



Australian Government
Jobs and Skills Australia

Labour Market Update

*The data in this document reflect the quarter to March 2023,
and are current as at 5 May 2023*

May 2023

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Executive summary

Labour market conditions have been strong over the March 2023 quarter, with continuing strong demand and growth in labour supply, albeit an increase in the unemployment rate (to 3.7%) was subsequently recorded in April. After signs of a slight easing in the level of demand during the December 2022 quarter, JSA's Internet Vacancy Index (IVI) and JSA's Recruitment Experiences and Outlook Survey (REOS) both indicate that labour demand stabilised in the March 2023 quarter, albeit below the mid-2022 peak.

Nevertheless, total employment continued to expand over the three months to March 2023. Ongoing strength in full-time employment growth, together with an underemployment rate well below its decade average prior to the COVID-19 pandemic, suggests a more efficient utilisation of the workforce and less spare capacity.

Compositionally, employment continues to shift towards jobs that are commensurate with some level of post-secondary school qualification (skill level 1 to 4 jobs) and away from jobs that do not typically require such a qualification (skill level 5 jobs). Over the past year, around 92% of total employment growth has been in occupations that typically require post-school qualifications, reflecting the importance of both the higher education and VET systems to growing a high-skilled Australian workforce. Around two-thirds of total employment growth over this period was in Skill Level 2 to Skill Level 4 occupations (where VET qualifications are the primary pathway).

As employment has continued to grow while recruitment activity has stabilised, levels of recruitment difficulty experienced by employers have declined, while the likelihood of filling an advertised role has increased slightly - albeit still below the levels recorded in previous years. The likelihood of filling an advertised role is a key element of Jobs and Skills Australia's assessment of skills shortages. Improved fill rates suggest that, on average at least, skills shortages may have eased slightly in recent months.

Measures of wages growth are also showing promising recent signs. The most recent wage price index result (for September 2022) recorded its strongest quarterly growth rate since 2012, while alternate measures of wages that reflect job mobility or newly advertised jobs are currently recording annual wage growth rates of well above 4%. The higher recorded levels of wage growth for measures that include the effects of job mobility are consistent with the workforce continuing to shift towards higher-skilled jobs.

While many of the macro indicators are positive, some more specific issues of concern remain - particularly with respect to key skills needs in regional areas, where shortages persist.

Employers in regional areas have consistently reported a lower likelihood of filling vacancies and fewer applicants per vacancy than those in capital cities. Some regional areas also continue to face skills pressures for critical roles, such as General Practitioners and Resident Medical Officers, that are much more acute than pressures felt in capital cities for the same occupation.

At the same time, some regional areas have persistently low participation rates that are driven by a range of factors - such as having an older age demographic, below-average levels of educational attainment, fewer jobs that are within travelling distance, the relative strength of the main employing industries in the region, and a history of labour market disadvantage.

Jobs and Skills Australia has also expanded upon its preliminary analysis of the underlying drivers of skills shortage - with a particular focus on whether the shortage is primarily driven by a lack of people with the essential technical skills, or by other factors (such as non-technical qualities considered important by employers, or by willingness to apply for the vacancies under current conditions). The expansion of this preliminary analysis has found that for key Clerical and Administrative Worker, Sales Worker, Machinery Operators and Driver, and Labourer occupations currently in national shortage, the shortage is primarily driven by challenges in worker retention. This suggests that there are sufficient people who have the essential technical skills for these occupations who are not already using them, but they are not willing to apply for the vacancies under current conditions. This reinforces the importance of well-paid, secure jobs with good working conditions in helping to address these shortages.

Recent labour market outcomes

Underlying labour market conditions were strong over the three months to March 2023, albeit an increase in the unemployment rate (to 3.7%) was subsequently recorded in April.

Table 1: Key labour market indicators, March 2023, and change since December 2022

Employment	Monthly hours worked in all jobs	Labour force	Unemployment rate	Participation rate
↑ 0.8%	↑ 1.4%	↑ 0.8%	Steady	↑ 0.1 % pts
13,884,400	1,914.2 million hours	14,391,500	3.5%	66.7%

Source: ABS, *Labour Force, Australia*, March 2023, seasonally adjusted data.

ABS *Labour Force Survey* figures show that the level of employment increased by a robust 106,100 (or 0.8%) over the three months to March 2023. Encouragingly, the rise in employment over the period was driven entirely by a strong increase in full-time employment, which rose by 107,700 (or 1.1%), while part-time employment decreased by 1,600.

- Significantly, employment for women rose by 79,000 (or 1.2%) over the three months to March 2023, accounting for just under three quarters of total employment growth over the period. Moreover, the vast majority (87%) of female employment growth over the period was concentrated in full-time jobs.

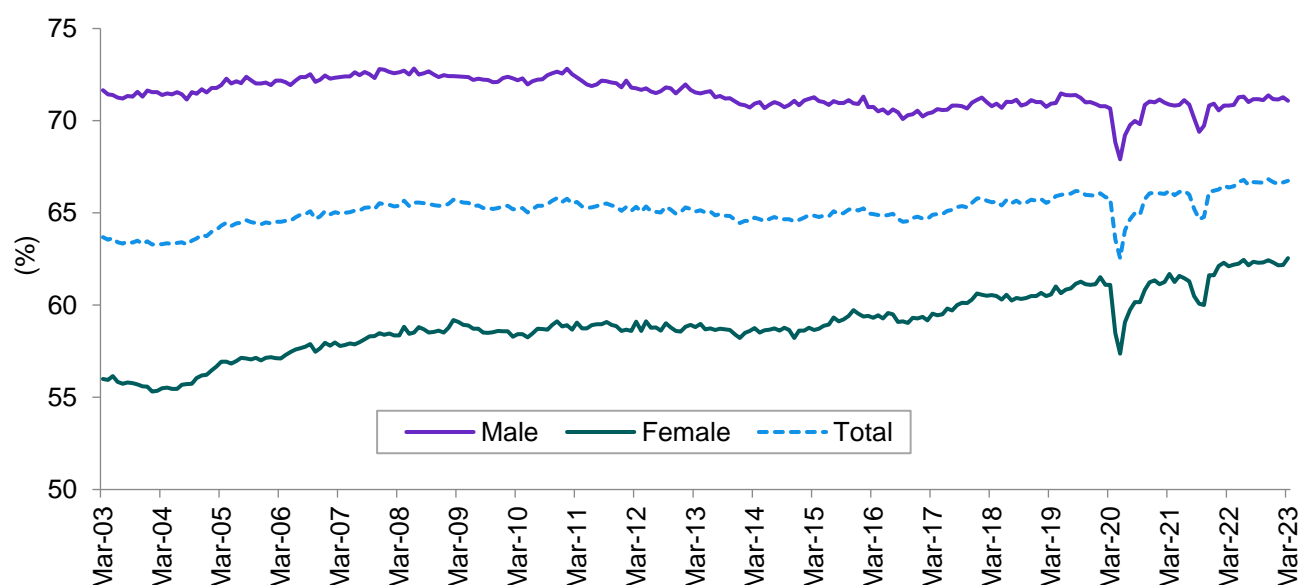
The employment-to-population ratio (for persons aged 15 and above) rose slightly over the quarter, from 64.3% in December 2022, to 64.4% in March 2023, and is now just below the record high of 64.5% recorded in November 2022.

- The employment-to-population ratio for women increased by 0.3 percentage points over the quarter, to a record high of 60.4% in March 2023, although it remains well below the 68.5% recorded for men.

The unemployment rate was steady over the quarter, at 3.5% in March 2023, and remained close to its 50-year low. The participation rate increased by 0.1 percentage points over the period, to 66.7% in March 2023, and is close to the equal record high of 66.8% recorded in June 2022 and November 2022.

- The female unemployment rate fell slightly over the quarter, from 3.5% in December 2022, to 3.4% in March 2023, and has not been lower since November 1973. Importantly, the decline occurred in conjunction with a rise in the female participation rate, to a record high of 62.5% in March 2023, although it remains well below the 71.1% recorded for men (see Figure 1).

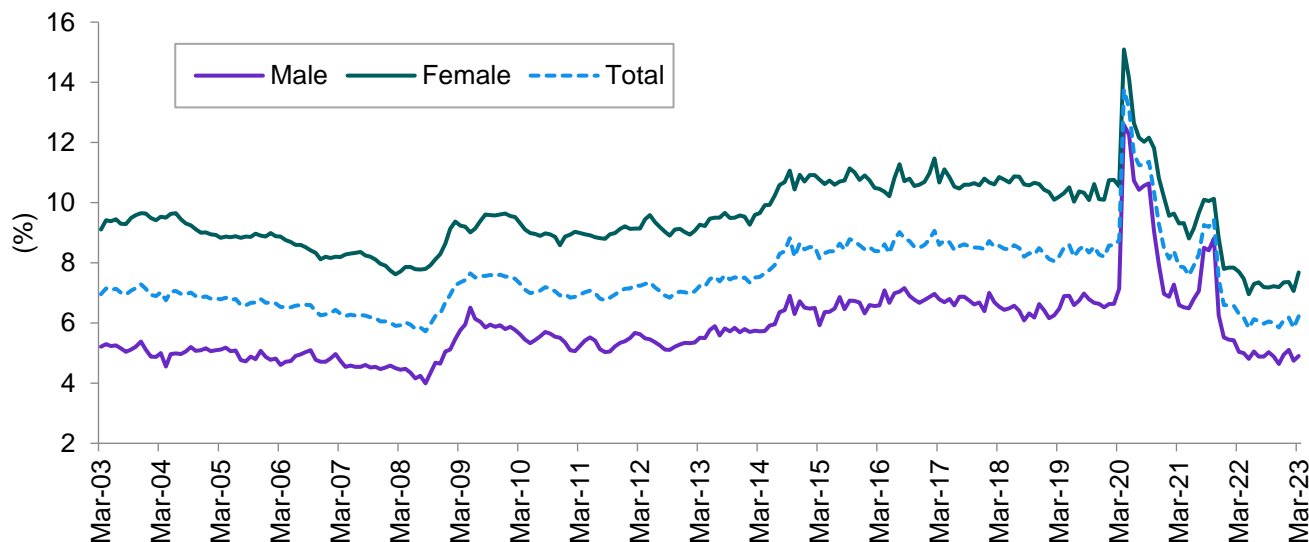
Figure 1: Participation rate by gender (%), March 2003 to March 2023



Source: ABS, *Labour Force, Australia*, March 2023, seasonally adjusted data.

The underemployment rate increased slightly over the quarter, from 6.1% in December 2022, to 6.2% in March 2023. Females recorded a 0.3 percentage point increase in their underemployment rate over the period, to 7.7% in March 2023, while the male underemployment rate was steady, at 4.9%. Importantly, however, underemployment rates for males, females and all persons remain well below the average rates recorded in the 10 years prior to the onset of the COVID-19 pandemic (of 6.1%, 10.0% and 7.9%, respectively), reflecting the underlying tightness evident in the labour market (see Figure 2).

Figure 2: Underemployment rate by gender (%), March 2003 to March 2023

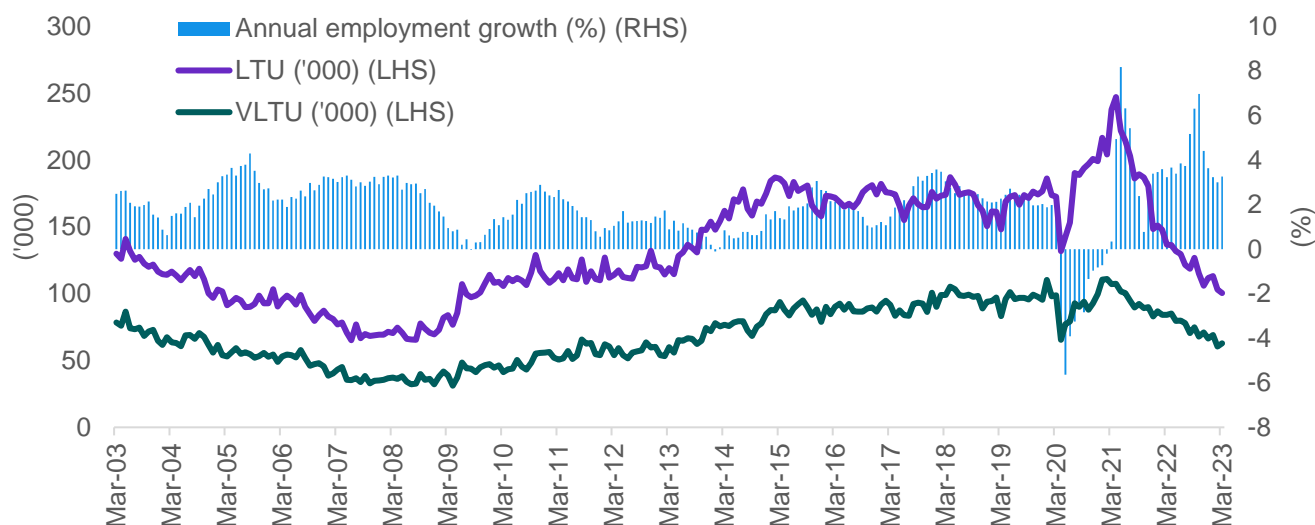


Source: ABS, *Labour Force, Australia*, March 2023, seasonally adjusted data.

Against the backdrop of strong underlying labour market conditions, long-term unemployment (LTU)¹ decreased by 11,300 (or 10.1%) over the three months to March 2023, to stand at 100,400, the lowest level recorded since September 2009 (see Figure 3).

- Female LTU declined by 4,800 (or 11.0%) over the three months to March 2023, to stand at 38,600 - the lowest level recorded since May 2009.
- Male LTU also fell over the period, by 6,500 (or 9.5%), to 61,800 in March 2023, and remains close to its lowest level (of 61,400 in February 2023) recorded since April 2013.

Figure 3: LTU and annual employment growth – March 2003 to March 2023



Source: ABS, *Labour Force, Australia, Detailed*, March 2023, seasonally adjusted data for LTU; ABS, *Labour Force, Australia*, March 2023, seasonally adjusted data for annual employment growth.

¹ Persons who are unemployed for 52 weeks or more.

State and Territory labour market outcomes

Employment rose in seven of the States and Territories but fell modestly in New South Wales over the three months to March 2023. Victoria (up by 73,400 or 2.1%) and Queensland (up by 22,300 or 0.8%) recorded the largest increases in employment over the period.

All jurisdictions recorded an unemployment rate of 4.0% or lower in March 2023. Tasmania recorded the highest unemployment rate (of 4.0%), while the Australian Capital Territory recorded the lowest rate (of 2.8%). The unemployment rate in South Australia, of 3.7% in March 2023, is the lowest rate recorded since the inception of the monthly series in February 1978.

The Northern Territory recorded the highest participation rate, of 75.2% in March 2023, while Tasmania recorded the lowest participation rate, of 63.7%.

