CHAPTER 5

JOBS AND INDUSTRIES

Key points

- There were 1.93 million employed persons residing in SEQ, on average, during the year ended August 2021. Of these, 68 per cent (or 1.3 million) resided in Greater Brisbane, 19 per cent in the Gold Coast, 10 per cent in the Sunshine Coast and 4 per cent in Toowoomba.
- The Health care and social assistance industry employs more SEQ residents than any other industry. With around 280,000 employed persons, it contributed 14.5 per cent of total SEQ employment as of August 2021. Other important industries include Retail trade (with 198,000 employed persons), Construction (176,000), Professional, scientific and technical services (167,000) and Education and training (165,000).
- Of the total 1.5 million people with an identifiable LGA of work in SEQ at the time of the 2016 census, 714,200 (48 per cent) worked in the Brisbane LGA and 235,500 (16 per cent) worked in the Gold Coast LGA. The Moreton Bay and Sunshine Coast LGAs were the only other LGAs which contained the place of work of more than 100,000 people.
- The Brisbane LGA is the only SEQ LGA that has more employed people who work in it than live in it. In 2016, there were 125 people who reported a place of work in the Brisbane LGA for every 100 employed residents of the LGA. In contrast, the Redland and Moreton Bay LGAs had a notable shortfall of local jobs, with around 60 people reporting a place of work in the LGA for every 100 employed residents.
- Employment density was highest in the Brisbane LGA at 532 persons per km^2 in 2016, followed by Gold Coast (177 persons per km^2). The Scenic Rim and Somerset LGAs had very low employment densities.
- The SEQ sub-regions of work with the most employment in 2016 were Inner Brisbane (312,100), Gold Coast (235,500), Middle South (155,700), Middle North (112,500) and Sunshine Coast (110,200).
- The industry mix of employment in Inner Brisbane is notably different to the other rings. Inner Brisbane has particularly high representation of the Professional, scientific and technical services, Financial and insurance services, Information media and telecommunications, and Public administration and safety industries, and a lower share of Manufacturing employment.
- Overall, SEQ had 23.9 per cent of its total employment in knowledge-intensive industries in 2016. Representation was highest for jobs located in Inner Brisbane (43.4 per cent), followed by Middle Brisbane (19.8 per cent) and Rest of SEQ (19.3 per cent). Outer Brisbane had the lowest share (16.0 per cent).
- The Brisbane City SA2 was the location of work of 122,500 persons, representing 8.3 per cent of the SEQ total at the time of the 2016 census. There were six SA2s in SEQ that were the place of work of between 20,000 and 28,000 employed persons, namely South Brisbane, Fortitude Valley and Newstead-Bowen Hills (in the Inner sub-region), Southport North (in the Gold Coast sub-region), Rocklea-Acacia Ridge (in the Middle South sub-region) and Brisbane Airport (in the Middle North sub-region).
- The number of employed residents of SEQ increased by 186,800 persons between 2016 and 2021, representing an average annual growth rate of 2.1 per cent. Of this, 122,300 (or almost two-thirds) were in Greater Brisbane. Within Greater Brisbane, the greatest increases occurred in Brisbane Inner City SA4 (29,100), Ipswich SA4 (28,900) and Logan-Beaudesert SA4 (24,300).
- The Gold Coast SA4 had the largest increase in employed residents of all SA4s in SEQ, with employment rising by 44,700 employed persons between 2016 and 2021.
- The major industry source of employment growth in SEQ from 2016 to 2021 was the Health care and social assistance industry which added 43,900 employed persons, which was 23.5 per cent of total growth. Other key contributors included Education and training (22,100), Professional, scientific and technical services (19,600), Manufacturing (18,000) and Accommodation and food services (14,000).

5.1 Introduction

This chapter provides an analysis of the spatial distribution of jobs throughout the SEQ region, and summarises recent evidence on growth in SEQ's employment and industries.

The chapter starts by presenting a snapshot of the spatial distribution of employment in SEQ, initially focusing on employment by place of residence (using ABS *Labour Force Survey* data for 2021), and then turning to the location of work (using ABS Census of Population and Housing data from 2016). It presents evidence on the employment contribution of various industries, including knowledge-intensive industries, across different parts of SEQ. The spatial analysis is undertaken using a range of geographies, including the 12 LGAs, the SEQ rings and sub-regions, SA4s, SA2s and major employment precincts. The latter part of the chapter is focused on summarising the available evidence on employment growth in SEQ between 2016 and 2021, including the spatial and industry breakdowns of that growth.

5.2 Employment snapshot

Snapshot of employed residents of SEQ in 2021

The ABS *Labour Force Survey* (LFS) provides the official measure of employment for Australia. Based on LFS data, there were 1.9 million employed persons residing in SEQ during 2020–21. This reflects a labour force participation rate of 66.7 per cent.

ABS LFS data is not available for LGAs, but is published for Statistical Area Level 4s (SA4s).[13] Table 5.1 presents LFS estimates of employed persons for the SA4s within SEQ. Of the total 1.9 million employed persons residing in SEQ, 68 per cent (or 1.3 million) live in Greater Brisbane, 19 per cent in the Gold Coast, 10 per cent in the Sunshine Coast and 4 per cent in Toowoomba. Within Greater Brisbane, the Brisbane South SA4 has the largest number of employed residents, followed by the Brisbane Inner City SA4.

Table 5.1 also reveals that the Health care and social assistance industry employs more SEQ residents than any other industry. With around 280,000 employed persons, this industry is responsible for 14.5 per cent of total SEQ employment as of August 2021.

The Health care and social assistance industry is also the top employing industry in most of the individual SA4s of SEQ. It is particularly prominent in the Toowoomba, Sunshine Coast and Brisbane North SA4s, where more than 16 per cent of employed residents work in this industry. However, of the SA4s in SEQ, Gold Coast has the largest number of employed residents working in the Health care and social assistance industry (46,900).

The Professional, scientific and technical services industry is the top employing industry in the Brisbane Inner City and Brisbane West SA4s, while Retail trade is the top employing industry for residents of the Moreton Bay South SA4.

13 SA4 regions are the largest sub-State regions in the ABS's Australian Statistical Geography Standard (ASGS) main structure. They are specifically designed for the output of ABS LFS data and therefore have population limits imposed by the LFS sample. There are 107 SA4 regions covering the whole of Australia without gaps or overlaps, including 18 non-spatial special purpose codes (ABS 2016a).

Table 5.1: Employed persons by Statistical Area 4 of residence in SEQ as of August 2021

SA4 of residence	Employed persons ('000)	Share of SEQ total (per cent)	Top employing industry in SA4 of residence	Industry share of SA4 total (per cent)
Brisbane Inner City	193.5	10.0	Professional, scientific and technical services	15.4
Brisbane East	127.8	6.6	Health care and social assistance	15.8
Brisbane North	126.5	6.5	Health care and social assistance	16.2
Brisbane South	201.1	10.4	Health care and social assistance	14.5
Brisbane West	102.6	5.3	Professional, scientific and technical services	17.9
Ipswich	182.1	9.4	Health care and social assistance	15.2
Logan – Beaudesert	158.7	8.2	Health care and social assistance	13.0
Moreton Bay North	106.7	5.5	Health care and social assistance	13.0
Moreton Bay South	116.5	6.0	Retail trade	15.0
TOTAL – GREATER BRISBANE	1315.5	68.0	Health care and social assistance	14.4
Gold Coast	358.1	18.5	Health care and social assistance	13.1
Sunshine Coast	185.9	9.6	Health care and social assistance	16.7
Toowoomba	74.0	3.8	Health care and social assistance	17.4
TOTAL – SEQ	1933.6	100.0	Health care and social assistance	14.5

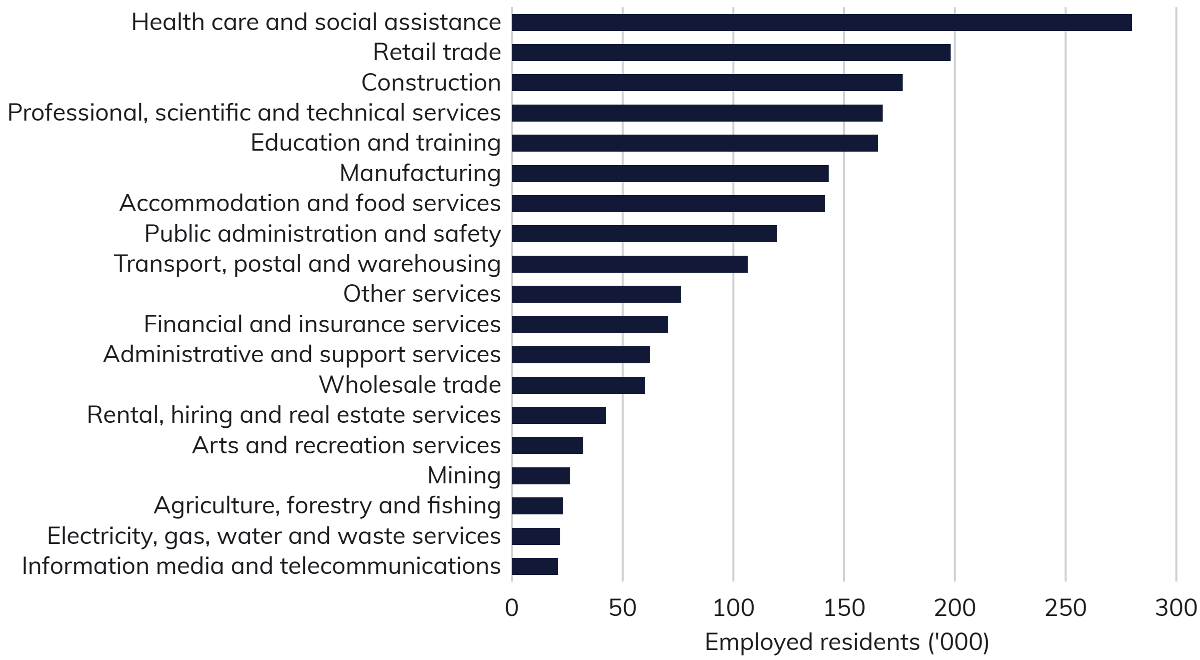
Note: Data is an annual average of the estimates for the 12 months up to August 2021. The Toowoomba SA4 captures only the urban extent of Toowoomba. Based on ANZSIC 1-digit industries.

