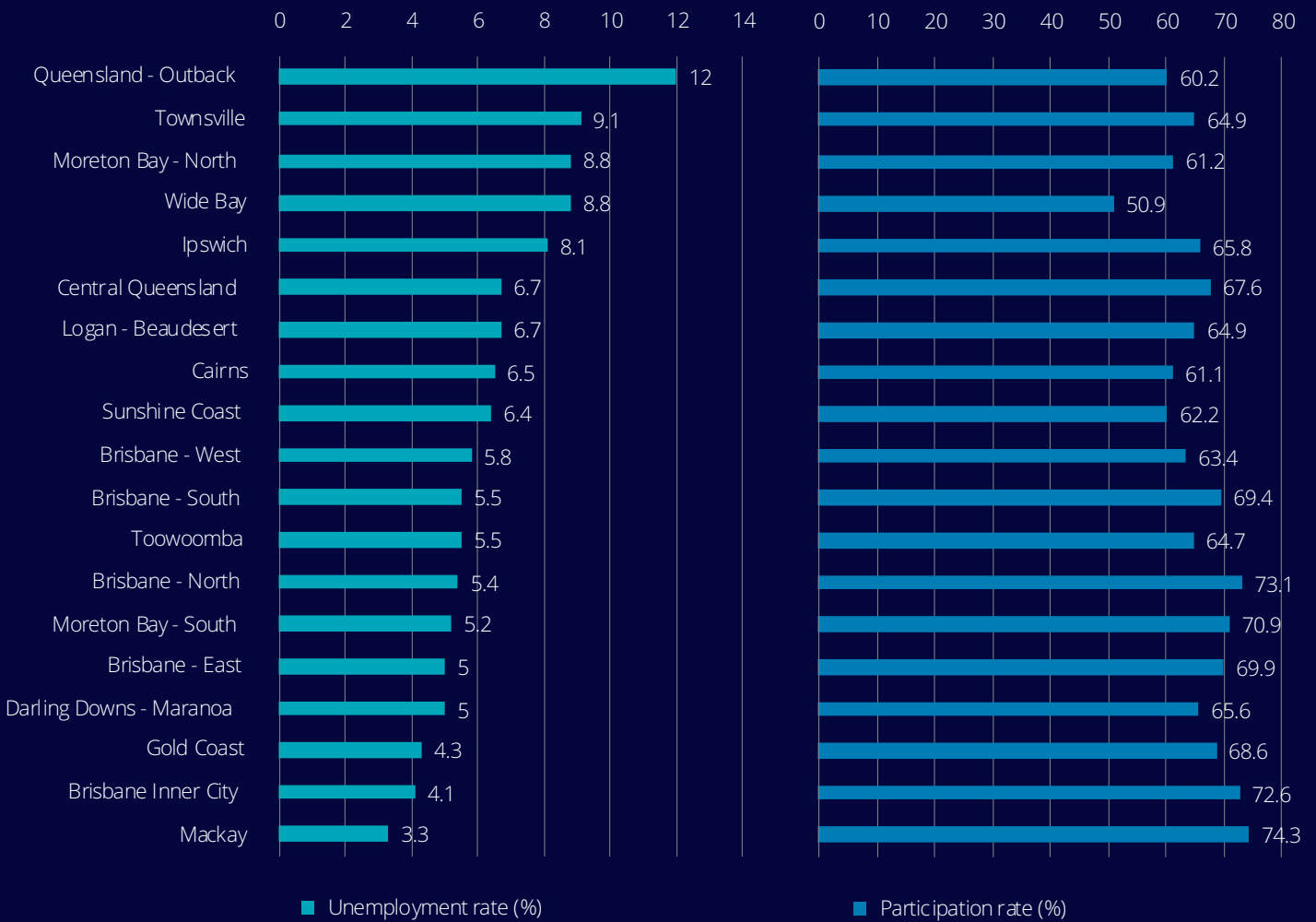
Region	Unemployment rate (%)	Participation rate (%)
Queensland - Outback	12	60.2
Townsville	9.1	64.9
Moreton Bay - North	8.8	61.2
Wide Bay	8.8	50.9
Ipswich	8.1	65.8
Central Queensland	6.7	67.6
Logan - Beaudesert	6.7	64.9
Cairns	6.5	61.1
Sunshine Coast	6.4	62.2
Brisbane - West	5.8	63.4
Brisbane - South	5.5	69.4
Toowoomba	5.5	64.7
Brisbane - North	5.4	73.1
Moreton Bay - South	5.2	70.9
Brisbane - East	5	69.9
Darling Downs - Maranoa	5	65.6
Gold Coast	4.3	68.6
Brisbane Inner City	4.1	72.6
Mackay	3.3	74.3