For more in-depth analysis on regional participation rates and their relationship with vacancies, and other characteristics influencing participation, see page 21.

Wages: variability in annual growth between different indicators

The most recent wage price index for the December 2022 quarter showed wages growth of 3.3% through the year, the highest rate of annual growth since December 2012. The Federal Budget released by the Treasurer on 12 May 2023 showed Treasury's forecast for nominal growth in the wage price index is 3¾% through the year to June 2023 and 4% through the year to June 2024.

It is important to note that the wage price index does not reflect the impact on overall wages of job mobility – such as movements towards more highly-skilled jobs, or movement of workers from lower-productivity firms to higher-productivity firms. Alternative measures of wage growth seek to reflect job mobility in different ways, leading to different measures of wages growth.

For example, ABS National Accounts data can be used to calculate Average Earnings on National Accounts (AENA). AENA is designed to measure the average level of labour cost per employee and is measured as total compensation of employees divided by the total number of employees – irrespective of whether employees have changed jobs or stayed in the same job. The most recent National Accounts data showed annual growth in AENA of 4.4% for the year to December 2022.

A recent addition to published data sources with respect to measures of wages growth is the SEEK Advertised Salary Index (ASI). This measures the growth in advertised salaries for jobs posted on SEEK, an employment marketplace in Australia, after removing much of the effect of any compositional change in jobs being advertised. As this data measures growth in advertised salaries for advertised jobs, it does not reflect wages growth for workers who remain in their existing job. Nonetheless, it offers additional insight into the wages that employers are offering when trying to attract new workers. The SEEK ASI for March 2023 showed annual growth in advertised salaries of 4.7% for the year².

² SEEK, *Advertised Salary Index*, March 2023

Employment growth has varied considerably across skill levels, occupations and industries

The most recent detailed ABS Labour Force Survey data for the February 2023 quarter shows that over the quarter to February 2023, employment increased in four Skill Level³ groups and declined in one.

- The largest employment gains were for Skill Level 1 Occupations (up by 55,300, or 1.2 per cent), Skill Level 2 Occupations (up by 53,700, or 3.2 per cent) and Skill Level 5 Occupations (up by 18,300, or 0.9 per cent).
- Employment for Skill Level 4 occupations fell by 86,000 (or 2.6%) over the quarter.

Over the year to February 2023, employment increased in all five skill level groups.

- The largest employment gains were in Skill Level 3 Occupations (up by 121,700, or 6.3%), Skill Level 1 Occupations (up by 97,900, or 2.1%) and Skill Level 4 Occupations (up by 79,200, or 2.5%).

Over the year to February 2023, around 92% of total employment growth was in occupations that typically require post-school qualifications, reflecting the importance of both the higher education and VET systems to growing a high-skilled Australian workforce. 67% of total employment growth over this period was in Skill Level 2 to Skill Level 4 occupations (where VET qualifications are the primary pathway).

Table 2: Employment by Skill Level, February 2023 ('000)

Skill Levels	Feb 2023	Nov 2022	Quarterly change	Quarterly change (%)	Annual change	Annual change (%)
Skill Level 1 Occupations	4,769.3	4,714.0	55.3	1.2	97.9	2.1
Skill Level 2 Occupations	1,714.0	1,660.3	53.7	3.2	66.9	4.1
Skill Level 3 Occupations	2,060.3	2,050.6	9.7	0.5	121.7	6.3
Skill Level 4 Occupations	3,263.8	3,349.8	-86.0	-2.6	79.2	2.5
Skill Level 5 Occupations	1,993.7	1,975.4	18.3	0.9	33.6	1.7

Source: ABS, *Labour Force, Australia, Detailed*, February 2023, data seasonally adjusted by Jobs and Skills Australia.

Table 3 shows that at a major occupational group level, over the quarter to February 2023:

- Employment increased in five of the eight occupation groups.
- The largest increases in employment were recorded for Labourers (up by 41,900 or 3.5%), Clerical and Administrative Workers (up by 35,400 or 2.0%) and Technicians and Trades Workers (up by 34,500 or 1.8%).
- Employment fell the most for Sales Workers (down by 33,500 or 3.0%), Machinery Operators and Drivers (down by 5,900 or 0.7%) and Community and Personal Service Workers (down by 3,200 or 0.2%).

Over the year to February 2023:

- Employment increased in six of the eight occupation groups.
- The largest increases in employment were recorded for Community and Personal Service Workers (up by 109,300 or 7.7%), Technicians and Trades Workers (up by 85,700 or 4.7%), and Labourers (up by 84,900 or 7.3%).
- Employment fell for Sales Workers (down by 32,100 or 2.9%) and Clerical and Administrative Workers (down by 14,200 or 0.8%).

³ Skill Level 1 is commensurate with a Bachelor degree or higher qualification; Skill Level 2 is commensurate with an Advanced Diploma or Diploma; Skill Level 3 is commensurate with a Certificate IV or III (including at least 2 years' on-the-job training); Skill Level 4 is commensurate with a Certificate II or III; Skill Level 5 is commensurate with a Certificate I or secondary education.

Table 3: Employment by major Occupational Group, November 2022 ('000)

Occupation	Feb 2023	Nov 2022	Quarterly change	Quarterly change (%)	Annual change	Annual change (%)
Managers	1,830.7	1,828.6	2.0	0.1	68.6	3.9
Professionals	3,571.3	3,559.0	12.2	0.3	71.5	2.0
Technicians and Trades Workers	1,912.9	1,878.4	34.5	1.8	85.7	4.7
Community and Personal Service Workers	1,536.7	1,539.9	-3.2	-0.2	109.3	7.7
Clerical and Administrative Workers	1,773.1	1,737.7	35.4	2.0	-14.2	-0.8
Sales Workers	1,068.9	1,102.4	-33.5	-3.0	-32.1	-2.9
Machinery Operators and Drivers	886.5	892.4	-5.9	-0.7	29.5	3.4
Labourers	1,251.7	1,209.8	41.9	3.5	84.9	7.3

Source: ABS, *Labour Force, Australia, Detailed*, February 2023, data seasonally adjusted by Jobs and Skills Australia.

Similarly, the strength in the labour market since the onset of COVID-19 has been uneven across industries. Over the quarter to February 2023:

- Employment increased in 11 industries and declined in 8.
- The largest gains in employment were for Health Care and Social Assistance (up by 43,600, or 2.1 per cent), Public Administration and Safety (up by 35,300, or 4.1 per cent), Construction (up by 27,600, or 2.1 per cent) and Retail Trade (up by 20,400, or 1.5 per cent).
- The largest falls in employment were for Administrative and Support Services (down by 48,800, or 10.5 per cent), Transport, Postal and Warehousing (down by 44,500, or 6.1 per cent), Financial and Insurance Services (down by 31,900, or 5.7 per cent) and Accommodation and Food Services (down by 12,900, or 1.4 per cent).

Table 4 shows that over the year to February 2023:

- Employment increased in 12 industries and declined in seven.
- The largest gains in employment were for Construction (up by 146,200, or 12.4 per cent), Health Care and Social Assistance (up by 97,300, or 4.8 per cent), Retail Trade (up by 73,400, or 5.7 per cent) and Accommodation and Food Services (up by 44,200, or 4.9 per cent).
- The largest falls were for Rental, Hiring and Real Estate Services (down by 18,300, or 7.7 per cent), Financial and Insurance Services (down by 16,900, or 3.1 per cent), Public Administration and Safety (down by 12,700, or 1.4 per cent) and Information Media and Telecommunications (down by 6,700, or 3.3 per cent).

Table 4: Employment by Industry, November 2022 ('000)

Industry	Feb 2023	Nov 2022	Quarterly change	Quarterly change (%)	Annual change	Annual change (%)
Agriculture, Forestry and Fishing	300.9	298.3	2.7	0.9	-2.6	-0.9
Mining	290.8	284.0	6.8	2.4	-0.6	-0.2
Manufacturing	870.7	875.4	-4.7	-0.5	16.4	1.9
Electricity, Gas, Water and Waste Services	163.4	165.1	-1.7	-1.0	-3.5	-2.1
Construction	1,322.1	1,294.5	27.6	2.1	146.2	12.4
Wholesale Trade	355.7	347.5	8.2	2.4	25.7	7.8
Retail Trade	1,359.3	1,338.9	20.4	1.5	73.4	5.7
Accommodation and Food Services	937.1	950.0	-12.9	-1.4	44.2	4.9
Transport, Postal and Warehousing	683.3	727.8	-44.5	-6.1	8.4	1.2
Information Media and Telecommunications	197.1	191.2	5.8	3.1	-6.7	-3.3
Financial and Insurance Services	530.7	562.6	-31.9	-5.7	-16.9	-3.1
Rental, Hiring and Real Estate Services	219.8	219.2	0.6	0.3	-18.3	-7.7
Professional, Scientific and Technical Services	1,249.8	1,259.0	-9.2	-0.7	8.3	0.7
Administrative and Support Services	415.3	464.2	-48.8	-10.5	3.4	0.8
Public Administration and Safety	888.7	853.5	35.3	4.1	-12.7	-1.4
Education and Training	1,164.8	1,148.2	16.7	1.5	17.2	1.5
Health Care and Social Assistance	2,112.6	2,068.9	43.6	2.1	97.3	4.8
Arts and Recreation Services	242.7	251.0	-8.4	-3.3	17.0	7.5
Other Services	523.1	521.3	1.8	0.3	7.9	1.5
TOTAL EMPLOYMENT	13,850.8	13,810.2	40.5	0.3	404.4	3.0

Source: ABS, *Labour Force, Australia, Detailed*, February 2023, seasonally adjusted data.

Record employment in Health Care and Social Assistance, Construction, and Education and Training

Reflecting continued economic growth and a tight labour market, employment in Australia reached a record high in the February 2023 quarter, and employment in three of the 19 broad industry groups reached record highs over the same period:

- Health Care and Social Assistance (2,112,600, up by 43,600 or 2.1% over the quarter)
- Construction (1,322,100, up by 27,600 or 2.1% over the quarter)
- Education and Training (1,164,800, up by 16,700 or 1.5% over the quarter)

The Health Care and Social Assistance industry has experienced nine consecutive quarters of employment growth, with employment increasing by 361,100 people (and the industry growing by 20.6%) since the November 2020 quarter. This growth may be attributed to continued healthcare spending by federal and state governments during and after the COVID-19 pandemic, with 2022-23 healthcare expenditure constituting 16.8% of the Australian Government's total expenditure over the period.⁴ Strong demand for allied health services is another key driver of this growth, with the Medical and Other Health Care Services sub-industry (inclusive of allied health) recording an increase of 99,200 (or 18.2%) people employed since November 2020.

⁴ Australian Government, Budget strategy and outlook paper no. 1: 2022-23, (Canberra: Australian Government, 2022), 151. Jobs and Skills Australia: Labour Market Update, May 2023

Over the February 2023 quarter, the Health Care and Social Assistance industry grew by 43,600 people (or 2.1%). This is largely due to an increase in the Social Assistance Services sub-industry (up by 29,700 or 5.0%), with strong demand for and increased attendance hours at childcare centres a potential driver of this growth.⁵

The Construction industry has experienced seven consecutive quarters of employment growth, with employment increasing by 187,100 people (or 16.5%) since August 2021. As the economy recovered from sustained COVID-19 lockdowns in 2020 and the first half of 2021 (particularly in NSW, Victoria and WA), the construction industry rebounded despite material shortages and supply chain issues early in the pandemic recovery. The industry has seen an easing in these issues, and fewer adverse weather events compared with previous quarters, and is expected to see continued growth over at least the next year due to a large pipeline of residential and non-residential projects.⁶ There are good prospects for higher density and detached residential projects, particularly in Sydney and Melbourne due to declining vacancy rates.⁷ Over the February 2023 quarter, the Construction industry has increased by 27,600 people (or 2.1%). An increase in employment in the Construction Services sub-industry of 25,800 people (or 3.2%) has contributed to growth in the industry as supply constraints continue to ease.⁸

The Education and Training industry reached a record high in the February 2023 quarter, growing by 16,700 people (or 1.5%) over the quarter. This growth is largely due to an increase in employment in the Preschool Education sector (up by 19,700 or 23.7%), with strong demand for and increased attendance hours at preschools a contributing factor.⁹

⁵ The Property Tribune, Childcare centre market poised for growth in 2023, 2023.

⁶ RBA, *Statement on Monetary Policy*, February 2023.

⁷ RBA, *Statement on Monetary Policy*, February 2023.

⁸ ABS, Australian National Accounts: National Income, Expenditure and Product, December 2022.

⁹ The Property Tribune, Childcare centre market poised for growth in 2023, 2023.

Job advertisements and recruitment activity have stabilised

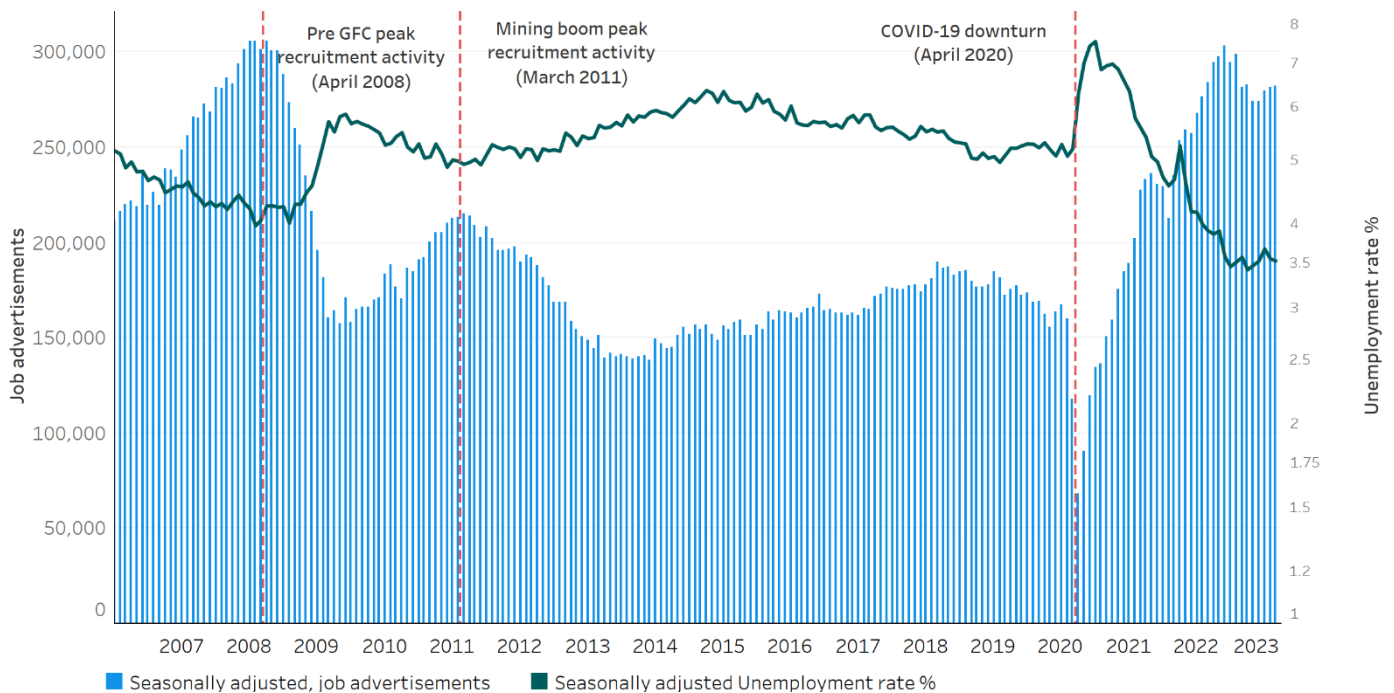
Monthly job advertisements have stabilised but remain below their mid-2022 peak

JSA's Internet Vacancy Index (IVI) (Figure 4) shows that job advertisements increased by 2.8% (or 7,700 job advertisements) between December 2022 and March 2023, to stand at 282,100. However, there has been an overall decrease in recruitment activity over the 12 months to March 2023, with job advertisements 0.7% (or 2,000 job advertisements) lower than in March 2022, and 7.0% (or 21,300 job advertisements) lower than the June 2022 peak.