Source: ABS *Labour Force Survey* data, Cat. 6291.0.55.001 (Table RQ1, 24 March 2022 release).

Figure 5.1 illustrates the industry structure of employment for SEQ residents as of August 2021. As previously noted, the Health care and social assistance industry is the principal industry of employment in SEQ, employing almost 280,000 residents. Other important employing industries include:

- Retail trade, with 198,000 employed persons (and 10.2 per cent of the SEQ total)
- Construction, with 176,000 employed persons (9.1 per cent)
- Professional, scientific and technical services, with 167,000 employed persons (8.7 per cent)
- Education and training, with 165,000 employed persons (8.6 per cent).

Figure 5.1: Employed persons by industry in SEQ as of August 2021



Note: Data is an annual average of the estimates for the 12 months up to August 2021. The Toowoomba SA4 captures only the urban extent of Toowoomba. Based on ANZSIC 1-digit industries. Data is on a place of residence basis.

Source: ABS *Labour Force Survey* data, Cat. 6291.0.55.001 (Table RQ1, 24 March 2022 release).

Snapshot of the location of work within SEQ in 2016

The previous section focused on employed residents of SEQ and its SA4s. However, for this study it is more important to understand the locations at which employed persons actually work, rather than where they live. The most recent data we have on employment by place of work for SEQ comes from the 2016 ABS *Census of Population and Housing.*[14]

Location of work by Local Government Areas

Table 5.2 summarises the census place of work data for the 12 LGAs of SEQ. In total, there were close to 1.5 million employed persons with an identifiable LGA of work in SEQ in 2016. This figure is significantly lower than the 1.9 million total from Table 5.1, reflecting the following factors:

- The 1.5 million figure is from 2016, and misses the growth that occurred between 2016 and 2021.
- Census non-response and item non-response to the labour force questions means that census employment estimates tend to be 11–12 per cent less than the official LFS estimates at the same point in time (ABS 2017a).
- About 5 per cent of employed persons in Queensland reported no fixed address of work. This can include occupations such as truck drivers, couriers, mobile salespeople, construction workers etc.
- Some employed residents of SEQ have a place of work outside of SEQ, such as fly-in fly-out mine sites.

14 The 2021 census place of work data was released by ABS in October 2022, after the completion of this research project.

Of the total 1.5 million people with an identifiable LGA of work in SEQ, 48 per cent worked in the Brisbane LGA and 16 per cent in the Gold Coast LGA. The Moreton Bay and Sunshine Coast LGAs were the only other LGAs which contained the place of work of more than 100,000 people. The Lockyer Valley, Somerset and Scenic Rim LGAs each contributed less than one per cent of SEQ employment.

Table 5.2: Employed persons by LGA of work in SEQ in 2016

LGA of work	Employed persons ('000)	Share of 12 LGA total (per cent)	Ratio of workers to employed residents	Employment density (persons/ km^2)
Brisbane	714.2	48.1	1.25	531.9
Gold Coast	235.5	15.9	0.90	176.6
Ipswich	62.3	4.2	0.74	57.4
Lockyer Valley	11.2	0.8	0.71	4.9
Logan	89.1	6.0	0.68	93.0
Moreton Bay	113.0	7.6	0.60	55.3
Noosa	20.1	1.4	0.91	23.1
Redland	40.6	2.7	0.58	75.5
Scenic Rim	12.4	0.8	0.73	2.9
Somerset	6.1	0.4	0.66	1.1
Sunshine Coast	110.8	7.5	0.86	49.2
Toowoomba	69.4	4.7	0.97	5.4
12 LGAs total	**1484.7**	**100.0**	**0.94**	**42.1**

Note: The 12 LGAs total differs from the total for SEQ, as the rural areas of Toowoomba LGA are excluded from the definition of SEQ.

Sources: BCARR analysis of ABS Census of Population and Housing, 2016 (data extracted from TablebuilderPro) and ABS Cat. 3218.0 Regional population, Australia, 2016.

Overall, there were 94 workers with an identifiable place of work in SEQ for every 100 employed residents of SEQ. This ratio lies below 1 primarily because about 5 per cent of employed people had jobs which did not have a fixed work address, although commuting out (or into) the region may have also played a role.

The only SEQ LGA which had a ratio of workers to employed residents that exceeded 1 was the Brisbane LGA. There were 125 people who reported a place of work in the Brisbane LGA for every 100 employed residents of the LGA. In Australian cities, the central LGA – and specifically the Central Business District – tends to be a key employment hub which draws commuters in from residences in more outlying suburbs, and the Brisbane LGA result is typical of that pattern. The Toowoomba LGA's ratio of 0.97 exceeded that of the 12 LGAs total, indicating it had sufficient local jobs to employ its residents.

The Gold Coast, Sunshine Coast and Noosa LGAs all had ratios of around 0.9, indicating a relatively minor shortfall of local jobs relative to employed residents. The remaining LGAs all had a notable shortfall of local jobs compared to employed residents, so that a significant number of locals needed to commute outside the LGA for work. In particular, there were only 58 people who reported a place of work in the Redland LGA for every 100 employed residents, and only 61 workers for every 100 employed residents of the Moreton Bay LGA.

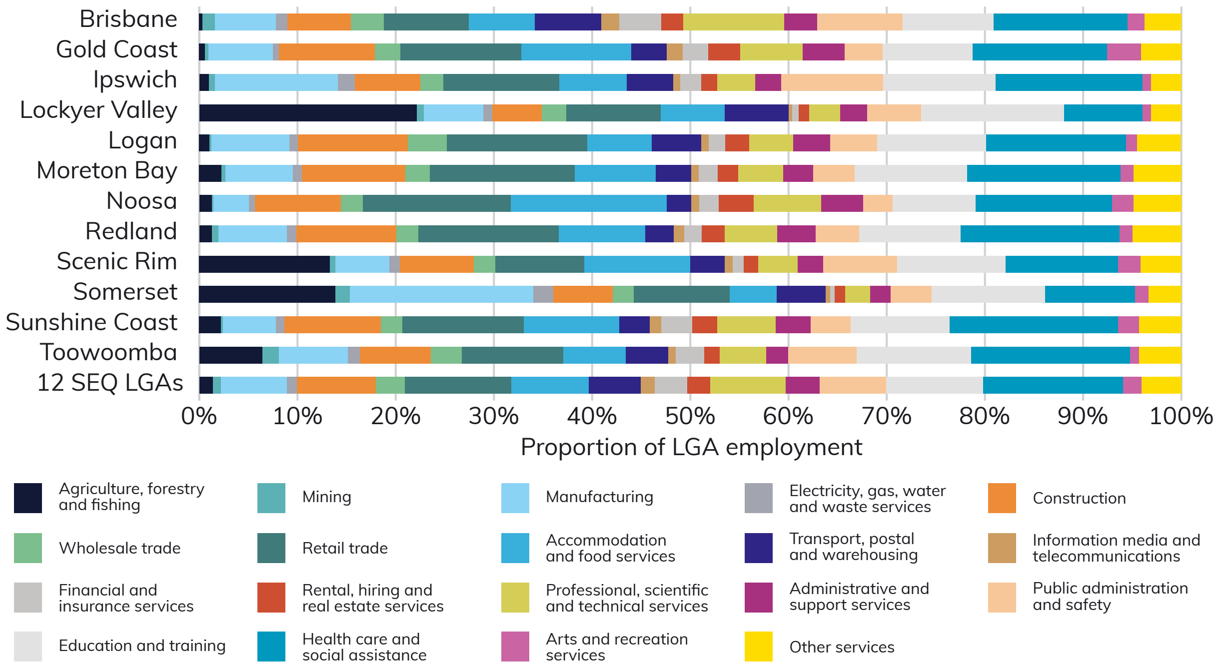
The overall employment density of the 12 LGAs was 42 employed persons per square kilometre (km^2) (Table 5.2). Employment density was highest in the Brisbane LGA at 532 persons per km^2, followed by Gold Coast (177 persons per km^2). The Scenic Rim and Somerset LGAs had particularly low employment densities, reflecting their predominantly rural nature.

Figure 5.2 illustrates the distribution of employment across industries for each of the LGAs of work in 2021. The Health care and social assistance industry was the top employing industry across the 12 SEQ LGAs with 202,900 employed persons at the time of the 2016 census, representing 14.3 per cent of total employment across the 12 LGAs. Health care and social assistance was also the top employing industry in most of the individual LGAs, with its employment share ranging from a low of 8.0 per cent for the Lockyer Valley to a high of 17.2 per cent for the Sunshine Coast.

Agriculture, forestry and fishing was the top employing industry in the Lockyer Valley (where it contributed 22.1 per cent of employment) and Scenic Rim LGAs (13.3 per cent), and was also a prominent source of employment in the Somerset LGA (13.9 per cent). However, Manufacturing was the top employing industry in the Somerset LGA, with 18.7 per cent of jobs.

In the Logan LGA, Retail trade was the top employing industry, with a 14.3 per cent employment share. In the Noosa LGA, the top employing industry was Accommodation and food services, which accounted for 15.9 per cent of Noosa's total jobs.

Figure 5.2: Employed persons by industry by LGA of work in SEQ in 2016



Note: The 12 LGAs total differs from the total for SEQ, as the rural areas of Toowoomba LGA are excluded from the definition of SEQ.