■ Unemployment rate (%)   ■ Participation rate (%)

Figure 1: Queensland Unemployment Rate and Participation rate, September 2018
Source: ABS 6202.0 Australia Labour force statistics, September 2018

Key industries

Agriculture

Experienced the second fastest increase in employment of the State's 19 industries, with impressive employment growth of 14%. An estimated 7,900 jobs were created over the year to the September quarter 2018, driven by growth in some sub sectors of agriculture. This performance is impressive when considering it was more than 2.5 times more growth than the national industry, which increased by 5% over the same period. This performance also highlights the resilience of the agriculture sector in both the state and the nation given the current severe drought.

Outside Greater Brisbane, the largest increases in the number of jobs in the agricultural sector were in:

Central Queensland

Queensland – Outback

Cairns
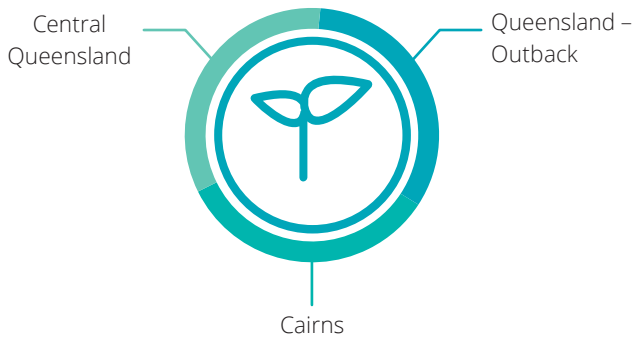
Mining

The recovery in the mining sector is translating into increased employment in the industry of 10.6% over the year to the September quarter 2018 (6,100 jobs) compared with a 5.5% increase nationally. This is in a large part due to the strong price outlook for metallurgical and thermal coal and the additional activity (including the supply chain) this is generating. Coal is a big export industry for Queensland.

Outside Greater Brisbane, the largest increases in the number of jobs in the mining sector were in:

Mackay

Townsville

Gold Coast

Healthcare

Healthcare created an additional 26,700 jobs over the year to the September quarter 2018, representing almost a third of total jobs' growth over the period. The health sector has rapidly expanded, with growth in employment of almost 9% over the year to the September quarter 2018. The ongoing rollout of the National Disability Insurance Scheme (NDIS) has contributed to the sustained increased in the employment in the sector nationally.

Outside Greater Brisbane, the largest increases in the number of jobs in the healthcare sector were in:

Moreton Bay

Sunshine Coast

Townsville

Education

The education and training industry created an additional 12,500 jobs over the year to the September quarter 2018. Education jobs growth in Queensland outpaced national growth, at 6.5% and 2.5% respectively. Increased service delivery is a function of increased population growth and the Government's election commitment (e.g. to employ more than 3,700 teachers over four years).