That said, the level of job advertisements nationally remains significantly elevated compared to pre-COVID-19 levels. Prior to 2022, the last time IVI job advertisements exceeded 250,000 in a month was in October 2008.

Recent trends in ABS Job Vacancies data reflect similarly stable patterns in recruitment activity. The most recent ABS data recorded 438,500 job vacancies in the February 2023 quarter¹⁰, representing a decrease of 6,600 job vacancies (or 1.5%) over the quarter, but an increase of 15,200 (or 3.6%) over the year.

Figure 4: Internet Vacancy Index job advertisements and unemployment rate, January 2006 to March 2023



Source: JSA, *Internet Vacancy Index*, March 2023 and ABS, *Labour Force, Australia*, March 2023, seasonally adjusted data.

Many employers are still recruiting, with recruiting for turnover beginning to increase

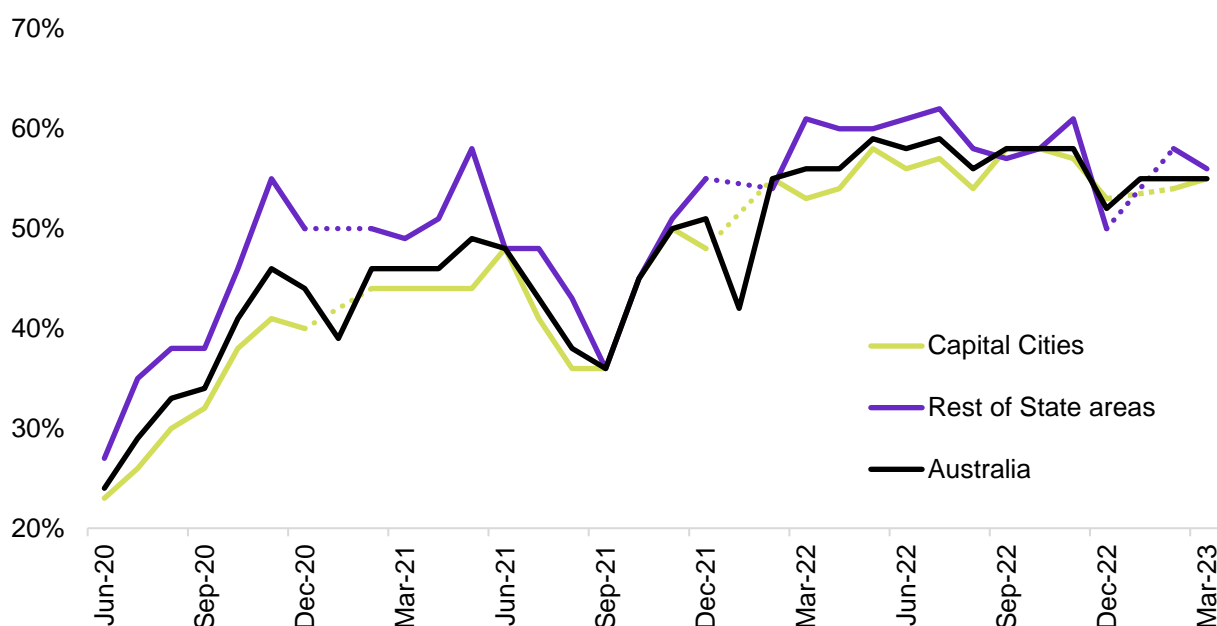
Recent results from JSA's *Recruitment Experiences and Outlook Survey* (REOS) are consistent with both the slight decline since mid-2022, and the more recent stability, in internet job advertisements.

Figure 5 shows that the proportion of employers recruiting (currently or in the past month) declined from a peak of 59% (in both May 2022 and July 2022) but has since stabilised at 55% in each month from January to March 2023.

For the quarter to March 2023, the recruitment activity rate was 55%. While this is a decline of 1 percentage point compared to the quarter to December 2022, it is two percentage points above the result for the quarter to March 2022.

¹⁰ ABS, *Job Vacancies, Australia*, February 2023, seasonally adjusted data.

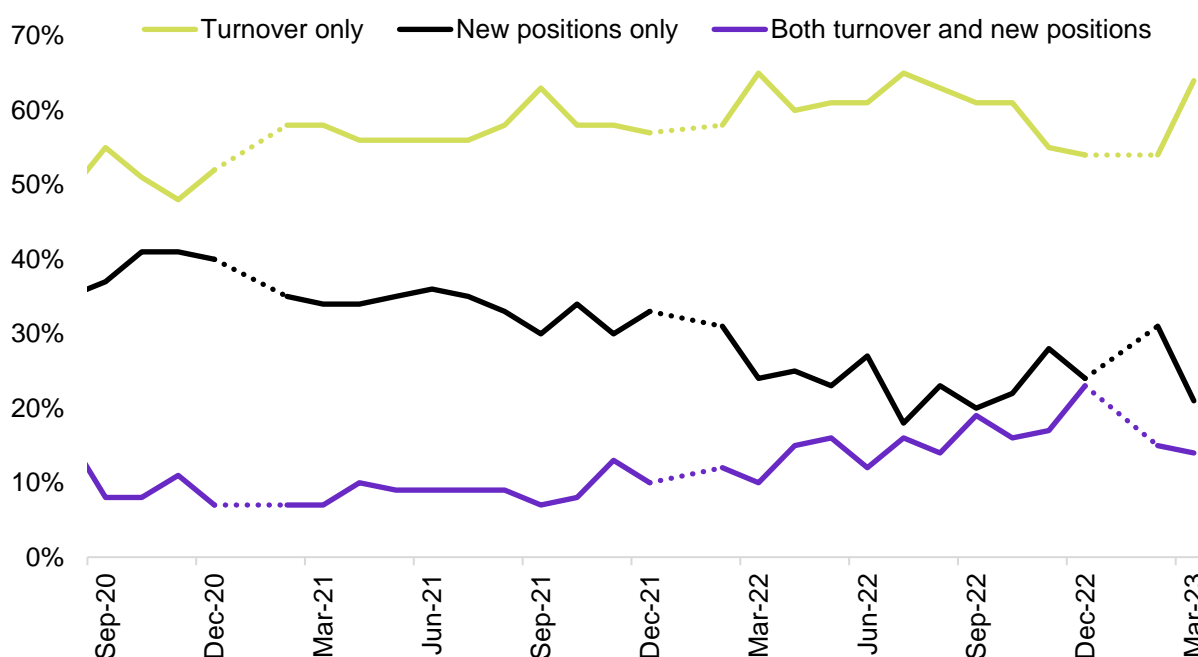
Figure 5: Proportion of employers currently recruiting or who recruited in the past month, June 2020 to March 2023



Source: JSA, *Recruitment Experiences and Outlook Survey*, March 2023. Please note: Disaggregated data was not publishable in January of each year; hence relevant data points have been joined by a dotted line.

Figure 6 shows that turnover remains the primary reason for employers to recruit, with 64% of employers recruiting for turnover only and a further 14% recruiting for a mix of both turnover and new roles in March 2023. The March 2023 result reverses a trend seen from July 2022 through to February 2023, where recruiting for turnover only had been declining. Indeed, 64% of employers recruiting for turnover only in March 2023 is almost at the record peak (of 65%) recorded in March 2022 and July 2022, and 10 percentage points higher than was recorded in February 2023.

Figure 6: Reasons for recruitment (proportion of recruiting employers), August 2020 to March 2023



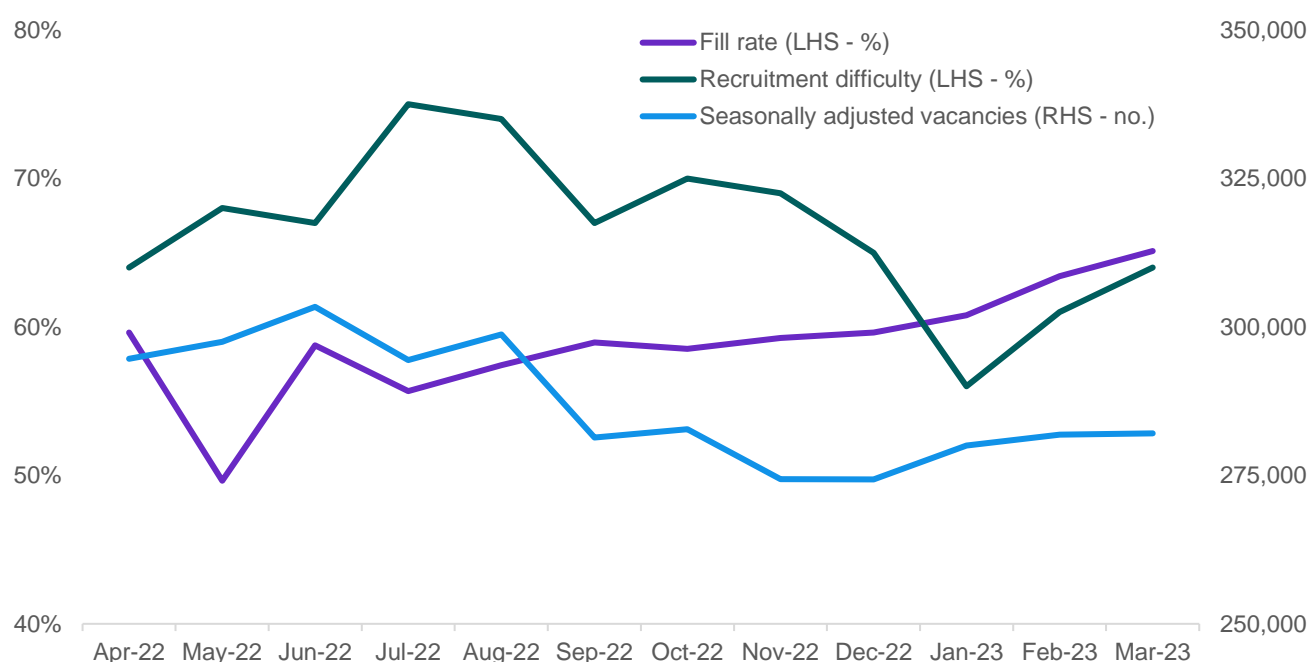
Source: JSA, *Recruitment Experiences and Outlook Survey*, December 2022. Please note: Disaggregated data was not publishable in January of each year; hence relevant data points have been joined by a dotted line.

Recruitment difficulty has eased slightly, as more advertised roles are being filled

Data from JSA's Survey of Employers who have Recently Advertised (SERA), shows that the percentage of occupation vacancies that have been filled (or the fill rate) have continued to rise.¹¹

The fill rate has moved up consistently from around 55% in July 2022 to 65% in March 2023 (see Figure 7). Growth in labour demand as measured by JSA's IVI have also eased in recent months. Recruitment difficulty, while increasing in March 2023 to 64%, remains well below levels recorded in mid-2022. Further, the percentage of employers recruiting has remained stable at 55%. Alongside rising fill rates, these additional indicators point to potential softening in the labour market.

Figure 7: Monthly fill rate (SERA), recruitment difficulty (REOS) and internet vacancies (IVI), March 2021 to March 2023



Source: JSA, Survey of Employers who have Recently Advertised, 2023; JSA, Recruitment Experiences and Outlook Survey, March 2023; JSA, Internet Vacancy Index, March 2023.

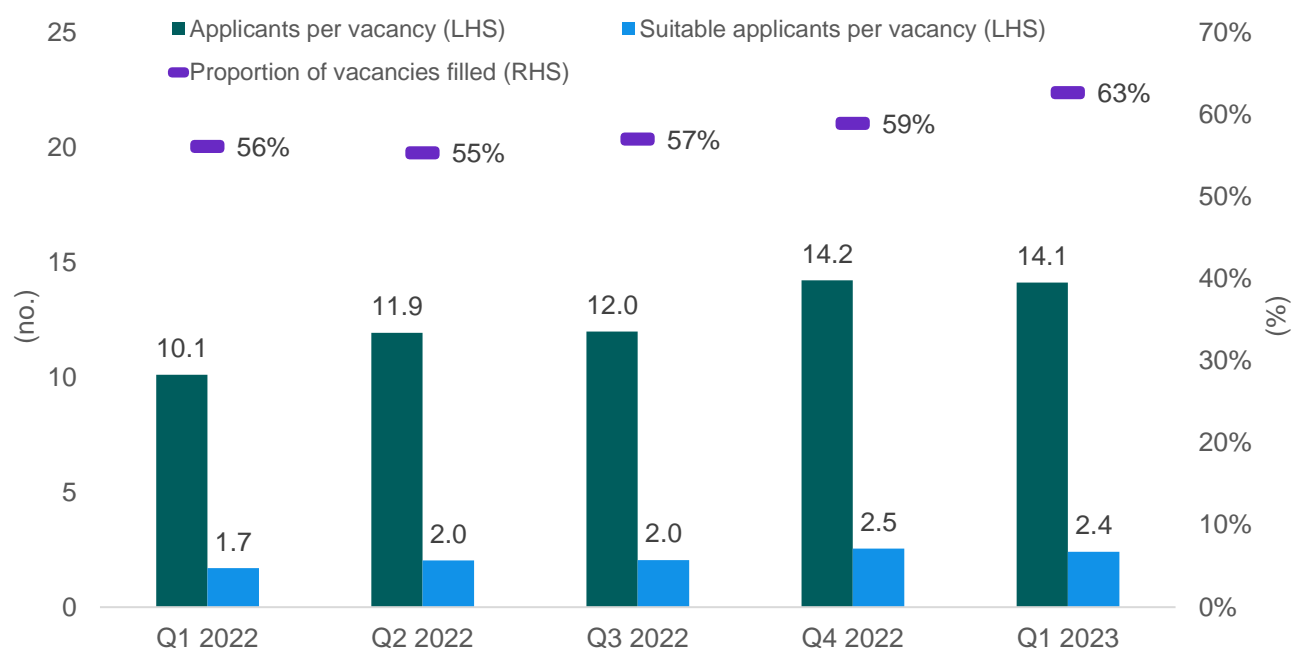
In addition to increased fill rates, applicant numbers – a proxy for labour supply – have also improved and were significantly higher than they were one year ago (see Figure 8). The average number of applicants per vacancy has increased from 10.1 in the March 2022 quarter to 14.1 in the March 2023 quarter, an increase of around 40% over 12 months. Further, the average number of suitable applicants per vacancy has increased from 1.7 in the March 2022 quarter to 2.4 in the March 2023 quarter.