Source: ABS Census of Population and Housing 2016 (place of work data extracted from TablebuilderPro).

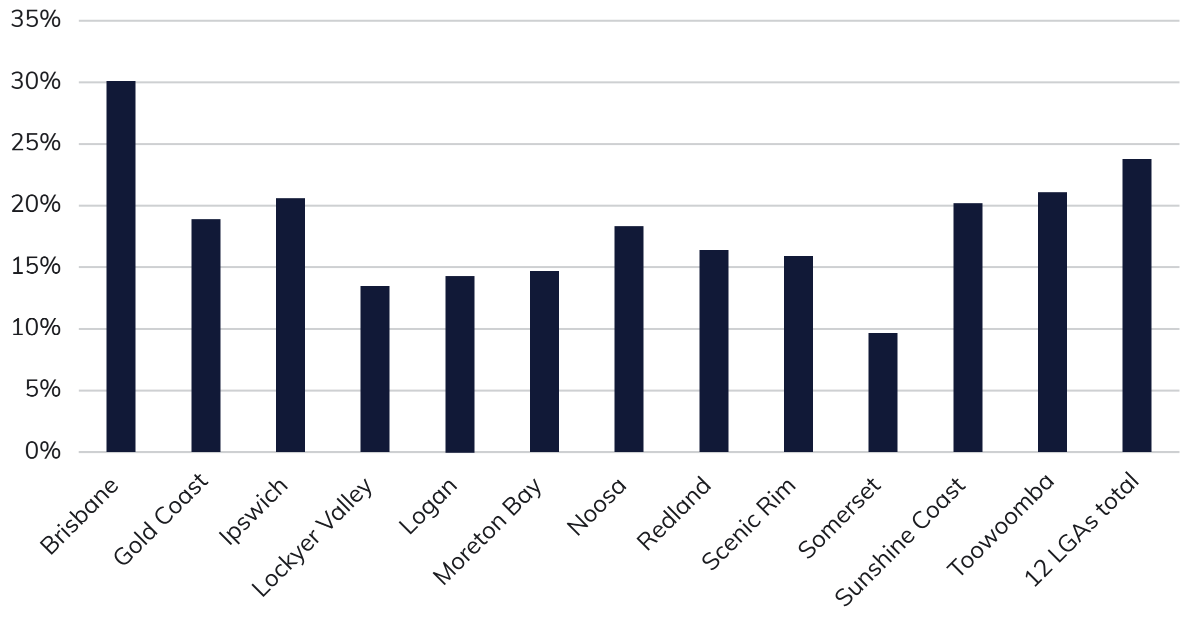
To understand the spatial distribution of knowledge-intensive industry jobs in SEQ, the report uses a group of knowledge industries comprising 126 sub-industries (Appendix A) within the following eight broad industries classified by the Australian and New Zealand Standard Industrial Classification (ANZSIC) (ABS 2006):

1. Information media and telecommunications
2. Financial and insurance services
3. Professional, scientific and technical services
4. Manufacturing
5. Public administration and safety
6. Education and training
7. Health care and social assistance
8. Arts and recreation

The knowledge-intensive industries were selected based on a review of literature on knowledge and creativity (Machlup 2014; Mellander 2009; Florida 2002; Florida 2003; Hu 2014 and Hu 2016). Some manufacturing sub-industries are considered knowledge-intensive because they are high-tech manufacturing and require a significant knowledge base to function. Similarly, some sub-industries within Public administration and safety are included, which are important in the knowledge economy (Tuli and Hu 2019).

Figure 5.3 below shows the proportion of knowledge-intensive industry jobs within the total place of work employment of each LGA in 2016. The Brisbane LGA had 30.1 per cent of its total employment in knowledge-intensive industries, which was above the 12 LGAs proportion of 23.8 per cent. Toowoomba, Ipswich and Sunshine Coast LGAs also had over 20 per cent of their total employment in knowledge-intensive industries in 2016, while Somerset LGA had the lowest representation at 9.6 per cent. The Professional, scientific and technical services industry was the main contributor to these knowledge-intensive jobs in Brisbane and to the total of the 12 LGAs (at 32.7 and 30.1 per cent respectively).

Figure 5.3: Proportion of total LGA employment in knowledge-intensive industries of SEQ in 2016



Note: Industries classified as knowledge-intensive are listed in Appendix A. The 12 LGAs total differs from the total for SEQ, as the rural areas of Toowoomba LGA are excluded from the definition of SEQ.

Source: BCARR analysis of ABS Census of Population and Housing, 2016 (place of work data extracted from Tablebuilder Pro).

Location of work by BCARR rings and sub-regions

Table 5.3 summarises the census place of work data for SEQ and its sub-regions. In 2016 just over 69 per cent of employed persons had a place of work in Greater Brisbane. The Middle ring of Brisbane was a particularly important source of jobs, responsible for 27 per cent of the SEQ total, while the Inner and Outer rings each contributed about 21 per cent of the SEQ total. At the sub-region scale, the most important contributors to the SEQ total were Inner Brisbane (312,100 jobs), Gold Coast (235,500), Middle South (155,700), Middle North (112,500) and Sunshine Coast (110,200).

Inner Brisbane was highly self-sufficient with respect to employment, with 222 jobs located in Inner Brisbane for every 100 employed residents. Jobs were heavily concentrated in and around Brisbane's CBD, with the Inner Brisbane sub-region accounting for 31 per cent of all jobs in Greater Brisbane, while 32 per cent of Greater Brisbane's jobs were located within a 5km radius of the central General Post Office (GPO).

The Middle East and Middle North sub-regions were also relatively self-sufficient, with slightly more jobs located in these sub-regions than employed residents. All of the remaining sub-regions had self-sufficiency ratios below one. The lowest ratios of workers to employed residents were for the Redland and Moreton Bay sub-regions, both of which had roughly 60 jobs available locally for every 100 employed residents.

Table 5.3 shows that employment density varies greatly across SEQ's rings and sub-regions. Inner Brisbane has very high employment density, with more than 3800 jobs per km^2. Other sub-regions with relatively high employment density include the Middle North and Middle South sub-regions. The semi-rural sub-regions of Scenic Rim, Lockyer Valley and Somerset all have very low employment densities, of less than 5 jobs per km^2.

Table 5.3: Employed persons by ring and sub-region of work in SEQ in 2016

BCARR rings/sub-regions	Employed persons ('000)	Share of SEQ total (per cent)	Ratio of workers to employed residents	Employment density (persons/km^2)
INNER Brisbane*	312.1	21.2	2.22	3805.8
MIDDLE Brisbane – TOTAL*	401.9	27.3	0.93	373.2
Middle East	40.0	2.7	1.05	344.9
Middle North	112.5	7.6	1.08	601.7
Middle South	155.7	10.6	0.93	586.7
Middle West	93.7	6.4	0.78	184.2
OUTER Brisbane – TOTAL	305.3	20.7	0.64	70.7
Ipswich	62.3	4.2	0.74	57.0
Redland	40.6	2.8	0.58	75.5
Logan	89.1	6.1	0.68	93.0
Moreton Bay	113.3	7.7	0.60	65.5
TOTAL – GREATER BRISBANE	1019.2	69.2	0.97	186.1
Rest of SEQ	453.0	30.8	0.88	26.6
Gold Coast	235.5	16.0	0.90	176.6
Sunshine Coast	110.2	7.5	0.86	50.5
Noosa	20.8	1.4	0.88	23.0
Toowoomba (urban part)	56.9	3.9	0.98	78.1
Scenic Rim	12.4	0.8	0.73	2.9
Lockyer Valley	11.2	0.8	0.71	4.9
Somerset	6.1	0.4	0.66	1.1
TOTAL – SOUTH EAST QUEENSLAND^	**1472.2**	**100.0**	**0.94**	**65.4**

Notes:

* The Inner and Middle Brisbane Rings together comprise the City of Brisbane LGA. See Table 1.3 and Figure 1.2 in Chapter 1 for these classifications.

^ The SEQ total differs from the 12 LGA total in the preceding table, which includes the whole of Toowoomba LGA. This table includes only the urban parts of Toowoomba LGA.

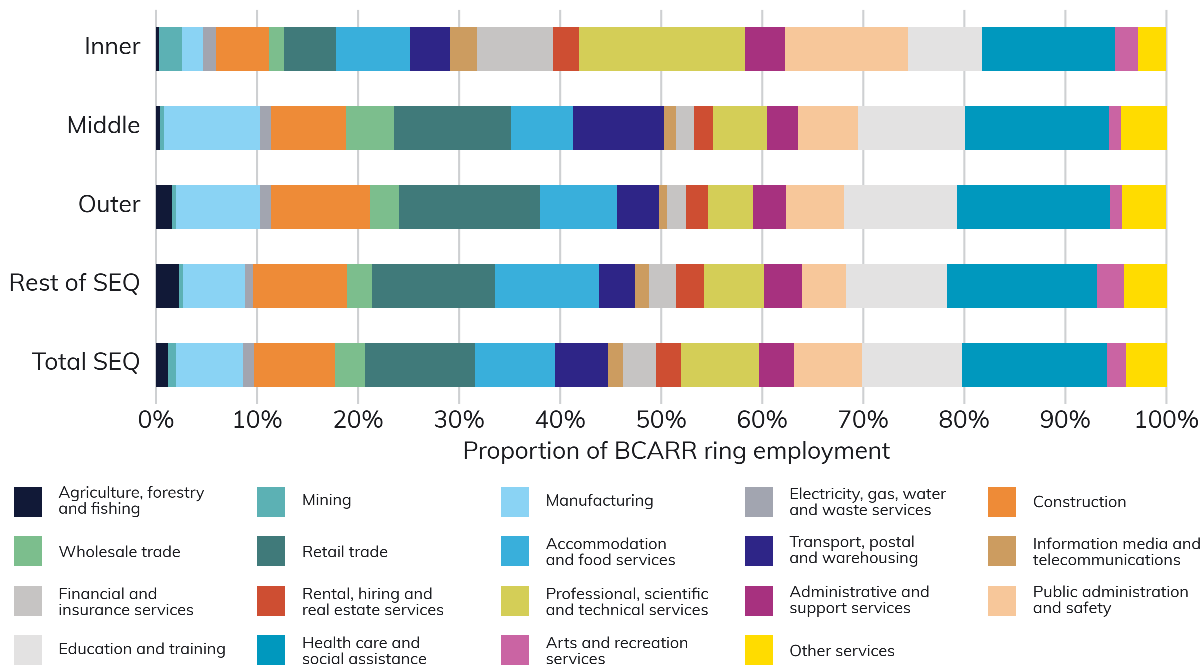
Sources: ABS Census of Population and Housing 2016 (data extracted from TablebuilderPro) and ABS Cat. 3218.0 Regional population, Australia, 2016.