Outside Greater Brisbane, the largest increases in the number of jobs in the education sector were in:

Ipswich

Moreton Bay

Logan – Beaudesert
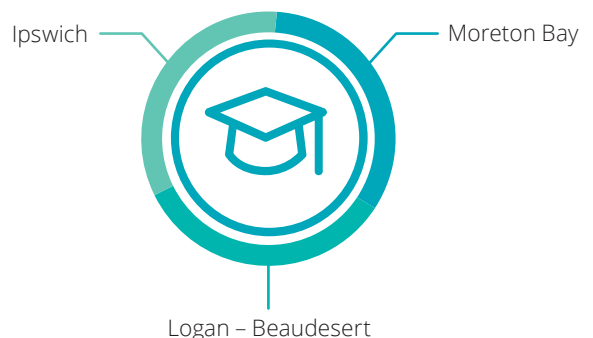
Manufacturing

Queensland's manufacturing sector bucked the national low growth trend, with the industry driving the creation of 15,100 jobs over the year to the September quarter 2018. Queensland took the lion's share of national manufacturing jobs with an impressive 9% growth, compared to the national 2% growth. This is a positive sign for a sector that is undergoing significant transformation.

The Australian Industry Group's Australian Performance of Manufacturing Index (Australian PMI) climbed 2.3 points to 59.0 in September.[3] The food & beverages sub-sector has been a driver of growth alongside construction-related non-metallic mineral products, machinery & equipment and chemicals sub-sectors. These sub-sectors have upstream linkages to agriculture and mining and broader supply chain effects, which is the reason Queensland manufacturing is flourishing. The short-term outlook for the sector is positive for exports, production, employment and new orders.

Outside Greater Brisbane, the largest increases in the number of jobs in the manufacturing sector were in:

Gold Coast

Ipswich

Logan – Beaudesert
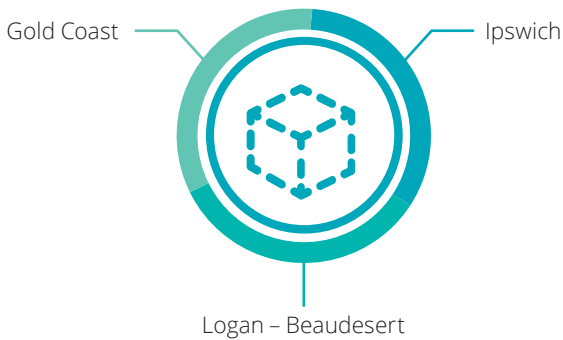
Utilities

Recorded impressive employment growth over the year to the September quarter 2018, growing at 27% and creating 7,200 jobs. This represented more than three times the national growth of 8% over the same period.

Outside Greater Brisbane, the largest increases in the number of jobs in the utilities sector were in:

Ipswich

Cairns

Central Queensland

Transport

The sector grew modestly with 3.2% over the year to the September quarter 2018 compared with national growth of 2.3%. That created 4,300 jobs across the State.

Outside Greater Brisbane, the largest increases in the number of jobs in the transport sector were in:

Gold Coast

Ipswich

Moreton Bay

[3] https://www.aigroup.com.au/policy-and-research/mediacentre/releases/PMI-Sept-2018/

In focus: Future of work

Occupational trends in nursing occupations

The ageing population and the rise in chronic disease morbidity have both driven significant change in the population demographics for Australians and Queenslanders.

Demand for nursing skills is therefore on the rise. In addition, the changing nature of healthcare provision, new health technologies that enable real-time patient monitoring and analytics, are all altering the requirements for the nursing workforce.

Growth potential of the nursing workforce

We forecast sound growth in the nursing workforce over the next five years at both a national and state level. Aggregating certain nursing occupations, Deloitte Access Economics projects the relevant workforce will grow from 308,000 persons in 2016-17 to 354,000 persons in 2021-22, representing an annual average growth rate of 2.8% nationally.

This anticipated future growth will outpace that of the Australian labour force as a whole, where employment is forecast to increase at an average of 1.5% per annum over the same period (Chart 1).