The increase of around 40% in the average number of applicants per vacancy over the past year that is highlighted by JSA's SERA data reflects similar patterns to recent data released by SEEK¹². The March 2023 SEEK Employment Report highlighted that average applications per SEEK job advertisement rose by 4.0% month-on-month (from January 2023 to February 2023) and by 48.5% over the past 12 months.

¹¹ The survey primarily covers ANZSCO Skill Level 1-3 occupations.

¹² SEEK, *Employment Report*, March 2023, *seasonally adjusted data*.
Jobs and Skills Australia: Labour Market Update, May 2023

Figure 8: Quarterly fill rate (%), applicants and suitable applicants per vacancy (no.), 2022 to 2023



Source: JSA, *Survey of Employers who have Recently Advertised, 2022 - 2023*

From a major occupational group perspective, employers had the most difficulty filling vacancies for Technicians and Trades Workers, with just 49% of vacancies filled in the March 2023 quarter. Shortages within this broad group of occupations appear to be persistent over time. The proportion of vacancies filled were particularly low during the March 2023 quarter for:

- Construction Trades Workers (28%);
- Automotive and Engineering Trades Workers (35%); and
- Electrotechnology and Telecommunications Trades Workers (35%)

JSA analysis suggests that employers seek skills beyond those provided by qualifications. The most common reason employers stated for applicants not being suitable was a lack of experience and specific skills. On average, employers received 4.3 qualified applicants per vacancy, more than twice the number of applicants than were deemed suitable (2.1 applicants per vacancy). This implies that the issues with low fill rates are not simply a matter of not enough people being formally educated in the field - but a mismatch between employer requirements for experienced staff with the required skills and the availability of such staff.

Labour demand and recruitment difficulty remain highest for the higher skill levels

Some of the recent trends in the percentage growth (or in some cases, decline) of IVI job advertisements should be viewed in the context of overall job advertisement volumes and employment growth.

For example, the percentage growth in job advertisements is highest for Skill Level 1 (up by 6.6%) and lowest for Skill Level 5 (down by 16.4%), compared to twelve months ago. As Table 5 highlights, the number of Skill Level 1 job advertisements far outweighs the other skill levels - making up more than one-third of all advertisements.

Table 5: Internet Vacancy Index job vacancies by Skill Level – March 2023

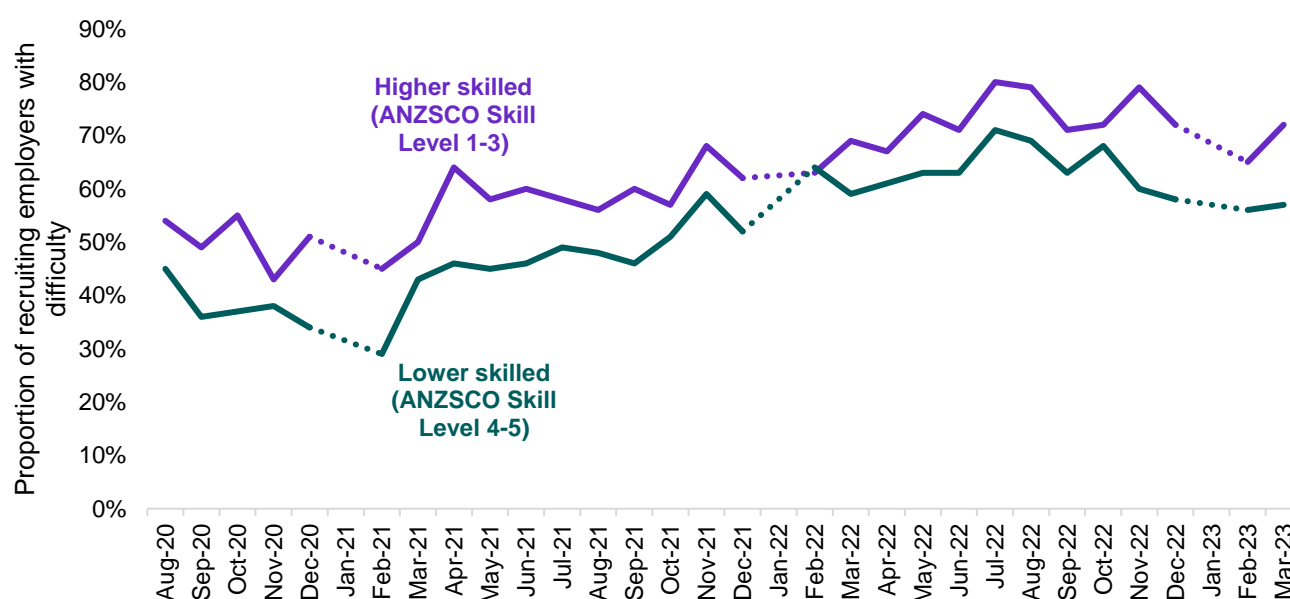
IVI by Skill Level – March 2023	Quarterly change (%)	Quarterly change (no.)	Annual change (%)	Annual change (no.)	Number of job advertisements
Skill Level 1 - Bachelor degree or higher	3.4%	3,400	6.6%	6,500	103,800
Skill Level 2 - Advanced Diploma or Diploma	3.3%	960	0.8%	240	30,000
Skill Level 3 - Certificate IV or III*	2.9%	1,200	-1.2%	-490	41,300
Skill Level 4 - Certificate II or III	3.7%	2,600	-2.7%	-2,000	74,500
Skill Level 5 - Certificate I or secondary education	-0.5%	-150	-16.4%	-6,400	32,300
Australia	2.8%	7,700	-0.7%	-2,000	282,100

The skill level of an occupation is based on the level of educational attainment/experience normally required to work in the occupation according to the Australian and New Zealand Standard Classification of Occupations (ANZSCO). *Includes at least two years of on-the-job training.

Source: JSA, *Internet Vacancy Index*, March 2023

Figure 9 shows that higher-skilled occupations also remain more difficult to recruit for compared with lower-skilled occupations, with difficulty rates for recruiting employers of 72% (for Skill Level 1 to 3 occupations) and 57% (for Skill Level 4 and 5 occupations) respectively in March 2023.

Figure 9: Difficulty by skill level of occupation (as a proportion of recruiting employers), August 2020 to March 2023



Source: JSA, *Recruitment Experiences and Outlook Survey*, March 2023. Please note: Disaggregated data was not publishable in January of each year; hence relevant data points have been joined by a dotted line.

Labour markets are similarly tight in many other countries

The outlook for labour markets in advanced economies remains strong

The International Monetary Fund (IMF)¹³ has found that labour markets in advanced economies, especially the United States (US), are strong. Other findings from the IMF's April 2023 World Economic Outlook report include:

- Incomes are expected to grow slowly over 2023, and unemployment is expected to rise by the end of the year.
- Unemployment rates are at historic lows, while vacancies per employed person are high in the US and the Euro area.

OECD data points toward tight labour markets in many countries, highlighting increasing global challenges for employers in finding workers with the required skills. Figure 10 shows that while about two-thirds of OECD nations currently have an unemployment rate that is below the level recorded in February 2020 (prior to the COVID-19 pandemic), Australia's unemployment rate decline is among the larger.

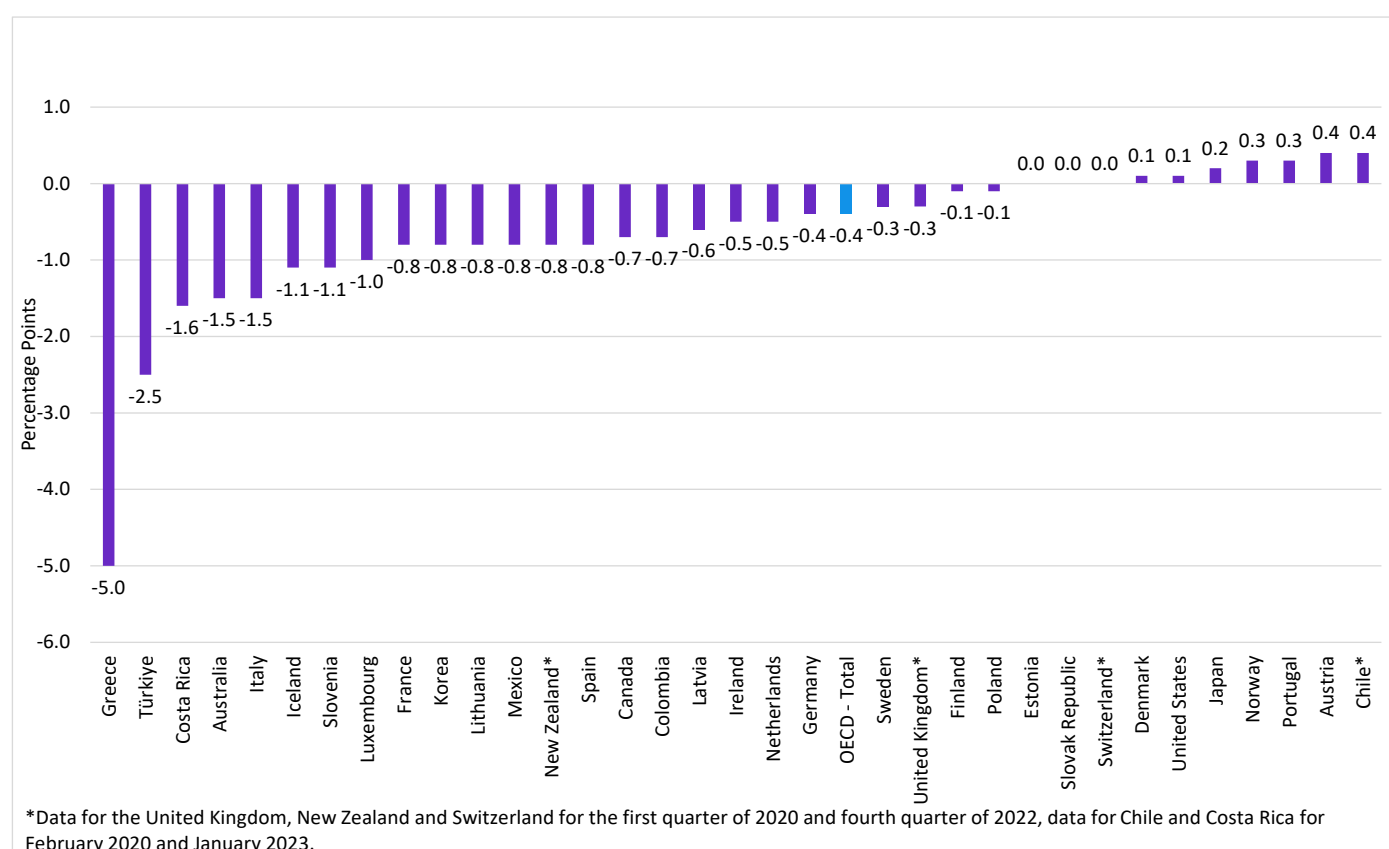


Figure 10: Changes in Unemployment Rates—OECD countries, February 2020 to February 2023 (percentage points)

Source: *OECDStat* (JSA staff calculations)

Job vacancy levels have grown more strongly in Australia than in other countries

Job vacancies have grown significantly beyond their pre-COVID levels in Australia and selected economies. However, in comparison to the US, United Kingdom (UK) and New Zealand (NZ), job vacancies continued to increase in Australia following the opening of international borders. See Figure 11 below.

¹³ <https://www.imf.org/en/Publications/WEO/Issues/2023/04/11/world-economic-outlook-april-2023>

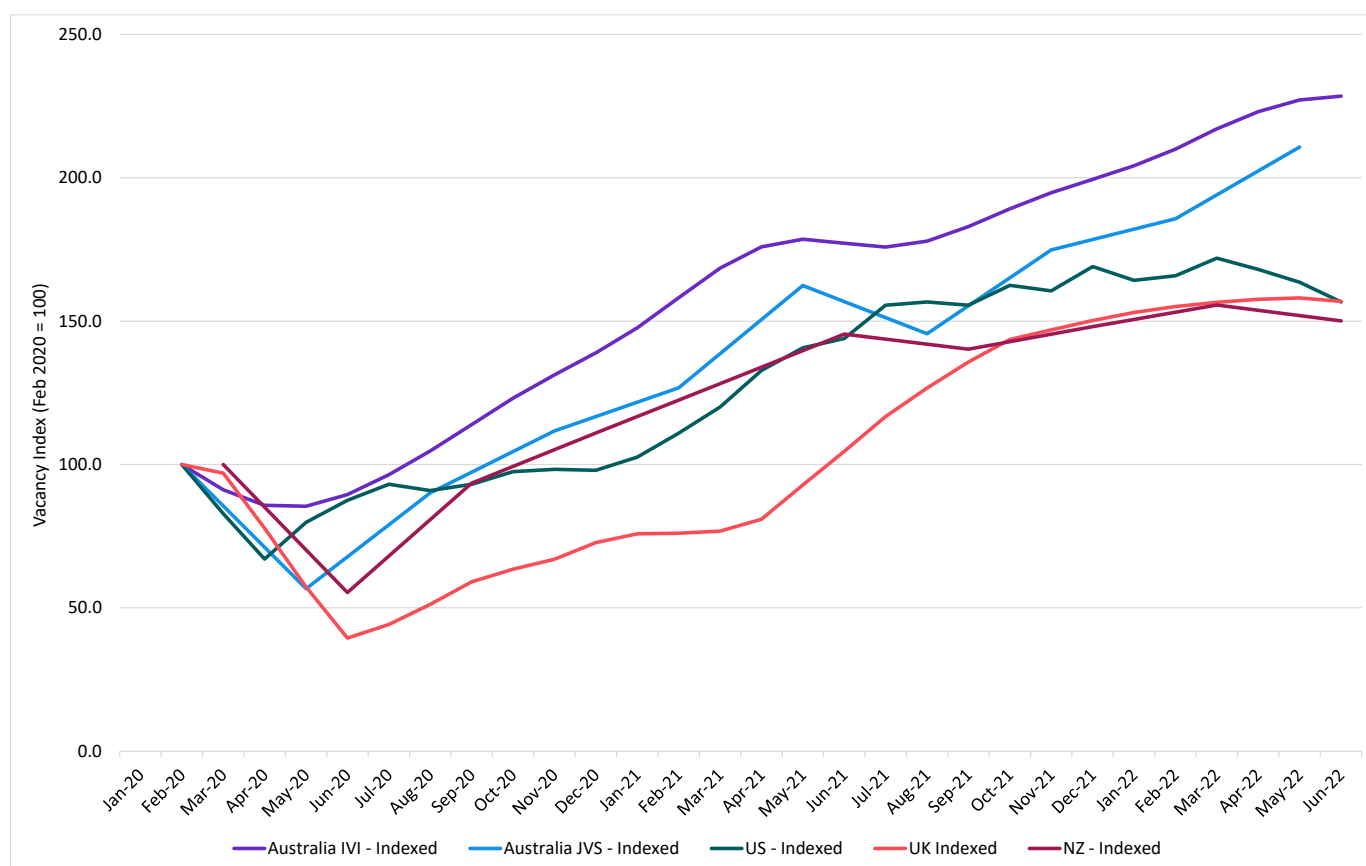


Figure 11: Job vacancies in Australia, United States, United Kingdom and New Zealand—2020 to 2023

Source: JSA, *Internet Vacancies Index, seasonally adjusted*; ABS *Job Vacancy Survey, seasonally adjusted*; New Zealand Ministry of Business, Innovation and Employment *Quarterly Jobs Online Index, seasonally adjusted*; U.S. Bureau of Labor Statistics, *Job Openings and Labor Turnover Survey, US job openings: total nonfarm, rate, monthly, seasonally adjusted*; UK Office for National Statistics, *UK Vacancies per 100 employee jobs, Vacancy Survey*.