Figure 5.4 illustrates the distribution of place of work employment across industries for each of the BCARR rings. The Health care and social assistance industry was the top employing industry in SEQ at the time of the 2016 census, with 202,200 employed persons, representing 14.4 per cent of total SEQ employment. Health care and social assistance was also the top employing industry in the Middle and Outer rings of Brisbane and in the Rest of SEQ. Its employment share was relatively stable across the rings, ranging from a low of 13.1 per cent for Inner Brisbane to a high of 15.2 per cent for Outer Brisbane.

The distribution of employment across industries in the Inner ring differs from the other rings.

- Professional, scientific and technical services was the top employing industry for the Inner sub-region, where it accounted for 16.4 per cent of employment. This industry accounted for less than 6.0 per cent of employment in the Middle, Outer and Rest of SEQ rings.
- The Inner ring also had higher representation of the Financial and insurance services, Information media and telecommunications, and Public administration and safety industries, compared to the other rings.
- The Inner ring had a significantly lower share of employment in Manufacturing than the other rings, as well as lower shares of employment in Construction, Retail trade and Education and training.

Figure 5.4: Employed persons by industry by BCARR ring of work in SEQ in 2016



Notes: The Inner and Middle Brisbane Rings together comprise the City of Brisbane LGA. See Table 1.3 and Figure 1.2 in Chapter 1 for these classifications.
The SEQ total differs from the 12 LGA total in the preceding chart, which includes the whole of Toowoomba LGA. This table includes only the urban parts of Toowoomba LGA.

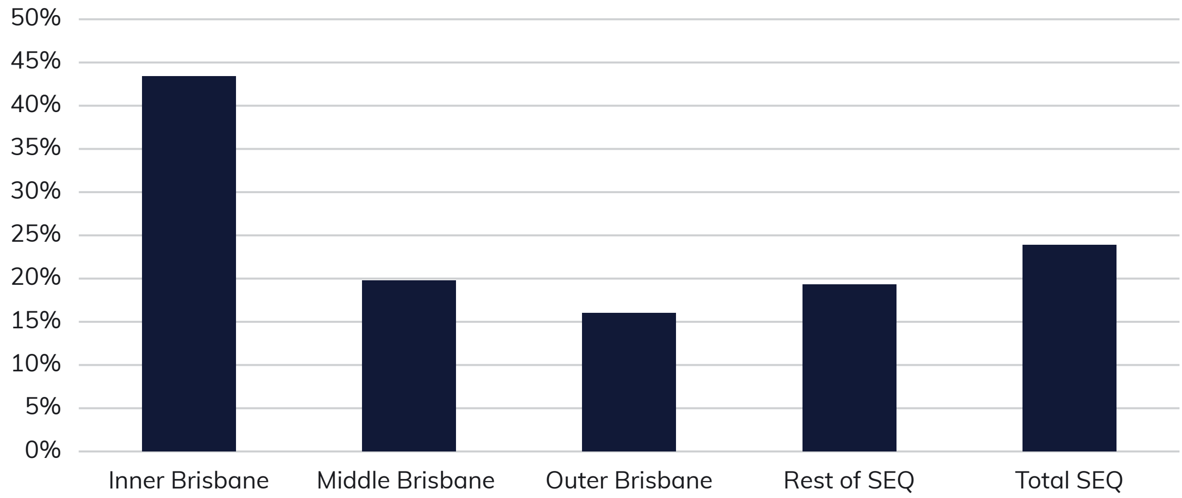
Source: ABS Census of Population and Housing 2016 (place of work data extracted from TablebuilderPro).

A distinctive feature of the industry distribution of employment in Middle Brisbane is its relatively high share of employment in the Transport, postal and warehousing and Wholesale trade industries. This reflects the presence of some important transport and logistics precincts in the Middle ring. More detail on SEQ's major employment precincts will be provided later in this chapter.

A distinctive feature of the industry distribution of employment in the Rest of SEQ is the relatively high share of employment in the Accommodation and food services industry at 10.3 per cent, which compares to 6–8 per cent in the other rings. This reflects the prominence of Gold Coast, Sunshine Coast and Noosa as tourist destinations.

Figure 5.5 below shows the proportion of the total employment of each of the BCARR rings that relates to knowledge-intensive industries (as defined in Appendix A). Overall, SEQ had 23.9 per cent of its total employment in knowledge-intensive industries. Inner Brisbane had the highest proportion of its total place of work employment in the knowledge-intensive industries (43.4 per cent), followed by Middle Brisbane (19.8 per cent) and Rest of SEQ (19.3 per cent). The Outer Brisbane ring has the lowest proportion of knowledge-intensive jobs (16.0 per cent).

Figure 5.5: Proportion of total employment in knowledge-intensive industries by BCARR ring in SEQ in 2016



Note: Industries classified as knowledge-intensive are listed in Appendix A.

Source: BCARR analysis of ABS Census of Population and Housing, 2016 (place of work data extracted from Tablebuilder Pro).

Location of work by small areas

This section summarises the ABS Census of Population and Housing place of work data for 2016 at the Statistical Area Level 2 (SA2) scale, and also draws on the finer-grained destination zone (DZ) scale data. Table 5.4 lists the top employing SA2s within SEQ. Figure 5.6 maps the SA2 data.

Brisbane City SA2 was by far the largest employment location, with 122,500 jobs, representing 8.3 per cent of the SEQ total at the time of the 2016 census. There were six SA2s that had between 20,000 and 28,000 people working in them, namely South Brisbane, Fortitude Valley and Newstead-Bowen Hills (in the Inner sub-region), Southport North (in the Gold Coast sub-region), Rocklea-Acacia Ridge (in the Middle South sub-region) and Brisbane Airport (in the Middle North sub-region).

Employment density was very high for the Brisbane City SA2 at more than 50,000 jobs per km^2, while the South Brisbane and Fortitude Valley SA2s in the Inner sub-region also had relatively high densities. The only other SA2 in SEQ with a density of more than 10,000 jobs per km^2 is the Spring Hill SA2, which is also in the Inner sub-region. The Brisbane Airport, Ormeau-Yatala and Rocklea-Acacia Ridge SA2s all have very low employment densities of 1000 jobs per km^2 or less, despite each containing around 20,000 jobs. This is typical of employment precincts that contain industrial areas focused on manufacturing, transport and logistics.

The Public administration and safety industry is the top employing industry in the Brisbane City SA2. The Health care and social assistance industry is the top employing industry in 4 of the top 10 SA2s, reflecting its status as the main industry of employment in SEQ (see Table 5.4). Each of these 4 SA2s contain a major hospital. The Fortitude Valley SA2 has a specialisation in Professional, scientific and technical services, while the transport specialisation of the inner city Newstead-Bowen Hills SA2 reflects the presence of Virgin Australia's headquarters in Bowen Hills as of 2016.

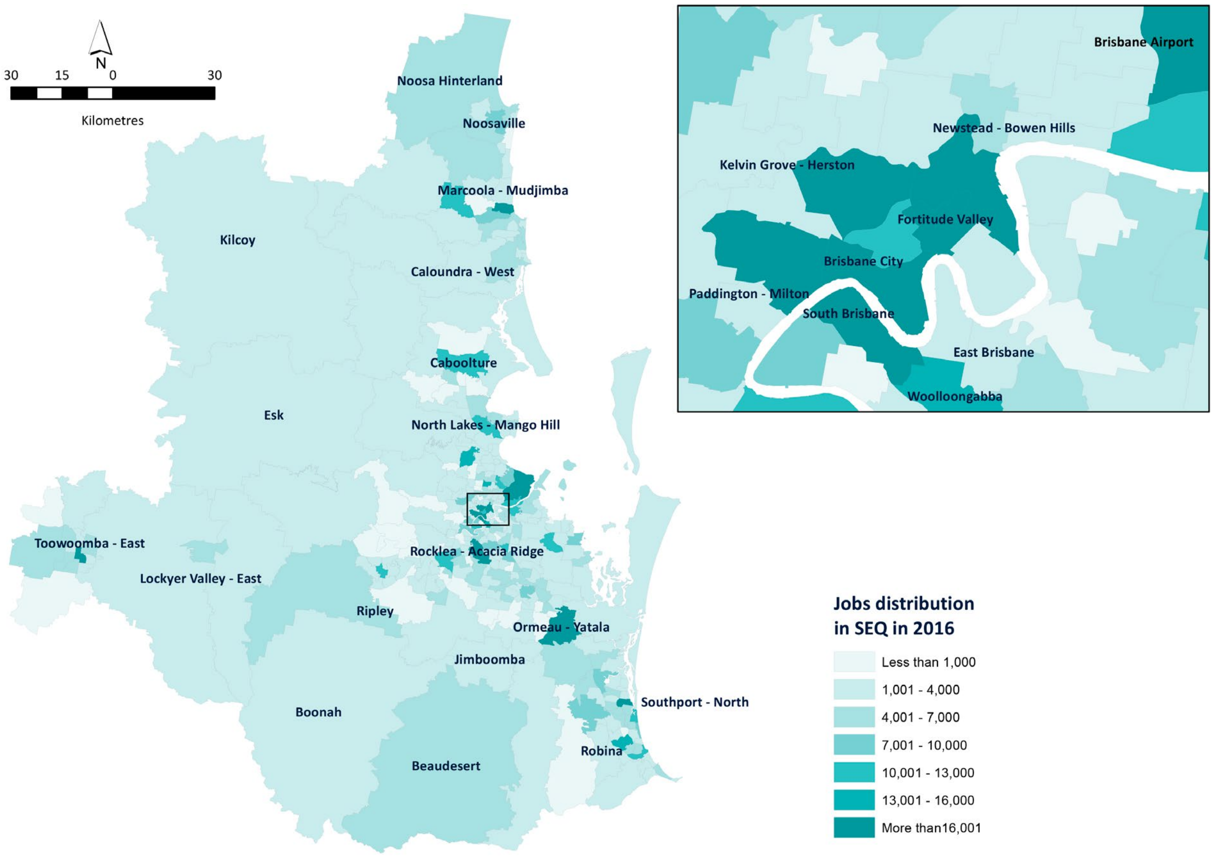
Table 5.4: Top ten employing SA2s of work in 2016