Chart 1: Nursing employment and total employment, 2016-17 to 2021-22
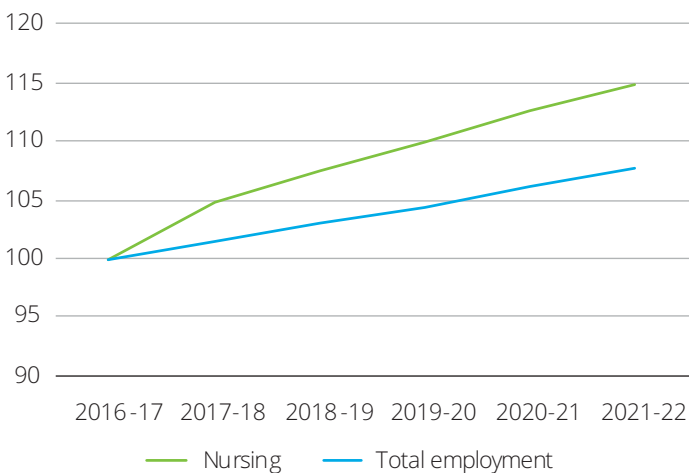
Source: Deloitte Access Economics (2017)

Table 1 provides a breakdown of Deloitte Access Economics employment forecasts for the nursing workforce by different occupations.

The overall positive outlook for labour market demand in these nursing occupations is expected to be supported by the labour intensive nature of economic activity in the healthcare sector and the demographic trend towards an ageing population.

Table 1: Nursing employment forecasts by occupation, 2016-17 to 2021-22

Occupation	Change in employment from 2016 to 2022 (000s)	Average annual growth rate (%)
Midwives	2.2	2.6
Registered Nurses	41.0	2.9
General Manager (Health industry)	0.4	2.3
Total Nursing	**45.9**	**2.8**

Source: Deloitte Access Economics (2017)

Benefits of further study in the nursing area

Data from the latest Census suggests that the average annual income of nursing workers with a postgraduate qualification in Nursing was $95,391 in 2016-17. Deloitte Access Economics forecasts this figure to increase to $111,235 in 2021-22, using annual Wage Price Index.

Further study in the nursing area can also facilitate the development of advanced care skills in more specialised medical functions, which can enable nurses to take up leadership roles at earlier stages of their career (Box 1).

Box 1: Nursing qualifications and career applications

Our consultation with Dr John Smithson from James Cook University (Queensland) suggests that further study in the nursing area can enable workers to start taking up leadership opportunities at earlier stages in their careers. With an ageing population placing increased pressure on existing primary healthcare workers, nurses who are qualified to deliver advanced care and extended practice will be in high demand in order to assist in the delivery of health services. While some nurses may acquire the necessary skills through years of experience and on-the-job training, postgraduate study can be an alternative means of equipping workers with these highly sought-after skills, and can provide accelerated training in specialised functions to enable current nurses to progress to more senior roles. John believes that the ability for further study to provide these training and development opportunities will be of increasing importance in future years, as the nursing workforce ages. With leadership and management roles in nursing generally being filled by older and more experienced nurses in the current workforce, there is a risk of increased labour shortages at senior levels when these workers retire. In this context, the development of advanced care skills and management capabilities through further study in the nursing area will be necessary to ensure that there are sufficient numbers of suitably qualified workers required to fill these senior roles in the future.

Deloitte Access Economics. (2018). *The future of work: Occupational and education trends in nursing in Australia.*
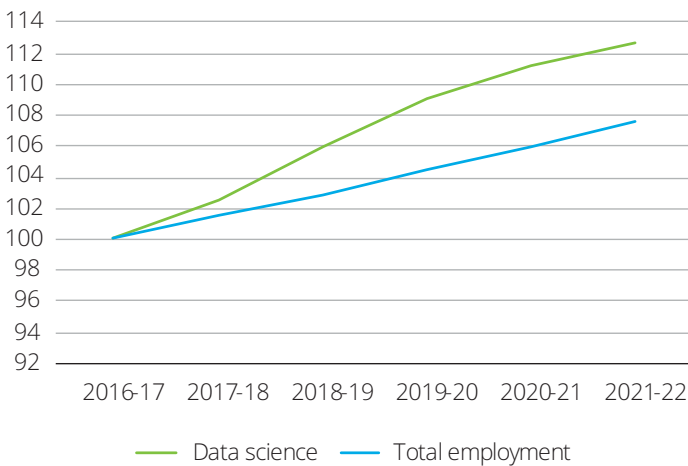
Occupational trend in data science occupations