Many current global skill shortages align with Australian findings

While methodologies for assessing skill shortages vary between countries, recently released international findings align with Jobs and Skills Australia analysis, and the 2022 Skills Priority List (SPL) findings. For example, a 2022 report from Eurofund¹⁴ found that:

- As European Union (EU) economies begin to recover from the pandemic, labour shortages are becoming increasingly evident despite the impact of the war in Ukraine on energy and commodity prices.
- Labour shortages in the EU are particularly prevalent in sectors with challenging working conditions, such as health and long-term care. Low levels of investment coupled with the impact of the pandemic and a gender segregated labour market are contributing to the shortages. The EU's ageing population and workforce is set to exacerbate these shortages in the coming years.
- EU economies continue to experience shortages in the information and communications technology (ICT) sector and in the context of the green and digital transformation where skills mismatch is the biggest driver of shortages.

Analysis by the World Economic Forum (WEF)¹⁵ also found that the scarcity of skilled workers has been exacerbated by the COVID-19 pandemic and an ageing population. The WEF noted that in February 2023, job openings in the US exceeded 9.9 million, yet there were 5.8 million unemployed Americans. While there are many reasons for this discrepancy, it often comes down to skills—during a period where employers across many industries faced difficulties in filling vacancies, the degree requirement in the US eliminates 64 per cent of working age adults who don't possess a bachelor's degree.

¹⁴ [Measures to tackle labour shortages: Lessons for future policy | \(europa.eu\)](https://european-council.europa.eu/media/en/press-summaries/Pages/13222.aspx)

¹⁵ [Why skills first hiring could solve the talent shortage | World Economic Forum \(weforum.org\)](https://www.weforum.org/publications/why-skills-first-hiring-could-solve-the-talent-shortage/)

Key national skills needs

Categorising skills pressures – preliminary analysis

JSA's February 2023 labour market update (reflecting data for the December 2022 quarter) introduced preliminary analysis of classifying skills shortages, focused on the top 20 occupations in demand. In this labour market update, we have expanded that analysis to key Clerical and Administrative Worker, Sales Worker, Machinery Operators and Driver, and Labourer occupations that are currently in national shortage.

There are many different potential causes of a skills shortage, which in turn may lead to different levels of effectiveness associated with a particular strategy used by employers, or a particular policy response used by governments. In 2007, Sue Richardson¹⁶ suggested the following scheme for classifying skills shortages (which JSA has adopted for its analysis):

- **Level 1 shortage:** There are few people who have the essential technical skills who are not already using them and there is a long training time to develop the skills.
- **Level 2 shortage:** There are few people who have the essential technical skills who are not already using them but there is a short training time to develop the skills.
- **Skills mismatch:** There are sufficient people who have the essential technical skills who are not already using them, but they are not willing to apply for the vacancies under current conditions.
- **Suitability gap**¹⁷: There are sufficient people with the essential technical skills who are not already using them and who are willing to apply for the vacancies, but they lack some qualities that employers consider are important.

We have analysed existing data sources to gain a preliminary and partial view of where current skills shortages may fit within the framework suggested by Richardson. In particular:

- analysis of occupation-specific job mobility and employment levels may assist in identifying where 'Skills mismatch' is a potential cause of shortages for some occupations; and
- analysis of SERA data may assist in identifying where 'Suitability gap' is a potential cause of shortages for some occupations

The most recent ABS data on job mobility shows that 1.3 million people changed jobs during the year ending February 2022, equating to a job mobility rate of 9.5% of all employed people. This was the highest rate of job mobility since 2012 in the annual series.

The same ABS data release also provides job mobility at an occupational level (3-digit ANZSCO level is the most detailed data available), to assess where occupations have job mobility that is clearly above (or clearly below) the economy-wide average. Occupations with higher job mobility will have lower rates of retention, and vice versa.

This ABS data highlights that many (though not all) occupations in ANZSCO Major Groups 5 to 8 (Clerical and Administrative Workers, Sales Workers; Machinery Operators and Drivers; and Labourers respectively) have job mobility rates that were significantly above the economy-wide figure, indicating challenges with retention of existing workers. More detailed analysis of job mobility for specific occupations in ANZSCO Major Groups 5 to 8 that are in national shortage found that:

- 10 occupations had a job mobility rate that was significantly above the economy-wide figure, indicating challenges with retention of existing workers (Contract, Program and Project Administrators; Insurance Agents; Industrial Spraypainters; Crane, Hoist and Lift Operators; Drillers, Miners and Shot Firers; Agricultural, Forestry and Horticultural Plant Operators; Earthmoving Plant Operators; Insulation and Home Improvement Installers; Structural Steel Construction Workers; and Meat Boners and Slicers, and Slaughterers);
- two occupations had a job mobility rate that was within 2 percentage points of the economy-wide figure (Bus and Coach Drivers; and Truck Drivers); and

¹⁶ Richardson S, *What is a skills shortage?*, National Centre for Vocational Education Research paper, 2007.

¹⁷ This was originally described as a Quality gap in the 2007 analysis.

- no occupations had a job mobility rate that was significantly below the economy-wide figure, which would have indicated strong rates of worker retention.

For occupations where job mobility is significantly above the economy-wide figure (indicating challenges with retention of existing workers), data from SERA on the *total* number of applicants per vacancy can be used as an additional indicator of the relative attractiveness of an occupation.

As noted above, 10 occupations in ANZSCO Major Groups 5 to 8 demonstrated challenges with retention of existing workers. JSA's February 2023 Labour Market Report also identified Child Carers and Aged and Disabled Carers as meeting these criteria. Analysing SERA data on the total number of applicants for these 12 occupations shows that:

- six occupations had a total applicants-per-vacancy figure that was significantly below the economy-wide figure, indicating below-average levels of attractiveness (Child Carers; Aged and Disabled Carers; Drillers, Miners and Shot Firers; Earthmoving Plant Operators; Insulation and Home Improvement Installers; and Structural Steel Construction Workers);
- one occupation had a total applicants-per-vacancy figure that was broadly comparable with the economy-wide figure (Insurance Agents);
- one occupation had a total applicants-per-vacancy figure that was significantly above the economy-wide figure (Contract, Program and Project Administrators); and
- four occupations had either no SERA data, or insufficient SERA data to make a robust assessment (Industrial Spraypainters; Crane, Hoist and Lift Operators; Agricultural, Forestry and Horticultural Plant Operators; Meat Boners and Slicers, and Slaughterers).

For occupations where relevant available data does not point to retention of workers being a challenge, data from SERA on the number of *qualified* applicants per vacancy and the number of *suitable* applicants per vacancy can then be used to assess the likelihood that there is some level of mismatch in each occupation.

Labour markets for occupations often differ - employers across different occupations generally receive different numbers of applicants, have different mandatory qualification and experience requirements, and therefore find different proportions of applicants to be suitable.

Occupations noted above as having an above-average job mobility rate also exhibited below-average levels of total applicants per vacancy (where relevant SERA data was available).

For the two occupations where job mobility rates were within 2 percentage points of the economy-wide figure, SERA data highlights that:

- Advertisements for Bus and Coach Drivers received an average of 1.8 qualified and 1.1 suitable applicants per vacancy; and
- Advertisements for Truck Drivers received an average of 4.0 qualified and 1.4 suitable applicants per vacancy; and

If every qualified applicant was also suitable for a position, there would be a one-to-one relationship between these metrics. However, many occupations in shortage have fewer than one suitable applicant for every two qualified applicants.

This analysis reinforces that employers seek additional skills and experience in candidates, beyond the technical skills provided by qualifications.

Using available ABS and SERA data, occupations can be classified into the four categories outlined above using this data (see Table 6, which reflects occupations assessed in both the February and May 2023 JSA Labour Market Updates).

- Occupations with average or below-average job mobility and few (an average of fewer than three) qualified applicants per vacancy are classified as level 1 or level 2 shortages (depending on education requirements).
- Occupations with average or below-average job mobility; an average of more than four qualified applicants per vacancy; and a low proportion of suitable applicants (per qualified applicant) are classified as having a suitability gap.
- Occupations with significantly above-average job mobility are classified as having a skills mismatch.

- Some occupations will require further data and analysis before they can be categorised.

For example, Motor Mechanics are most likely a level 1 shortage based on these definitions, with low numbers of people with the essential skills to fill available positions and with lengthy training requirements (Certificate III/IV and an apprenticeship) needed for the role. Conversely, shortages for Civil Engineering Professionals appear to be driven by a suitability gap, with large numbers of applicants who have the right qualifications, but with many of these people lacking some other qualities that employers consider as important.

Table 6: Preliminary JSA shortage classifications, March 2023

Classification of skills shortage	Top 20 occupations in demand	Occupations in ANZSCO Major Groups 5 to 8*
Level 1 shortage Few qualified applicants per vacancy, Bachelor degree, Certificate IV or apprenticeship required	<ul style="list-style-type: none"> • Motor Mechanics • Early Childhood (Pre-primary School) Teachers • Electricians • Metal Fitters and Machinists • Physiotherapists 	
Level 2 shortage Few qualified applicants per vacancy, Certificate I-III or less required	<ul style="list-style-type: none"> • Gardeners • Retail Managers 	<ul style="list-style-type: none"> • Bus and Coach Drivers
Suitability gap¹⁸ Many qualified applicants per vacancy, but few suitable applicants per qualified applicant	<ul style="list-style-type: none"> • Civil Engineering Professionals • Chefs • Construction Managers • Software and Applications Programmers • ICT Business and Systems Analysts • Database and Systems Administrators, and ICT Security Specialists • Advertising and Marketing Professionals 	
Skills mismatch Above-average job mobility (below-average rates of retention), potentially reinforced by low number of new applicants per vacancy	<ul style="list-style-type: none"> • Child Carers • Aged and Disabled Carers • Contract, Program and Project Administrators 	<ul style="list-style-type: none"> • Insurance Agents • Industrial Spraypainters • Crane, Hoist and Lift Operators • Drillers, Miners and Shot Firers • Agricultural, Forestry and Horticultural Plant Operators • Earthmoving Plant Operators • Insulation and Home Improvement Installers • Structural Steel Construction Workers • Meat Boners and Slicers, and Slaughterers
Yet to be determined Further data and analysis required before these occupations can be confidently classified	<ul style="list-style-type: none"> • Registered Nurses • General Practitioners and Resident Medical Officers • Mining Engineers 	<ul style="list-style-type: none"> • Truck Drivers

* Please note: Contract, Program and Project Administrators is an occupation that is both in the top 20 in national demand, and in ANZSCO Major Occupational Group 5. For the table above, this occupation is assigned to the top 20 occupations in demand column. The occupations that are bolded report below average new applicants per vacancy.

Not all skill shortages are the same, and the challenges faced in findings workers vary by occupation. Further analysis using additional sources will contribute to a better understanding of skill shortages in the labour market and how best to address them.

¹⁸ This was originally described as a Quality gap in the 2007 analysis.

Deep dive into key skills needs for regional labour markets

Key findings of deep dive

- Employers in regional areas are less likely to use internet job boards, such as those reflected in JSA's Internet Vacancy Index, to advertise vacancies than is the case for employers in capital cities. However, once this difference in recruitment methods is considered, overall vacancy rates (vacancies as a percentage of employment) in regional areas are similar to those of capital cities.
- At the Greater Capital City Statistical Area (GCCSA) level, regions with high vacancy rates also tend to exhibit high rates of labour force participation. However, when analysing more granular Statistical Area 4 (SA4) regions, the relationship between participation rates and vacancy rates becomes less clear, as a range of other region-specific factors influence the level of labour force participation.
- Recruitment difficulty in regional areas remains slightly higher than in capital cities, in contrast to the pre-COVID trend of recruitment difficulty being higher in capital cities. There also tends to be a positive correlation between the share of employers that are recruiting and recruitment difficulty.
- The likelihood of filling an advertised vacancy (the fill rate) and key applicant-per-vacancy metrics are higher in capital cities than in regional areas. This is despite regional employers requiring fewer years of relevant labour experience (on average) than employers in capital cities.
- Regional employers are more likely to report 'location' as the reason vacant positions remained unfilled. This is particularly true for regional employers of Hospitality Workers, Construction Trades Workers, Skilled Animal, Agriculture and Horticulture Workers, ICT Professionals and Education Professionals.
- Consistent with the findings of a recent Parliamentary Committee review into the provision of general practitioner and related primary health services, many regional areas exhibit much higher vacancy ratios for General Practitioners and Resident Medical Officers than are recorded for capital cities.

Recruitment methods vary across regions, which affects vacancy rate estimates

To help gain a better understanding of regional skills pressures, an indicator based on the ratio of online job ads (IVI) to employment at the regional level, can be combined with findings from the 2022 Skills Priority List to test current labour demand pressures for occupations on a region-by-region basis¹⁹. By examining similar figures for particular occupations that are assessed as being in shortage, the regions also experiencing high vacancy rates can also be identified. In effect, this provides an indication of the variations in regional skills pressures for any given occupation.

However, in making these comparisons, it is also important to recognise that recruitment methods vary across regions. Some regions use internet job boards (such as those captured in the IVI) for a high proportion of their total recruitment activity, while other regions use internet job boards less frequently, focusing more on recruitment methods such as social media and word of mouth. Equally, REOS data shows that internet job boards are more frequently used when in recruiting for higher skill level jobs.