SA2 of work	Sub-region	Employed persons ('000)	Density (jobs/ km^2)	Top employing industry (and its employment share)
Brisbane City	Inner	122.5	51,800	Public administration and safety (23%)
South Brisbane	Inner	27.5	13,600	Health care and social assistance (34%)
Southport – North	Gold Coast	24.2	3,200	Health care and social assistance (34%)
Rocklea – Acacia Ridge	Middle South	23.3	1,000	Manufacturing (20%)
Fortitude Valley	Inner	22.1	17,300	Professional, scientific and technical services (24%)
Brisbane Airport	Middle North	21.4	500	Transport, postal and warehousing (45%)
Newstead – Bowen Hills	Inner	20.3	6,700	Transport, postal and warehousing (18%)
Ormeau – Yatala	Gold Coast	18.4	300	Manufacturing (26%)
Toowoomba Central	Toowoomba	18.2	1,900	Health care and social assistance (23%)
Kelvin Grove – Herston	Inner	16.7	5,000	Health care and social assistance (53%)

Notes: Estimates of job density are rounded to the nearest hundred, so as not to overstate the underlying precision of estimates.
Source: ABS Census of Population and Housing 2016 (place of work data extracted from TablebuilderPro).

Figure 5.6 maps the SA2 employment data. A key feature is the cluster of high employment SA2s in and around the CBD. The high employment SA2s listed in Table 5.4 all stand out on the map, as do some other outlying SA2s with relatively high employment, including Maroochydore-Kuluin, Caboolture, North Lakes-Mango Hill and Robina.

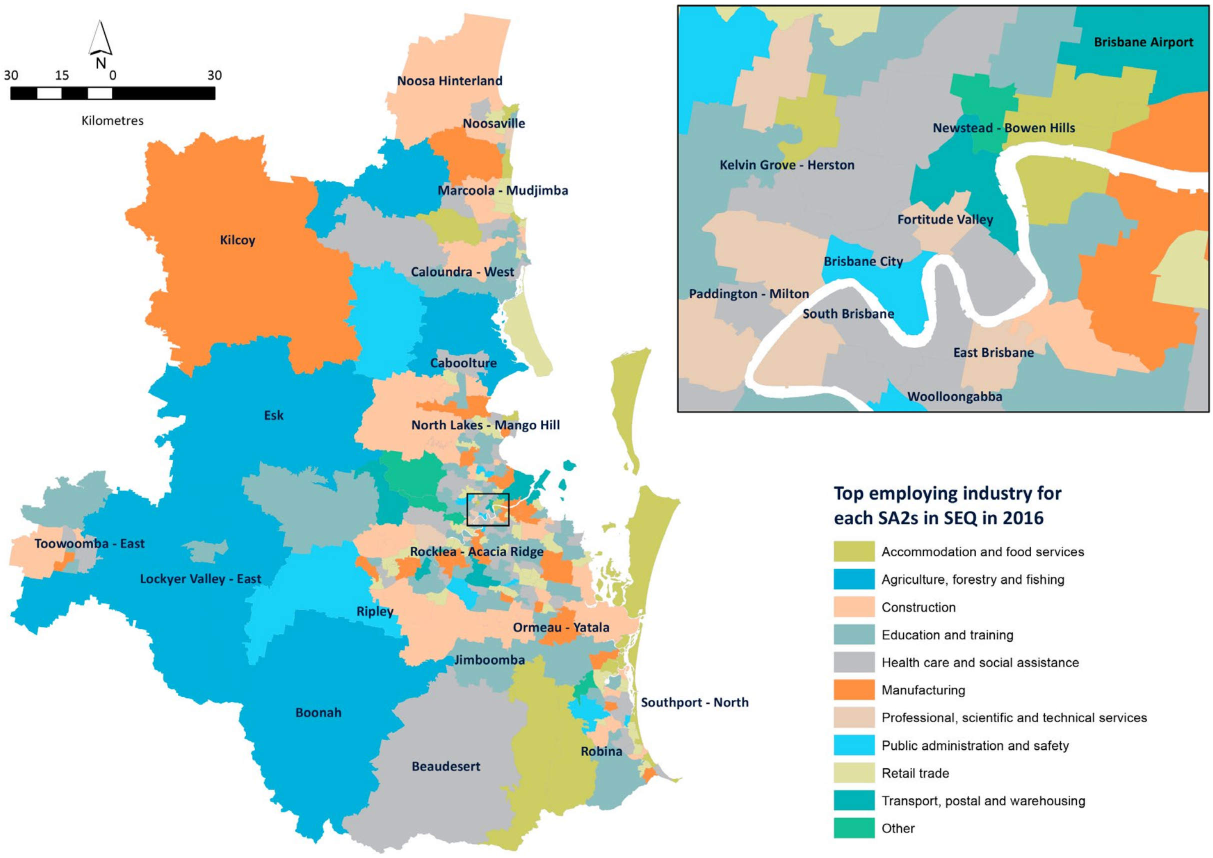
Figure 5.6: Employed persons by SA2 of work in SEQ in 2016



Source: ABS Census of Population and Housing 2016 (place of work data extracted from TablebuilderPro).

Figure 5.7 illustrates the top employing industry for each of the SA2s in SEQ. Education and training is the top employing industry for 81 of SEQ's SA2s. It tends to be the top employing industry in many residentially-oriented suburban and peri-urban SA2s, where there are few sizeable workplaces apart from the local schools. However, it is also the top employer in SA2s containing university campuses, such as St Lucia and Salisbury-Nathan. Health care and social assistance is the top employing industry for 72 SA2s, reflecting it being the main employing industry in SEQ. Employment in the Health care and social assistance industry is concentrated in SA2s containing significant hospitals (e.g. South Brisbane, Southport North, Kelvin Grove-Herston), but is well represented in many SA2s across the region. Retail trade is the top employing industry in 49 SA2s, while Construction and Manufacturing are both the top employing industries in 33 SA2s. It is also evident from Figure 5.7 that Agriculture, forestry and fishing is the top employing industry in a number of SEQ's more rural SA2s.

Figure 5.7: Top employing industry by SA2 of work in SEQ in 2016



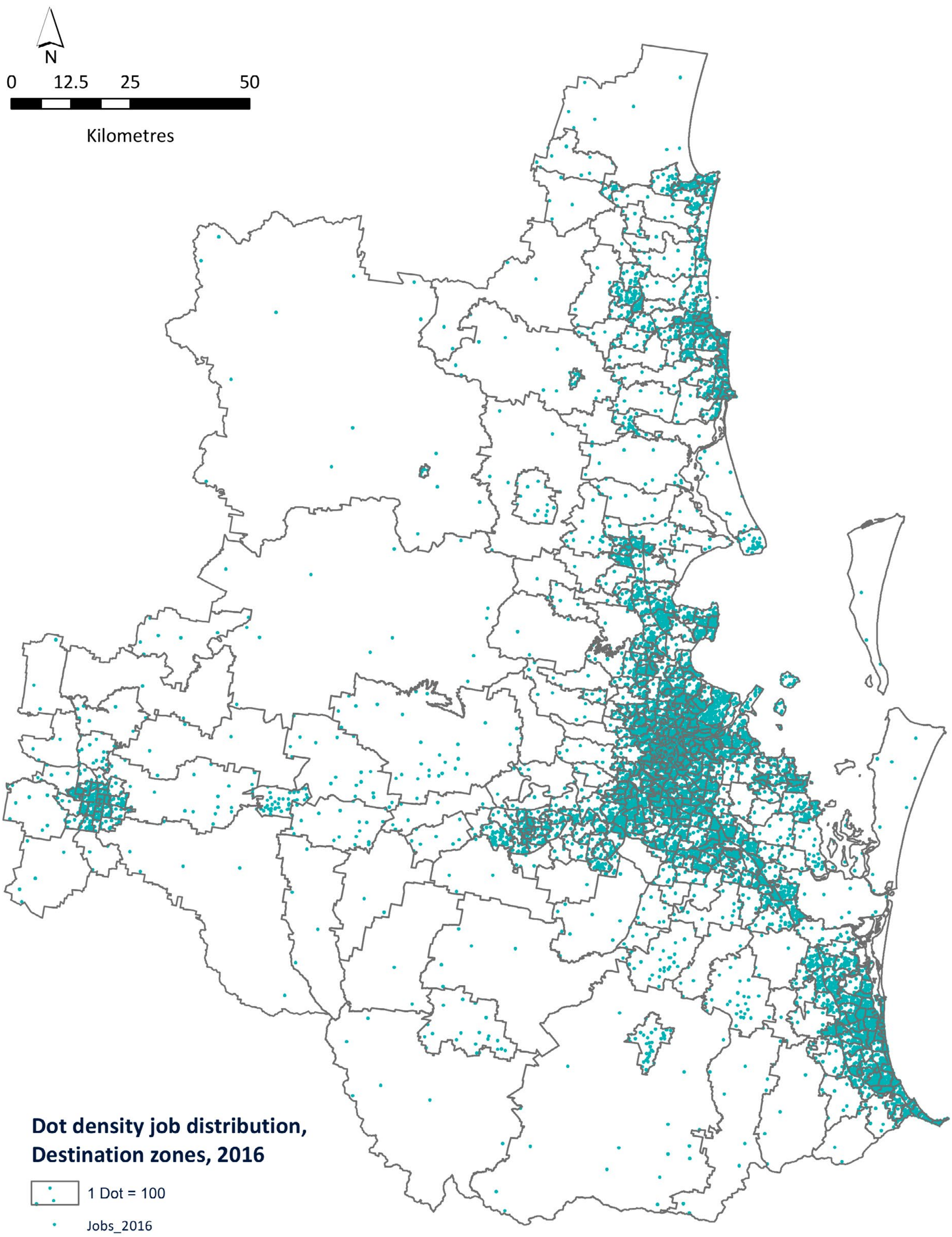
Note: Other includes industries which appear fewer than 3 times as the top employing industry, and SA2s which have more than one industry with equal top employment.