The level of growth and variety of data now available is resulting in companies integrating data and analytics into their daily operations. Demand for individuals with data science skills, whether they are IT-related or non-IT, has increased. This trend is accelerated by the development of analytics roles in a diverse array of sectors and applications.

Growth potential of the data science workforce

The Australian data science workforce is forecast to see sound growth in the next five years. Aggregating certain data science occupations, Deloitte Access Economics projects the relevant workforce will grow from 301,000 persons in 2016-17 to 339,000 persons in 2021-22, an increase of around 38,000 workers at an annual average growth rate of 2.4%. This rate is expected to be stronger than the Australian labour force as a whole, where employment is forecast to grow at an average of 1.5% per annum over the same period (Chart 2).

Chart 2: Data science employment and total employment, 2016-17 to 2021-22

Source: Deloitte Access Economics (2017)

Table 2 provides a breakdown of Deloitte Access Economics employment forecasts for the data science workforce by different occupations. The overall positive outlook for labour market demand in these data science occupations is expected to be supported by the growing digital economy and the increasing applications of data analytics across a diverse range of industries.

Table 2: Data science employment forecasts by occupation, 2016-17 to 2021-22

Occupation	Change in employment (000s)	Average annual growth rate (%)
Software and Applications Programmers	17.5	3.0%
Database and Systems Administrators and ICT Security Specialists	5.5	2.3%
Computer Network Professionals	2.8	1.9%
Total Data Science	**37.9**	**2.4%**

Source: Deloitte Access Economics (2017)

Benefits of further study in data science

Workers who have completed a postgraduate qualification in Information Technology, can expect a lifetime wage premium of 51% relative to workers with no post-school qualifications. This is directly attributable to their qualification. Data from the latest Census reports an average annual income of $111,634 in 2016-17 for data science workers with a postgraduate qualification in Information Technology. Deloitte Access Economics forecasts a rise in this number up to $130,176 in 2021-22, using the annual Wage Price Index.

Further study in the data science area can also build core technical competencies for individuals currently employed in other areas (enabling them to pivot towards data-related roles).

Businesses are increasingly demanding technical specialists who are also skilled in 'business translation': the ability to understand an organisation's strategy and functions, and ensure that data-driven insights are able to support these broader aspects and be communicated to non-technical audiences. Additional education can also enable the development of a greater understanding on the strategic and business applications of data analytics (Box 2).

Box 2: Data science qualifications and career applications

Our consultation with Professor Ricardo Campello from James Cook University (Queensland) suggests that further study in the data science area can enable workers that are currently employed in other occupations, who have an interest in applying data analytics within the context of their role or industry, to build the core skills and knowledge required to be a data science professional. Learning modules in key areas such as computer programming, statistical analysis, machine learning and information management enable individuals to develop the necessary expertise which can be utilised in a career in data science across a range of sectors and applications. Workers who already have previous education and work experience in technical IT competencies can also benefit from further study in the data science area. Further study can enable current technical specialists to develop the interpretation and reporting skills required to succeed in such an environment. Ricardo notes that postgraduate qualifications in data science should include course content in data visualisation, decision making and business intelligence in order to build students' knowledge in this area.

Deloitte Access Economics. (2018). *The future of work: Occupational and education trends in data science in Australia.*
McKinsey Global Institute. (2016). *The Age of Analytics: Competing in a Data-Driven World.*

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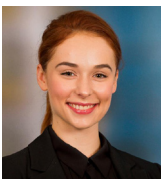Email: skanowski@deloitte.com.au
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