JSA will be undertaking analysis in the coming months to develop estimates of a more comprehensive vacancy rate that considers the variations in recruitment methods observed between states and territories, between capital cities and regional areas, and between higher skill level and lower skill level jobs. However, at a headline level it is worth noting that:

- The current national IVI vacancy ratio is around 2.0% (based on 282,000 job ads and just under 14 million employed persons). REOS data indicates that in 2022, around 63% of all recruitment activity used an internet job board, inferring that a comprehensive national vacancy rate would be around 3.2%.
- For capital cities, the current national IVI vacancy ratio is around 2.2%. REOS data indicates that in 2022, around 68% of all recruitment activity used an internet job board, inferring that a comprehensive capital city vacancy rate would be around 3.2%.

¹⁹ The regional skills pressure indicator relies upon the Nowcast of Employment by Region and Occupation (NERO). NERO has been used to develop and publish monthly estimates of current employment levels for 355 occupations across 88 regions, with more than 31,000 observations for any one month. Prior to the release of NERO, detailed data of employment by occupation and region were only readily available every five years from the ABS Census of Population and Housing.

- For regional areas outside of capital cities, the current national IVI vacancy ratio is around 1.6%. REOS data indicates that in 2022, around 53% of all recruitment activity used an internet job board, inferring that a comprehensive regional area vacancy rate would be around 3.0%.

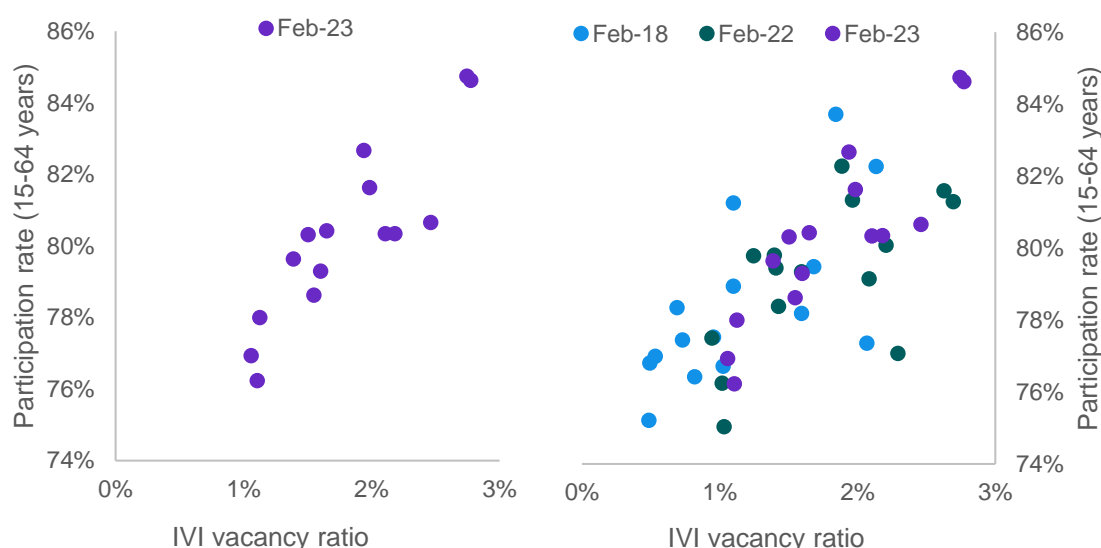
While the following analysis reflects IVI vacancy ratios alone, it is worth understanding differences in recruitment methods when comparing results, particularly between capital cities and regional areas.

Regional participation rates are driven by many factors, including (but not limited to) vacancy rates

Australia's labour market strength has been broadly based, with high levels of job advertisements across the states and territories, as well as low rates of unemployment and high rates of labour force participation, as strong labour market conditions have encouraged more people to enter the labour force.

The vacancy rate (job vacancies as a share of employment) can also be a useful indicator of underlying labour market dynamism. Unsurprisingly, given the strong labour market conditions currently prevailing, the IVI vacancy ratio remains high, at around 2.0%, well above the recent low of 0.9% recorded in September 2020. Figure 12, below (left panel), plots the working age (15-64 years) participation rate against the IVI vacancy ratio.²⁰ As illustrated, at the Greater Capital City Statistical Area (GCCSA) level,²¹ regions with high vacancy rates also tend to exhibit high rates of labour force participation.

Figure 12: Scatter plots of the working age participation rate and the IVI vacancy ratio by GCCSA, February 2023



Source: JSA, *Internet Vacancy Index*, February 2023; JSA, *Nowcast of Employment by Region and Occupation*, February 2023; ABS, *Labour Force, Australia, Detailed*, February 2023. All data are in 6-month average terms.

The left scatter plot shows that there is a clear relationship between the participation rate and the vacancy rate although the correlation also tends to vary (as shown in the right panel). It is worth noting, however, that current labour market conditions are stronger than normal. It is a little unclear, therefore, about the extent to which this relationship would hold during periods of somewhat softer labour market conditions.

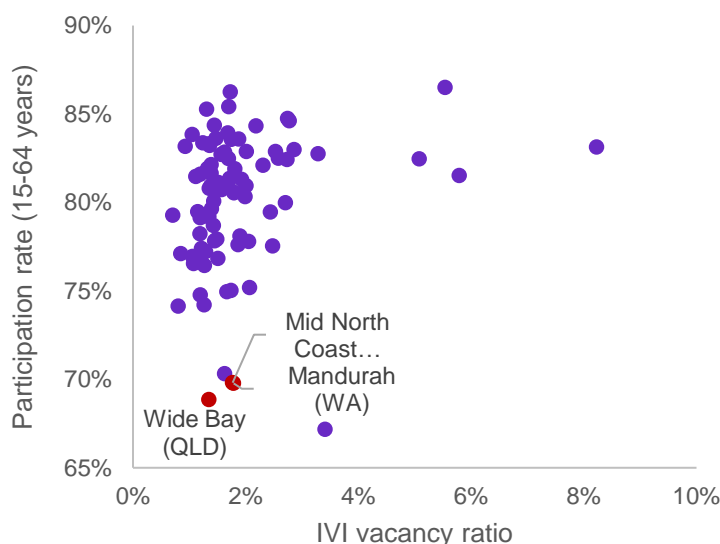
Regional labour market characteristics, and their impact on participation rates, can be complex, so it is unsurprising that the degree to which high vacancy rates are associated with high rates of labour force participation varies somewhat, even at the GCCSA level.²² Indeed, as shown in Figure 13, the relationship between the participation and vacancy rate is substantially weaker at the Statistical Area 4 (SA4) level.

²⁰ The working age participation rate was used in an attempt to account, to some extent, for the impact that the age profile of a given region has on its participation rate. Older age cohorts typically have lower rates of labour force participation, so regions with older populations are more likely to have lower participation rates by virtue of the age distribution of the population.

²¹ In the ABS' GCCSA structure, each state and the Northern Territory comprises a 'capital city' and a 'rest of state' area. The ACT is not split in this way and is labelled as capital city.

²² JSA analysis found that the coefficient of determination (R^2 or "R-squared") averaged 0.50 over the 5 years between February 2018 and February 2023, with a range of 0.24 to 0.78, suggesting that differences in the vacancy rate only *partially* explain differences in the participation rate, and the degree to which they do varies substantially over time, as labour market circumstances change.

Figure 13: Scatter plot of the working age participation rate and the IVI-NERO vacancy rate by SA4, February 2023



Source: JSA, *Internet Vacancy Index*, February 2023; JSA, *Nowcast of Employment by Region and Occupation*, February 2023; ABS, *Labour Force, Australia, Detailed*, February 2023. All data are in 6-month average terms.

While it is clear that the strength of underlying labour market conditions has a direct impact on the participation rate, some regions have a low participation rate that cannot readily be explained by the vacancy rate alone. Indeed, a number of factors can influence a region's participation rate, including:

- Age profile – regions with older populations (i.e. with a larger share of their population in older age cohorts) tend to have lower rates of labour force participation;
- Human capital (i.e. level of education) – lower levels of educational attainment are associated with lower rates of labour force participation;
- Transport infrastructure and population density – if fewer jobs are within travelling distance, it is also less likely that job seekers will be matched to jobs in that region;
- A region's industry structure/concentration and the strengths of the main employing industries in the region;
- The rate of population growth; and
- A region's natural amenity.

Examining these factors can help to explain why low participation rates are not universally associated with low vacancy rates at the SA4 level. Put another way, while there is a reasonable relationship between vacancies and a region's participation rate, there are key factors outside the encouraged worker effect that will be impacting on some SA4s more than others, which are outliers.

To cite some examples, the SA4s of Wide Bay (Queensland), Mid North Coast (New South Wales) and Mandurah (Western Australia) (marked with a red dot in Figure 13) each have very low rates of working age labour force participation and yet two of the three regions have IVI vacancy ratios that are only slightly below the national average (Mid-North Coast and Mandurah, both with IVI vacancy ratios of 1.8%).

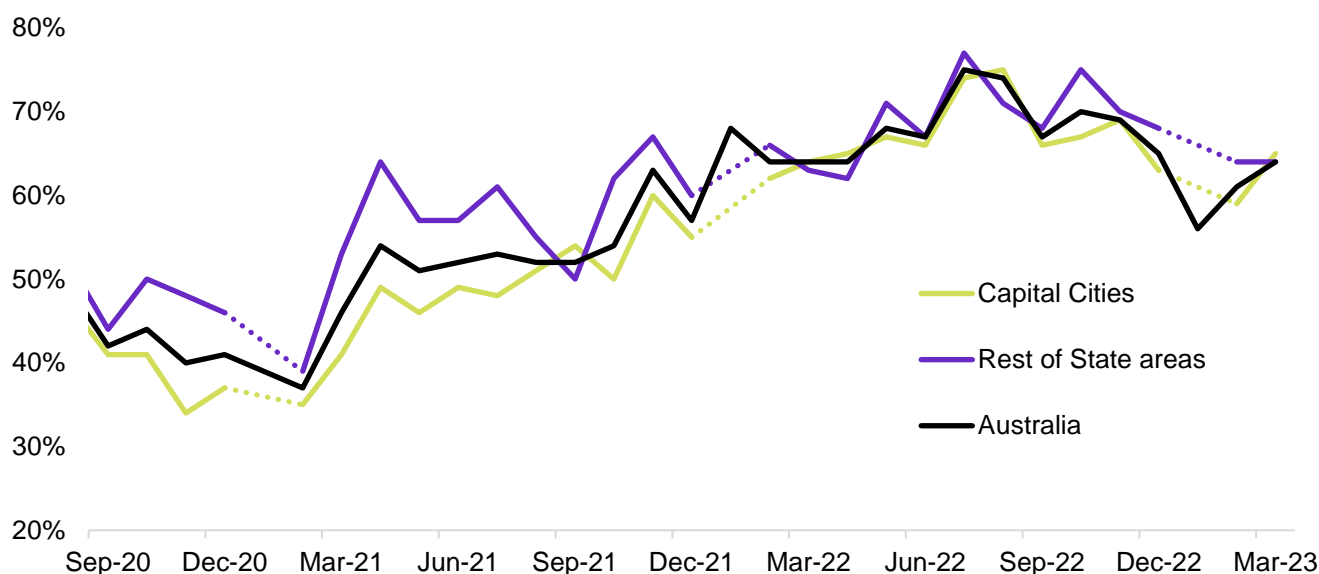
The factors affecting labour force participation, listed above, help to explain the low participation rate in these three regions. For instance, the regions have a population with an older demographic, have below-average levels of educational attainment, have a far more concentrated industry structure and, for Mid North Coast and Wide Bay, lack a close transport link to a more dynamic, capital city labour market. It is also worth noting that each region has a history of labour market disadvantage. Quite clearly, a number of factors impact on labour force participation, which can vary, depending on the specific characteristics of individual regions.

Comparing recruitment difficulty in capital cities and regional areas

Figure 14 shows that recruitment difficulty (for recruiting employers) has declined in both capital cities and regional areas in the March 2023 quarter. In capital cities, recruitment difficulty peaked at 75% in August

2022 but has since declined to 65% in March 2023. For rest of state areas, recruitment difficulty peaked at 77% in July 2022 but has since declined to 64% in March 2023.

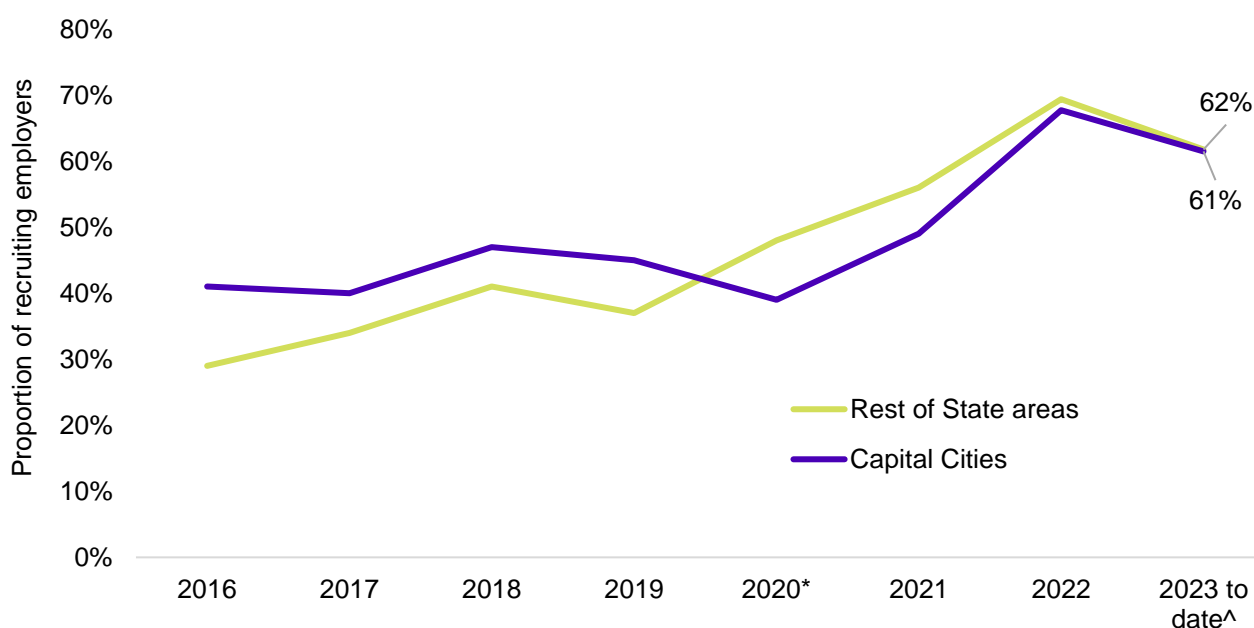
Figure 14: Difficulty by region type (as a proportion of recruiting employers), August 2020 to March 2023



Source: JSA, *Recruitment Experiences and Outlook Survey*, March 2023. Please note: Disaggregated data was not publishable in January of each year; hence relevant data points have been joined by a dotted line.