Source: ABS Census of Population and Housing 2016 (place of work data extracted from TablebuilderPro).

Figure 5.8 maps the distribution of employment (by place of work) in SEQ, based on the more detailed destination zone (DZ) data. The map is reasonably similar to the population dot density map (Figure 3.2) and also resembles the existing urban area footprint (Figure 4.6). Employment is heavily concentrated in the Inner and Middle suburbs of Brisbane, with several additional employment corridors stretching out beyond the Brisbane LGA to the north, south-east and west.[15] Other major employment clusters can be seen in Toowoomba and the Gold Coast, with a further employment cluster evident around Maroochydore on the Sunshine Coast.

15 These 3 corridors correspond to the Economic Foundation paper's North Corridor, South Corridor and the Ipswich component of the East-West Corridor, respectively (Queensland Government, 2018a).

Figure 5.8: Dot density distribution of employment by place of work in SEQ in 2016



Source: ABS Census of Population and Housing 2016 (place of work data extracted from TablebuilderPro at destination zone scale).

Because SA2s are defined principally based on population characteristics, they do not provide a particularly suitable statistical boundary for identifying the most significant employment precincts in Australia's major cities. Employment precincts can be much more accurately defined using DZ boundaries, and this will be the focus of the next part of this section.

Employment precincts potentially include CBDs, suburban activity centres, industrial areas, and specialised precincts, such as hospitals, universities, office parks, airports and ports. Employment precincts share a common economic function and land use pattern. They can be smaller than SA2s (e,g. the Yatala-Stapylton employment precinct is a subset of the Ormeau-Yatala SA2) or they can cover multiple SA2s (e.g. the Brisbane Capital City precinct). The motivation for defining employment precincts in this study is to ensure the analysis is relevant to the Queensland Government's employment-related strategic planning goals. Box 5.1 describes BCARR's approach to identifying and defining the boundaries of the major employment precincts in SEQ.

Box 5.1 How are major employment precincts identified and defined?

Employment precincts are defined as a set of contiguous destination zones (DZs) that meet the aggregate jobs threshold of 10,000 jobs, where the precinct as a whole shares a common land use structure and function.

BCARR identified a set of potential employment precincts from the *SEQ Regional Plan 2017*. Geographic boundaries for each of these precincts were established based on state government provided boundaries where available, or otherwise defined by BCARR based on prior studies (BITRE 2013a,b), analysis of information contained in state planning documents, and spatial patterns of land use and employment. Brisbane Capital City and South Brisbane are neighbouring precincts that were identified as separate centres in the metropolitan strategic plan, and so BCARR followed that approach and defined them as separate precincts. The activity centre network, knowledge and technology precincts, and major enterprise and industrial areas from the SEQ Regional Plan were all assessed against the job threshold.

Based on analysis of census employment data, BCARR also identified some additional employment precincts that met the job threshold, but were not highlighted as key precincts within the SEQ Regional Plan. An example is Burleigh Heads.

There was no employment density criterion applied in defining these precincts, so the final list of precincts includes very high density precincts such as CBDs, as well as very low density precincts such as outer suburban industrial areas.

Table 5.5 identifies 24 major employment precincts containing more than 10,000 jobs in SEQ as of 2016. Taken together, these 24 precincts capture 39 per cent of SEQ jobs that could be allocated to an identifiable place of work. The 24 major employment precincts are mapped in Figure B.1 of Appendix B.

The Brisbane Capital City employment precinct[16] is by far the largest employment precinct in SEQ, containing the workplaces of 188,200 employed persons, and capturing 12.8 per cent of SEQ employment. Note that the Brisbane Capital City employment precinct (as defined by BCARR) extends beyond the Brisbane City SA2 to cover Fortitude Valley, Spring Hill and parts of the Newstead-Bowen Hills and Paddington-Milton SA2s.

16 The Brisbane Capital City employment precinct is a core part of the Capital City Knowledge Corridor, one of the five key economic corridors identified in the SEQ Economic Foundations paper (Queensland Government, 2018a).

Table 5.5: Employment precincts containing the most jobs in SEQ in 2016

Employment precinct	Sub-region	Jobs ('000)	Density (jobs/ km^2)	Top employing industry (and its employment share)
Brisbane Capital City	Inner	188.2	22,300	Professional, scientific and technical services (21%)
Acacia Ridge-Coopers Plains-Salisbury-Rocklea	Middle South	35.4	900	Manufacturing (21%)
South Brisbane KTP	Inner	27.5	13,600	Health care and social assistance (35%)
Sumner-Darra-Richlands-Wacol-Carole Park	Middle West	25.8	1,100	Manufacturing (37%)
Geebung-Virginia-Northgate-Banyo	Middle North	23.0	1,500	Manufacturing (22%)
Brisbane Airport	Middle North	22.2	600	Transport, postal and warehousing (45%)
Murrarie-Hemmant	Middle East	19.5	1,100	Manufacturing (28%)
Southport PRAC	Gold Coast	19.1	1,800	Health care and social assistance (21%)
Maroochydore PRAC	Sunshine Coast	18.7	1,000	Retail trade (18%)
Yatala-Stapylton	Gold Coast	16.5	400	Manufacturing (28%)
Toowoomba PRAC	Toowoomba	15.6	4,900	Health care and social assistance (24%)
Caboolture-Morayfield PRAC	Moreton Bay	15.4	600	Health care and social assistance (27%)
Herston-Kelvin Grove KTP	Inner	15.3	6,700	Health care and social assistance (56%)
Chermside PRAC	Middle North	14.2	4,200	Health care and social assistance (48%)
Underwood-Slacks Creek	Logan	13.5	1,100	Retail trade (18%)
Ipswich PRAC	Ipswich	12.8	2,300	Health care and social assistance (34%)
Robina PRAC	Gold Coast	12.7	1,300	Health care and social assistance (24%)
Surfers Paradise MRAC	Gold Coast	12.0	2,100	Accommodation and food services (40%)
Eagle Farm-Pinkenba	Middle North	11.9	1,600	Manufacturing (26%)
Burleigh Heads	Gold Coast	11.7	900	Retail trade (17%)
Noosa MRAC	Noosa	11.4	300	Accommodation and food services (21%)
Southport KTP	Gold Coast	10.9	2,800	Health care and social assistance (52%)
North Lakes MRAC	Moreton Bay	10.3	400	Retail trade (24%)
Broadbeach MRAC	Gold Coast	10.2	5,900	Retail trade (26%)

Notes: Estimates of jobs and job density are rounded to the nearest hundred, so as not to overstate the underlying precision of estimates. PRAC is a Principal Regional Activity Centre, MRAC is a Major Regional Activity Centre, and KTP is a knowledge and technology precinct, as identified in *ShapingSEQ*.

Source: BITRE analysis of ABS Census of Population and Housing 2016 place of work data for destination zones (extracted from Tablebuilder Pro) and key employment precincts identified in SEQ Regional Plan 2017.

Other major employment precincts in SEQ include:

- The Acacia Ridge-Coopers Plains-Salisbury-Rocklea industrial area[17] in Brisbane's Middle South, which employs 35,400 people, primarily in Manufacturing (21 per cent), Wholesale trade (15 per cent) and Transport, postal and warehousing (14 per cent).
- The South Brisbane knowledge and technology precinct[18] in Inner Brisbane, which employs 27,500 people, and has a strong specialisation in health due to the presence of Mater Hospital and the Queensland Children's Hospital.
- The Sumner-Darra-Richlands-Wacol-Carole Park industrial area[19] (which is largely in the Middle West sub-region but extends into the Ipswich sub-region) employs 25,800 people, predominantly in the Manufacturing industry (37 per cent).

The Gold Coast sub-region is very well represented in Table 5.5, with 7 separate employment clusters of 10,000 or more jobs, reflecting the lack of a single focal point of economic activity in the sub-region. Instead employment is dispersed across a number of mid-sized employment precincts.

The table contains a mix of traditional suburban activity centres (e.g. Ipswich, North Lakes), industrial areas (e.g. Yatala-Stapylton, Murrarie-Hemmant) and specialised centres (e.g. Brisbane Airport, Herston-Kelvin Grove). Employment density was highest in the inner city precincts of Brisbane Capital City, South Brisbane and Herston-Kelvin Grove. Employment density tended to be relatively low in industrial areas and in precincts located outside the Brisbane LGA (e.g. in Moreton Bay, Noosa).

Health care and social assistance is frequently the top employing industry, both for the Queensland Government's identified knowledge and technology precincts, but also for several principal and major activity centres where a hospital is located in close proximity to the town centre (e.g. Toowoomba, Chermside). Several of the principal and major activity centres have Retail trade as the major employing industry, as does the Underwood-Slacks Creek commercial area. The Manufacturing industry was the top source of employment for several industrial area precincts (e.g. Eagle Farm-Pinkenba). The Accommodation and food services industry was the major employing industry in two tourism-oriented precincts (i.e. Noosa, Surfers Paradise).

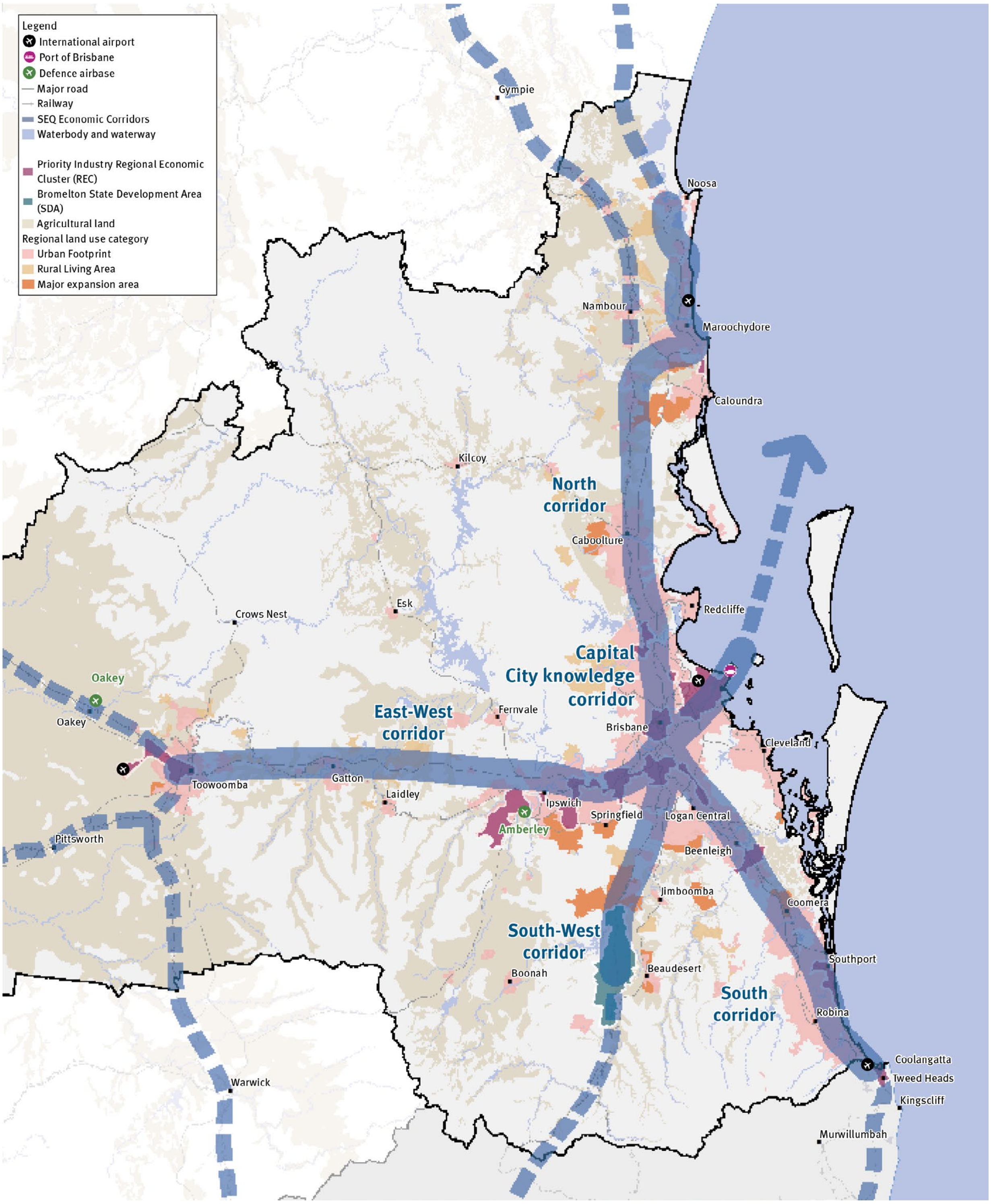
The SEQ *Economic Foundations* paper identified 5 key economic corridors (Queensland Government, 2018), which were listed previously in Figure 2.3 and are mapped in Figure 5.9 below.

17 This industrial area is an important part of the East-West Corridor, one of the five key economic corridors identified in the SEQ Economic Foundations paper (Queensland Government, 2018a).

18 A set of Knowledge and technology precincts (or KTPs) are identified by the Queensland Government in ShapingSEQ (Queensland Government, 2017). The South Brisbane KTP is part of the Capital City Knowledge Corridor, one of the five key economic corridors identified in the SEQ Economic Foundations paper.

19 This industrial area is part of the East-West Corridor, one of the five key economic corridors identified in the SEQ Economic Foundations paper (Queensland Government, 2018a).

Figure 5.9: Five key economic corridors of South East Queensland



Source: Queensland Government (2018), Figure 60.

The 5 key economic corridors and the major employment precincts from Table 5.5 that contribute to them are listed below:

- East-West Corridor: includes Brisbane Airport, Eagle Farm-Pinkenba, Murarrie-Hemmant, Acacia Ridge-Coopers Plains-Salisbury-Rocklea, Sumner-Darra-Richlands-Wacol-Carole Park, Ipswich PRAC and Toowoomba employment precincts
- Capital City Knowledge Corridor: includes Brisbane Capital City, Herston-Kelvin Grove KTP and South Brisbane KTP major employment precincts
- North Corridor: includes Chermside PRAC, North Lakes MRAC, Caboolture-Morayfield PRAC, Maroochydore PRAC and Noosa MRAC major employment precincts
- South Corridor: includes Underwood-Slacks Creek, Yatala-Stapylton, Southport PRAC, Southport KTP, Surfers Paradise MRAC, Broadbeach MRAC, Robina PRAC and Burleigh Heads major employment precincts
- South West Corridor: this is an emerging corridor and none of the contributing precincts had sufficient employment in 2016 to make the 10,000 job cutoff of Table 5.5.

The key economic corridors capture nearly all of SEQ's major employment precincts, as listed in Table 5.5.

5.3 Employment growth

Growth in employed residents from 2016 to 2021

The ABS *Labour Force Survey* (LFS) shows that the number of employed residents of SEQ increased by 186,800 persons between 2016 and 2021, representing an average annual growth rate of 2.1 per cent (see Table 5.6).

ABS LFS data is not available for LGAs, but is published for SA4s. Table 5.6 provides details of how SEQ's growth in employed persons was distributed across SA4s of residence. Of the total increase of 186,800 employed persons, 122,300 (or almost two-thirds) was in Greater Brisbane. Within Greater Brisbane, the greatest increases in employed residents occurred in Brisbane Inner City SA4 (29,100), Ipswich SA4 (28,900) and Logan-Beaudesert SA4 (24,300). The Gold Coast SA4 experienced the largest increase in employed residents of all SA4s in SEQ, with employment rising by 44,700 employed persons between 2016 and 2021, which represented 23.9 per cent of SEQ's total growth.

The growth rate of employment was highest for Ipswich between 2016 and 2021 (averaging 3.5 per cent per annum), closely followed by Logan-Beaudesert (3.4 per cent) and Brisbane Inner City (3.3 per cent). In contrast, Brisbane South, Moreton Bay North and South (combined) and Toowoomba recorded much more modest growth rates.

Table 5.6: Growth in employed residents by Statistical Area 4 of residence in SEQ from 2016 to 2021

SA4 of residence	Employed persons, 2016 ('000)	Employed persons, 2021 ('000)	Change in employed persons, 2016 to 2021 (per cent)	Average annual growth rate, 2016 to 2021 (per cent)	Share of SEQ total growth (per cent)
Brisbane Inner City	164.4	193.5	29.1	3.3	15.6
Brisbane East	119.6	127.8	8.2	1.3	4.4
Brisbane North	113.3	126.5	13.3	2.2	7.1
Brisbane South	195.2	201.1	5.9	0.6	3.1
Brisbane West	96.4	102.6	6.1	1.2	3.3
Ipswich	153.2	182.1	28.9	3.5	15.5
Logan – Beaudesert	134.5	158.7	24.3	3.4	13.0
Moreton Bay North and South (combined)	216.7	223.2	6.5	0.6	3.5
TOTAL – GREATER BRISBANE	1193.2	1315.5	122.3	2.0	65.5
Gold Coast	313.4	358.1	44.7	2.7	23.9
Sunshine Coast	169.6	185.9	16.3	1.9	8.7
Toowoomba	70.5	74.0	3.5	1.0	1.9
TOTAL – SEQ	1746.7	1933.6	186.8	2.1	100.0