Figure 15 shows that 2020 marked the first time that employers in rest-of-state areas experienced more difficulty than those in capital cities since records began in 2016. However, with lockdowns having eased and activity in the major cities picking up, recruitment difficulty in the capital cities has increased to a similar (albeit slightly lower) level as that experienced in regional areas over 2022. In both cases, the rate of recruitment difficulty over 2022 exceeded that of prior years, with a slight decline observed in 2023 to date.

Figure 15: Proportion of recruiting employers who experienced difficulty with their most recent recruitment, 2016 to 2023

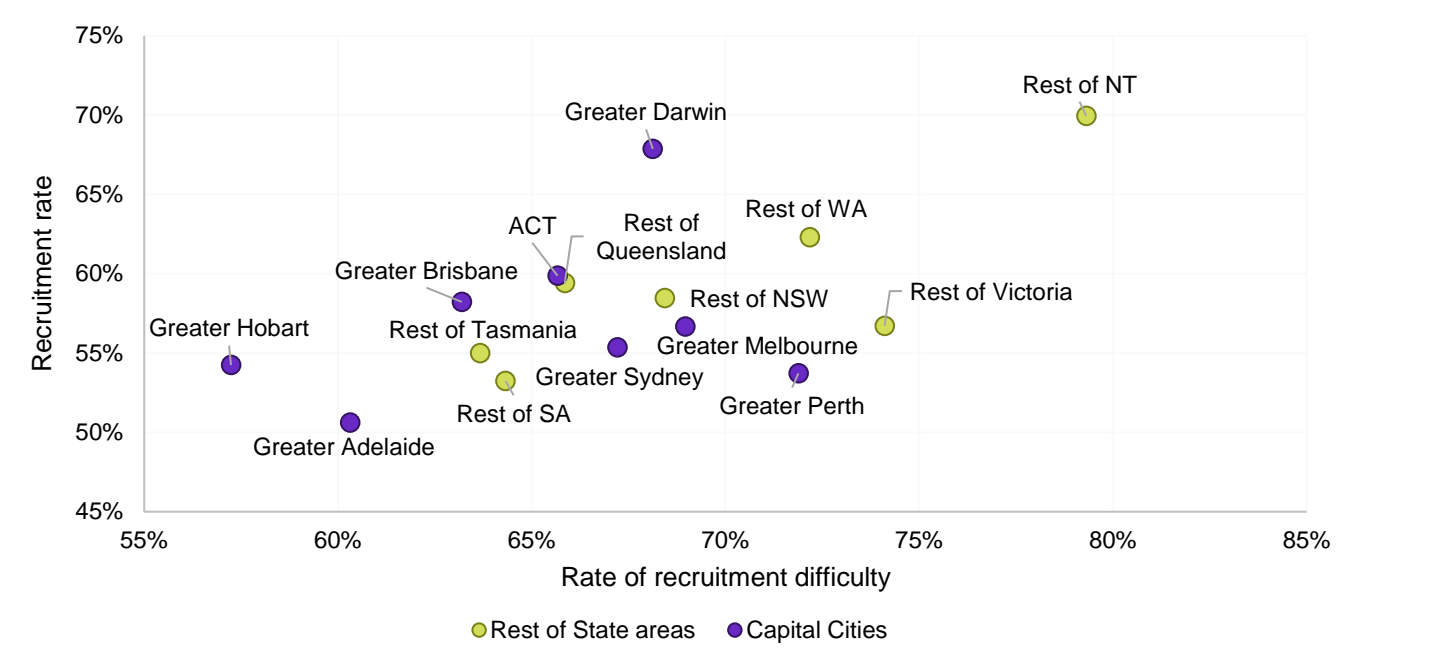


Source: JSA, *Survey of Employers' Recruitment Experiences* (2016-2019), *Recruitment Experiences and Outlook Survey* (2020-2023).
 *2020 data covers the period from August 2020 to December 2020. As a result, it does not reflect recruitment conditions at the height of the restrictions that were put in place in response to the pandemic.

Rates of recruitment and recruitment difficulty vary by individual rest of state and capital city areas. For each region, Figure 16 shows not only the regional variation that we have seen on average over the past 12

months, but also there tends to be a positive correlation between the share of employers that are recruiting and recruitment difficulty.

Figure 16: Rates of recruitment and recruitment difficulty by region (12 months to March 2023)



Source: JSA, *Recruitment Experiences and Outlook Survey*, March 2023

Finding skilled workers: the capital city and regional divide

Fill rates in capital cities or metro areas (63%) and regional areas (62%) were similar in March 2023 quarter, as regional fill rates strengthened by 7 percentage points. However, applicant numbers per vacancy were far greater in metro labour markets (see Table 7).

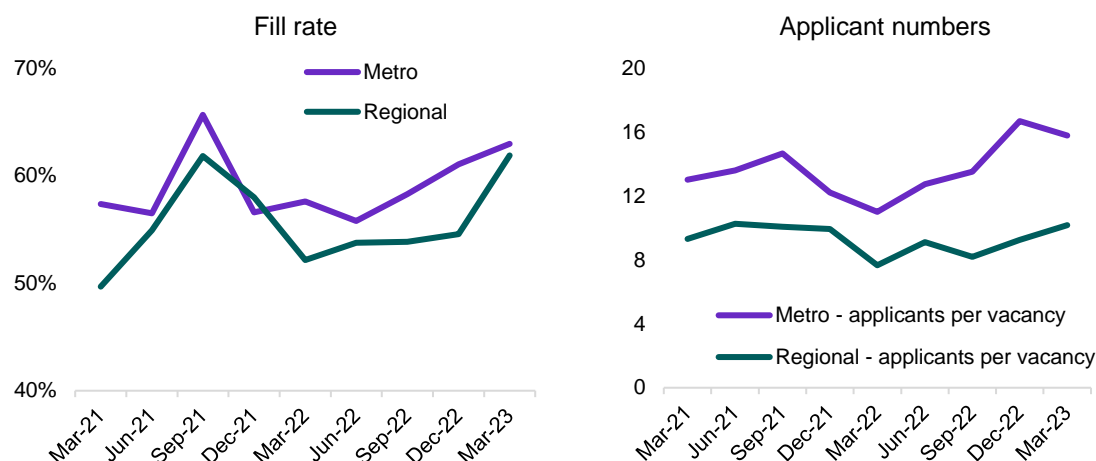
Table 7: Applicant per vacancy metrics (no.), metro and regional areas, March quarter 2023

	Metro areas	Regional areas
Applicants per vacancy	15.8	10.2
Qualified applicants per vacancy	5.4	3.3
Suitable applicants per vacancy	2.6	2.0

Source: JSA, *Survey of Employers who have Recently Advertised*, March quarter 2023

Generally, fill rates and the various applicant per vacancy metrics are higher in metro locations than in regional areas. The gap between metro and regional fill rates and applicant numbers substantially widened during the peak period (mid to late 2022) of labour market tightness (Figure 17).

Figure 17: Quarterly fill rates (%) and applicants per vacancy (no.), metro and regional areas, March 2021 to March 2023



Source: JSA, Survey of Employers who have Recently Advertised, 2021 - 2023.

The sharp rise in regional fill rates, despite the much lower pool of applicants in regional areas could reflect lower employer requirements and expectations among regional employers when filling vacancies. This is another sign that skill shortage pressures are more acute in regional labour markets.

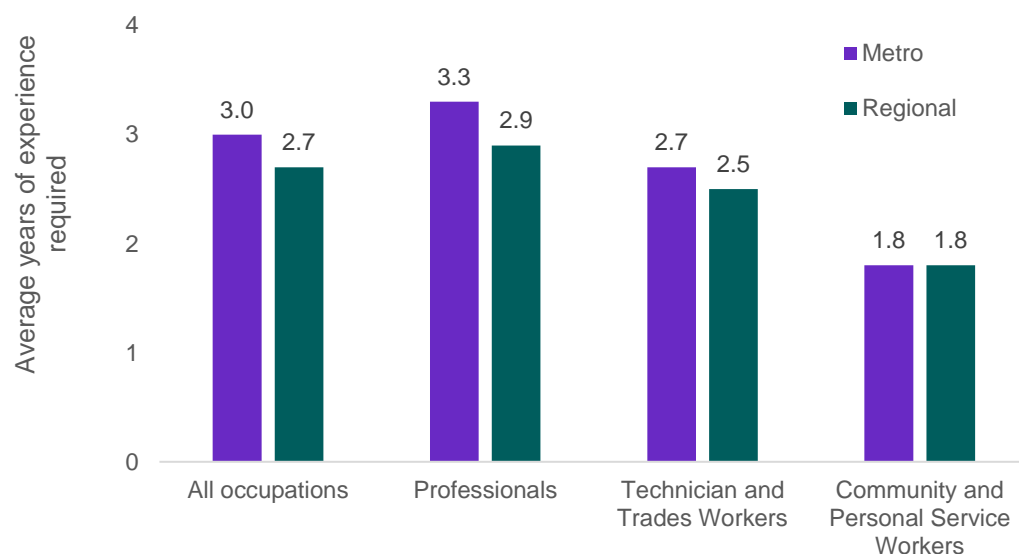
The lower level of requirements among regional employers can be further demonstrated through examination of average years of relevant labour market experience required by employers in metro and regional areas.

SERA data highlights that regional employers report lower experience requirements for vacancies in Professional and Technician and Trades Worker major occupation groups (see Figure 18). Over the year to March 2023:

- Regional employers required an average of 2.9 years of experience for professional group vacancies, compared with 3.3 years for employers in metro areas.
- Regional employers required an average of 2.5 years of experience for technician and trades worker vacancies, compared with 2.7 years for employers in metro areas.

However, for the Community and Personal Service Workers major occupation group both metro and regional employers recruiting required an average of 1.8 years of relevant labour market experience.

Figure 18: Average years of experience required, metro and regional areas, year to March 2023



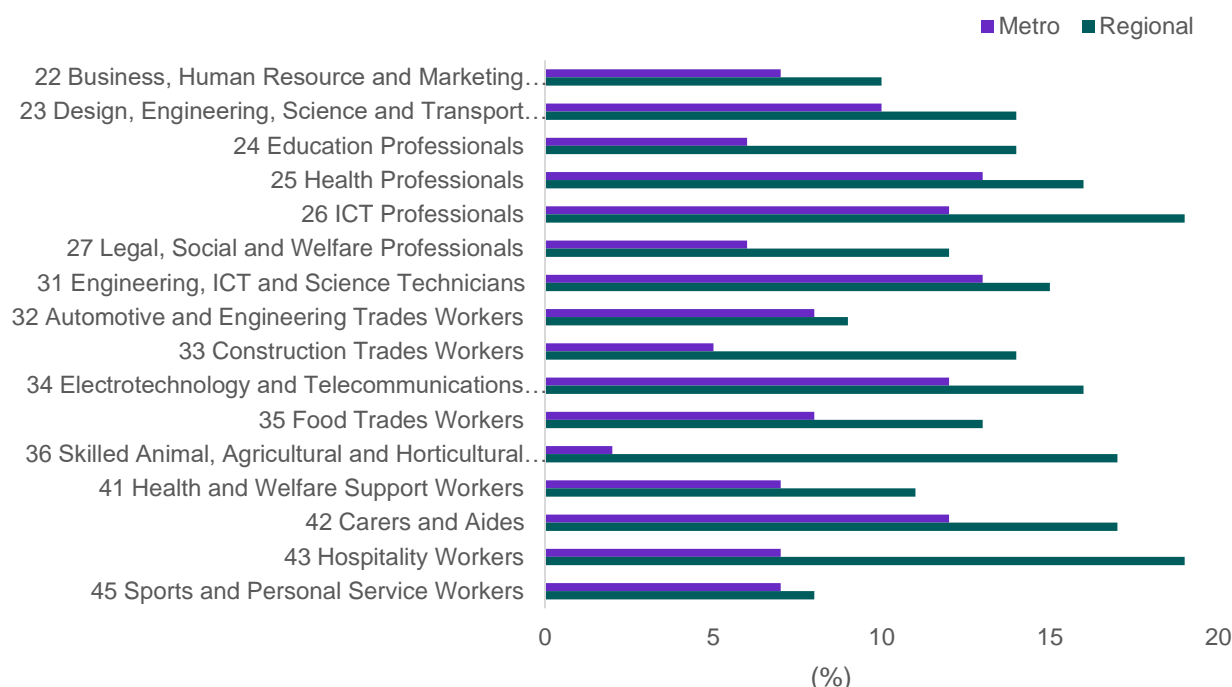
Source: JSA, Survey of Employers who have Recently Advertised, April 2022 – March 2023.

The lower experience requirements highlight the challenges regional employers face when recruiting skilled workers. However, it may also represent an opportunity for inexperienced workers to find employment if they are willing and able to move to regional areas early in their career.

Further, regional employers are more likely to report 'location' as the reason vacant positions remained unfilled (Figure 19). Location as a barrier to finding skilled workers appears to be a major issue for regional employers among Hospitality Workers, Construction Trades, Skilled Animal, Agriculture and Horticulture Workers, ICT Professionals and Education Professionals sub-major occupation groups. Studies have shown that health professional students with a rural origin are more likely to practice in a rural setting, and it is the strongest factor for continued rural practice (Grobler et al 2009).²³ This may extend to other professional occupations. Providing training pathways for people in regional areas, through universities for Professional occupations including many healthcare roles and through TAFE for occupations such as Aged and Disabled Carer, will be important to fill this demand.

For metro area employers, the lack of specific skills was a more likely reason that skilled people were not found. This outcome may be due to metro employers having access to a larger pool of skilled workers to choose from and therefore can be more selective with respect to suitable skills.

Figure 19: Vacancy unfilled due to location (%), metro and regional areas, year to March 2023



Source: JSA, *Survey of Employers who have Recently Advertised*, March quarter 2023.

²³ Grobler L, Marais BJ, Mabunda SA, Marindi PN, Reuter H, Volmink J. Interventions for increasing the proportion of health professionals practising in rural and other underserved areas. *Cochrane Database of Systematic Reviews* 2009, Issue 1. Art. No.: CD005314. Jobs and Skills Australia: Labour Market Update, May 2023

Regional skills pressure case study: General Practitioners and Resident Medical Officers

One occupation that has been the subject of regular public discussion with respect to regional skills shortages is General Practitioners (GPs).