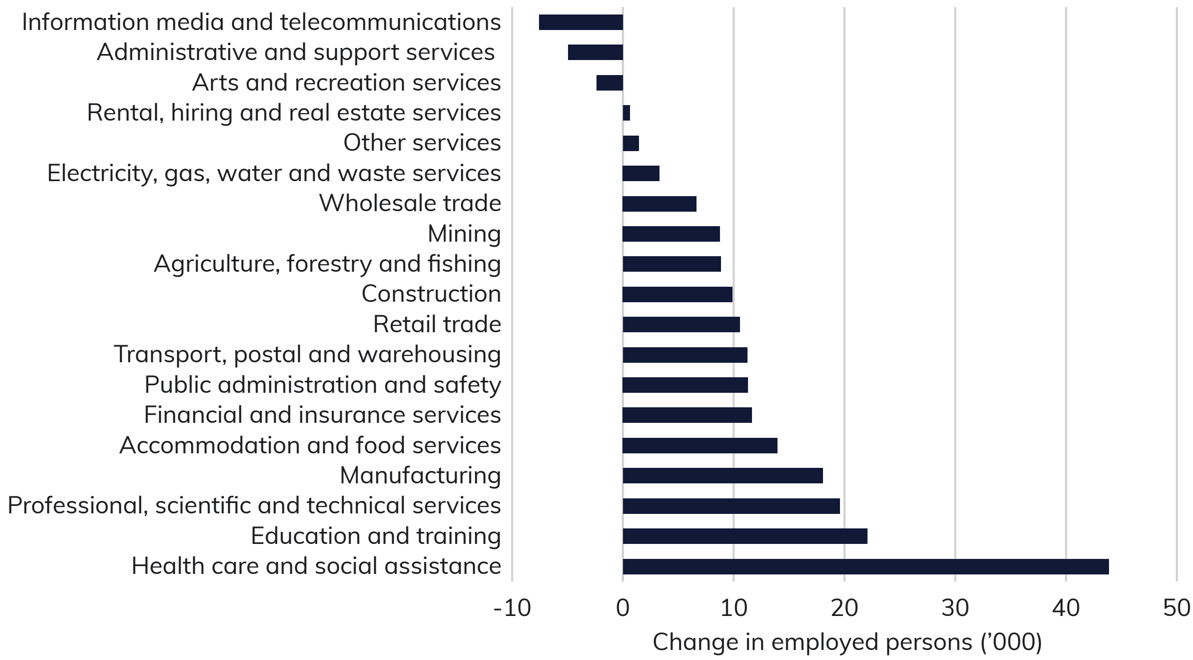
Note: Data is an annual average of the estimates for the 12 months up to August of 2016/2021. The Toowoomba SA4 captures only the urban extent of Toowoomba. Results for the Moreton Bay North and Moreton Bay South SA4s have been aggregated together, as results for the individual SA4s were volatile over time.

Source: ABS *Labour Force Survey* data, Cat. 6291.0.55.001 (Table RQ1, 24 March 2022 release).

Figure 5.10 shows the industry contributors to SEQ's employment growth between 2016 and 2021. The major source of employment growth was the Health care and social assistance industry which added 43,900 jobs, which was 23.5 per cent of total growth. Employment in SEQ's Health care and social assistance industry grew quite rapidly at 3.5 per cent per annum. The Sunshine Coast SA4 appeared to capture more of this growth than other SA4s, with an increase of around 10,000 residents employed in the Health care and social assistance industry.

Other key contributors to growth included Education and training (up 22,100 employed persons), Professional, scientific and technical services (19,600), Manufacturing (18,000) and Accommodation and food services (14,000). However, employment in the Information, media and telecommunications industry declined by 7,500 persons over the period.

Figure 5.10: Growth in employed persons by industry in SEQ from 2016 to 2021



Note: Data is an annual average of the estimates for the 12 months up to August 2021. The Toowoomba SA4 captures only the urban extent of Toowoomba. Based on ANZSIC 1-digit industries. Data is on a place of residence basis.

Source: ABS *Labour Force Survey* data, Cat. 6291.0.55.001 (Table RQ1, 24 March 2022 release).

Evidence on the spatial distribution of recent jobs growth

At the time of writing, ABS 2021 Census of Population and Housing second-release data was not available, meaning there was no clear evidence about which SEQ locations have experienced particularly strong jobs growth or decline since 2016 on a place of work basis. The 2021 census place of work data could be impacted by the pandemic (including the effect of lockdowns and government recommendations to encourage working from home).[20]

There is some evidence available on past trends on where jobs growth tends to be concentrated in SEQ, which is summarised below.

- Analysis of the 2011 and 2016 census place of work data shows that some of the key job growth locations were North Lakes – Mango Hill in Moreton Bay (up by 4,400 employed persons), Ormeau-Yatala in the Gold Coast (4,100), Newstead-Bowen Hills in Inner Brisbane (3,400), Brisbane Airport in the Middle North (2,800), South Brisbane in Inner Brisbane (3,100) and Southport on the Gold Coast (3,000). Areas that experienced significant job declines between 2011 and 2016 included Spring Hill in Inner Brisbane (2,700) and Rocklea-Acacia Ridge in the Middle South (–2,500).
- Brisbane's Inner ring was the location of 18.9 per cent of SEQ's total employment in 2006 (BITRE 2013a, p. 109). This compares to a 21.2 per cent share in 2016 (see Table 5.3), which suggests increased centralisation of jobs over the preceding decade.[21]

20 There was a short lockdown in place in SEQ in the lead up to the 2021 census, but restrictions were significantly eased a few days prior to census night.

21 There were methodological changes for the census place of work data between 2006 and 2016, so comparison of results across censuses should be treated with caution.

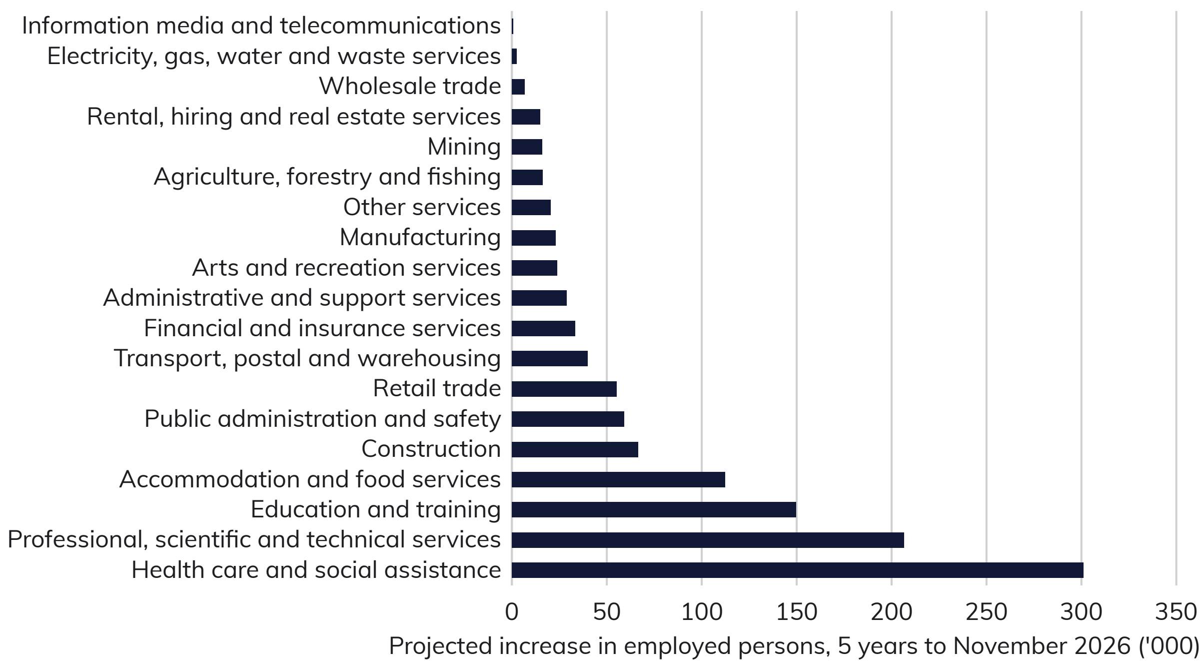
The Gold Coast and Inner Brisbane sub-regions recorded the largest increases in employed residents between 2016 and 2021 (see Table 5.6), and given they both have relatively high self-containment rates (see Chapter 7), it is likely that this will be reflected in relatively large increases in some of the main employment precincts within these two sub-regions (e.g. Brisbane Capital City, Southport, Yatala-Stapylton).

Employment projections

The National Skills Commission (2021) projects national employment growth by industry between November 2021 and November 2026. The industries with the largest projected increases in employment are Health care and social assistance (301,000), Professional, scientific and technical services (206,600) and Education and training (149,600). These align with the top three employment growth industries for SEQ between 2016 and 2021, as shown in Figure 5.9. Thus, the national growth projections point to ongoing growth in the industries that have been the main drivers of SEQ's recent employment growth.

Figure 5.11 shows that beyond these top three sources of growth, employment growth is projected to be distributed widely across most industries at the national scale.

Figure 5.11: Projected growth in employed persons by industry in Australia from November 2021 to November 2026



Source: National Skills Commission (2022a), Employment Outlook (five years to November 2026).

Similar projections have been prepared by the state government for Queensland, covering the five year period ending 2024 (Queensland Government 2020a). However, they were prepared prior to the emergence of COVID–19 and do not take into account its impacts. For the 2019 to 2024 period, employment growth in Queensland is projected to be greatest in the following industries:

- Health care and social assistance (60,651)
- Professional, scientific and technical services (29,099)
- Education and training (27,701).

These are the same three industries that ranked most highly for Australia as a whole in Figure 5.11.

5.4 Conclusion

This chapter has presented a detailed snapshot of the spatial distribution of jobs throughout SEQ as of 2016. It described how jobs are distributed across SEQ's LGA's, rings and sub-regions and identified the main SA2s of work and the major employment precincts. It also identified the top employing industries in each place and the extent to which employment is in knowledge-intensive industries.

The chapter has also summarised employment growth in SEQ between 2016 and 2021, identifying the rings and sub-regions that grew most strongly (i.e. Gold Coast, Inner Brisbane and Ipswich) and the main industry drivers of employment growth (i.e. Health care and social assistance).

While the focus remains on employment in the next chapter, there is a shift to considering the skills of the SEQ workforce, from both an occupational and educational perspective.