In April 2022, the Interim Report of the Community Affairs References Committee into the *Provision of general practitioner and related primary health services to outer metropolitan, rural, and regional Australians* found that “the distribution of the primary health workforce is a significant issue in Australia's health system, and it is well known that those living in outer metropolitan, regional, and rural areas have less access to timely and affordable primary health care and experience worse health outcomes than those in metropolitan areas.” This report also highlighted a number of key stakeholder submissions that remain relevant to this subject. In particular:

- The Primary Health Network Cooperative noted that regional and rural areas experience significant health workforce shortages (relative to both state averages and patient need), along with an inability to attract and retain health care practitioners to health care settings that can't offer the career and lifestyle opportunities found in inner metropolitan areas.²⁴
- The Rural Workforce Agency Network noted that several rural health workforce challenges, including workforce distribution which skews towards metropolitan centres; high dependence on International Medical Graduate (IMGs) doctors to provide primary care and general practice services within country regions; and uncertain viability of small rural hospitals, as loss of services such as maternity, surgical, anaesthetic and emergency services makes working in those communities less attractive for rural generalists.²⁵
- The Regional Australia Institute noted that access to employment opportunities is impacted by the recruitment (including supply and distribution) and retention of an appropriately trained, skilled and equitably distributed health workforce.²⁶
- The Rural and Remote Medical Services noted a range of barriers for GPs to take up residence and work in rural and remote communities, including isolation; lack of professional development; inability of spouse to gain employment; lack of educational options for children; lack of social amenity; perceived workload; and comparatively lower remuneration for rural and remote GPs.²⁷

As noted earlier, an indicator based on the ratio of IVI job advertisements to employment can be used to test current labour demand pressures for occupations, on a region-by-region basis. Table 8 presents these results for General Practitioners and Resident Medical Officers, which is an occupation that was found to be in shortage (both nationally and for each state and territory) in the 2022 Skills Priority List. However, as the table illustrates, the current degree of skills pressure is far from uniform across regions.

²⁴ Primary Health Network Cooperative, *Provision of general practitioner and related primary health services to outer metropolitan, rural, and regional Australians*, Community Affairs References Committee, submission 46.

²⁵ Rural Workforce Agency Network, *ibid*, submission 50.

²⁶ Regional Australia Institute, *ibid*, submission 71.

²⁷ Rural and Remote Medical Services, *ibid*, submission 118.

Table 8: IVI vacancy ratios (IVI online job advertisements as a proportion of employment) for General Practitioners and Resident Medical Officers, by region

No.	Region	IVI vacancy ratio (%)	No.	Region	IVI vacancy ratio (%)
1	Far West and Orana	20.7	25	Mid North Coast	6.1
2	Queensland - Outback	20.0	26	West and North West	6.0
3	Darling Downs - Maranoa	13.4	27	Ballarat	5.1
4	New England and North West	13.2	28	Hume	5.0
5	Capital Region	12.5	29	Riverina	4.9
6	Sunshine Coast	12.5	30	Central West	4.9
7	Warrnambool and South West	11.4	31	Richmond - Tweed	4.8
8	Southern Highlands and Shoalhaven	11.0	32	Wide Bay	4.7
9	Shepparton	10.6	33	Western Australia – Outback (South)	4.3
10	Central Queensland	9.9	34	Newcastle and Lake Macquarie	4.0
11	Barossa – Yorke – Mid North	9.4	35	Brisbane	4.0
12	Western Australia – Wheat Belt	9.0	36	Perth	4.0
13	Murray	8.7	37	Adelaide	3.7
14	North West	8.7	38	Darwin	3.4
15	Latrobe - Gippsland	8.6	39	Launceston and North East	3.4
16	Australian Capital Territory	8.3	40	Gold Coast	3.3
17	Illawarra	8.0	41	Bunbury	3.2
18	Cairns	7.9	42	Melbourne	3.1
19	Western Australia – Outback (North)	7.9	43	Hunter Valley excl. Newcastle	2.9
20	Mackay – Isaac - Whitsunday	7.7	44	Sydney	2.7
21	Coffs Harbour - Grafton	7.6	45	Geelong	2.5
22	Hobart	7.5	46	Toowoomba	2.2
23	Townsville	7.0	47	Northern Territory - Outback	2.1
24	Bendigo	6.4	48	South Australia – South East	1.7

Notes: IVI data are October 2022 to March 2023 monthly average. Regions presented in this table are Statistical Area 4 (SA4) regions, with the exception of capital cities, where relevant SA4 regions are combined to present an overall result for that capital city. Results for Tasmania-South East and South Australia-Outback SA4 regions are excluded from the table, due to small sample sizes and accompanying low reliability of the result.

Source: JSA, *Internet Vacancy Index*, March 2023; *Nowcast of Employment by Region and Occupation*, March 2023.

Despite capital cities generally using internet job boards for a higher percentage of their total recruitment activity (as noted earlier), the five largest capital cities (Sydney, Melbourne, Adelaide, Perth and Brisbane) all appear in the bottom third of this table, with IVI job advertisements for General Practitioners and Resident Medical Officers representing 4% or less of the relevant employment level in each city.

Conversely, many regions outside major cities, particularly remote or sparsely populated areas, exhibit much higher ratios of online job ads to employment for this occupation. This is particularly true of regional New South Wales and Queensland, where the six highest ratios were recorded. In both the Far West and Orana and the Queensland – Outback regions, there is one General Practitioners and Resident Medical Officers IVI job advertisement for every five people currently working in these roles.

Appendix A: Highest IVI vacancy ratios – capital cities and regional areas

The analysis of online vacancy ratios that follows is based on:

- the 2022 Skills Priority List ratings of current skills shortages;
- Internet Vacancy Index (IVI) data on job vacancies, based on the most recent 6-month average (from October 2022 to March 2023 inclusive) for each region; and
- monthly estimates of current employment levels for 355 occupations across each region, based on JSA's Nowcast of Employment by Region and Occupation (NERO).

To minimise the effect that small sample sizes (which can display greater volatility over time) have on this analysis, results are only presented for occupations and regions that meet the following criteria:

For capital cities:

- at least 20 IVI job vacancies per month (on average), employment of at least 100 people in that occupation, and an IVI vacancy ratio of at least 5 per cent;
OR
- where estimated employment in that occupation falls below 100, at least 40 IVI job vacancies per month (on average)

For regional areas:

- at least 10 IVI job vacancies per month (on average), employment of at least 100 in that occupation, and an IVI vacancy ratio of at least 4 per cent;
OR
- where estimated employment in that occupation falls below 100, at least 20 IVI job vacancies per month (on average)

Table A1: Top capital city IVI vacancy ratios (IVI job advertisements as a proportion of employment), for occupations in shortage on the 2022 SPL

Capital City	Occupations	IVI vacancy ratio (%)
Sydney	Sheetmetal Trades Workers	12.5
	Safety Inspectors	8.2
	Occupational Therapists	8.2
	Cooks	8.0
	Mining Engineers	7.5
	Other Miscellaneous Technicians and Trades Workers	7.1
	Industrial Spraypainters	6.8
	Audiologists and Speech Pathologists \ Therapists	6.7
	Automotive Electricians	6.5
	Insurance Agents	6.2
	Enrolled and Mothercraft Nurses	5.4
	Crane, Hoist and Lift Operators	5.3
Melbourne	Sheetmetal Trades Workers	9.3
	Cooks	9.0
	Automotive Electricians	8.2
	Enrolled and Mothercraft Nurses	7.3
	Audiologists and Speech Pathologists \ Therapists	7.0
	Mining Engineers	6.8
	Insurance Agents	6.3
	Other Miscellaneous Technicians and Trades Workers	6.3
	Occupational Therapists	6.0
	Podiatrists	5.3
	Credit and Loans Officers	5.1
Brisbane	Insurance Agents	10.1
	Mining Engineers	8.7
	Automotive Electricians	7.8
	Occupational Therapists	7.3
	ICT Business and Systems Analysts	6.7
	Other Miscellaneous Technicians and Trades Workers	6.6
	Sheetmetal Trades Workers	6.6
	Early Childhood (Pre-primary School) Teachers	6.3
	Hotel and Motel Managers	6.1
	Mechanical Engineering Draftspersons and Technicians	5.8
	Podiatrists	5.7
	Audiologists and Speech Pathologists \ Therapists	5.7
	Motor Mechanics	5.6
	Industrial Spraypainters	5.5
	Civil Engineering Professionals	5.4
	Dental Practitioners	5.0
Adelaide	Sheetmetal Trades Workers	9.1
	Other Miscellaneous Technicians and Trades Workers	6.8
	Occupational Therapists	6.6
	Cooks	6.5
	Mining Engineers	5.2
Perth	Automotive Electricians	9.1
	Sheetmetal Trades Workers	8.0

Capital City	Occupations	IVI vacancy ratio (%)
Perth (cont.)	Mining Engineers	8.0
	Crane, Hoist and Lift Operators	6.2
	Civil Engineering Professionals	5.8
	Earthmoving Plant Operators	5.5
	ICT Business and Systems Analysts	5.3
	Enrolled and Mothercraft Nurses	5.3
	Construction Managers	5.1
	Cooks	5.1
Hobart	General Practitioners and Resident Medical Officers	7.5
	Occupational Therapists	7.0
Darwin	Welfare, Recreation and Community Arts Workers	14.4
	Social Workers	9.1
	Occupational Therapists	8.4
	Motor Mechanics	7.8
	Metal Fitters and Machinists	6.8
	Storepersons	5.3
	Earthmoving Plant Operators	5.3
	Construction Managers	5.0
Canberra	Audiologists and Speech Pathologists \ Therapists	16.6
	Other Miscellaneous Technicians and Trades Workers	15.3
	Metal Fitters and Machinists	13.7
	Construction Managers	11.5
	Auditors, Company Secretaries and Corporate Treasurers	8.4
	General Practitioners and Resident Medical Officers	8.3
	Security Officers and Guards	8.0
	Occupational Therapists	7.5
	ICT Business and Systems Analysts	6.5
	Social Workers	6.2
	Physiotherapists	5.7
	Early Childhood (Pre-primary School) Teachers	5.2
	Civil Engineering Professionals	5.1
	Software and Applications Programmers	5.1
	Computer Network Professionals	5.0

Table A2: Top regional New South Wales IVI vacancy ratios (IVI job advertisements as a proportion of employment), for occupations in shortage on the 2022 SPL

New South Wales SA4 Region	Occupations	IVI vacancy ratio (%)
Capital Region	General Practitioners and Resident Medical Officers	12.5
	Occupational Therapists	8.7
	Civil Engineering Professionals	7.5
	Early Childhood (Pre-primary School) Teachers	6.5
	Physiotherapists	4.7
Central West	Occupational Therapists	8.5
	Early Childhood (Pre-primary School) Teachers	6.7
	General Practitioners and Resident Medical Officers	4.9
	Civil Engineering Professionals	4.3
Coffs Harbour - Grafton	General Practitioners and Resident Medical Officers	7.6
Far West and Orana	General Practitioners and Resident Medical Officers	20.7
	Civil Engineering Professionals	12.8
	Early Childhood (Pre-primary School) Teachers	7.3
	Enrolled and Mothercraft Nurses	6.3
	Registered Nurses	5.3
Hunter Valley excl. Newcastle	Mining Engineers	12.3
	Occupational Therapists	10.8
	Cooks	6.5
	Civil Engineering Professionals	6.5
	Physiotherapists	6.0
	Software and Applications Programmers	4.8
	Enrolled and Mothercraft Nurses	4.7
	Early Childhood (Pre-primary School) Teachers	4.5
	Psychologists	4.5
Illawarra	Occupational Therapists	10.0
	Audiologists and Speech Pathologists \ Therapists	9.4
	General Practitioners and Resident Medical Officers	8.0
	Cooks	7.4
	Medical Imaging Professionals	4.5
	Enrolled and Mothercraft Nurses	4.4
	Motor Mechanics	4.2
Mid North Coast	Enrolled and Mothercraft Nurses	6.5
	General Practitioners and Resident Medical Officers	6.1
	Civil Engineering Professionals	6.0
	Registered Nurses	5.3
	Cooks	5.0
Murray	Enrolled and Mothercraft Nurses	10.2
	General Practitioners and Resident Medical Officers	8.7
	Occupational Therapists	7.2
	Early Childhood (Pre-primary School) Teachers	5.8
	Registered Nurses	5.3
	Motor Mechanics	4.2
New England and North West	General Practitioners and Resident Medical Officers	13.2
	Civil Engineering Professionals	6.8
	Early Childhood (Pre-primary School) Teachers	6.0
	Registered Nurses	5.7

New South Wales SA4 Region	Occupations	IVI vacancy ratio (%)
Newcastle and Lake Macquarie	Mining Engineers	27.8
	Earthmoving Plant Operators	6.9
	Cooks	6.7
	Motor Mechanics	6.4
	Industrial, Mechanical and Production Engineers	5.6
	Structural Steel and Welding Trades Workers	5.3
	Enrolled and Mothercraft Nurses	5.1
	Audiologists and Speech Pathologists \ Therapists	4.5
	Construction Managers	4.3
	General Practitioners and Resident Medical Officers	4.0
Richmond - Tweed	Dental Practitioners	9.0
	Occupational Therapists	7.4
	Medical Imaging Professionals	6.2
	Registered Nurses	5.1
	Civil Engineering Professionals	4.9
	Dental Assistants	4.9
	General Practitioners and Resident Medical Officers	4.8
	Enrolled and Mothercraft Nurses	4.3
Riverina	Occupational Therapists	23.0
	Enrolled and Mothercraft Nurses	13.0
	Physiotherapists	8.6
	Pharmacists	7.0
	Early Childhood (Pre-primary School) Teachers	6.5
	Civil Engineering Professionals	5.9
	Motor Mechanics	5.8
	General Practitioners and Resident Medical Officers	4.9
	Registered Nurses	4.9
	Electricians	4.5
Southern Highlands and Shoalhaven	General Practitioners and Resident Medical Officers	11.0
	Occupational Therapists	7.6
	Civil Engineering Professionals	5.4

Table A3: Top regional Victoria IVI vacancy ratios (IVI job advertisements as a proportion of employment), for occupations in shortage on the 2022 SPL

Victoria SA4 Region	Occupations	IVI vacancy ratio (%)
Ballarat	Occupational Therapists	14.9
	Pharmacists	11.7
	Early Childhood (Pre-primary School) Teachers	10.6
	Enrolled and Mothercraft Nurses	6.5
	Cooks	5.4
	General Practitioners and Resident Medical Officers	5.1
	Child Carers	4.6
	Chefs	4.2
	Social Workers	4.1
Bendigo	Early Childhood (Pre-primary School) Teachers	8.3
	General Practitioners and Resident Medical Officers	6.8
	Cooks	5.3
	Occupational Therapists	5.0
	Nursing Support and Personal Care Workers	4.3
Geelong	Enrolled and Mothercraft Nurses	9.8
	Cooks	8.3
	Nursing Support and Personal Care Workers	7.9
	Social Workers	7.7
	Chefs	7.6
	Credit and Loans Officers	7.5
	Other Miscellaneous Technicians and Trades Workers	7.4
	Occupational Therapists	7.4
	Physiotherapists	7.2
	Registered Nurses	6.6
	Child Carers	4.9
Hume	Early Childhood (Pre-primary School) Teachers	9.6
	Occupational Therapists	8.3
	Enrolled and Mothercraft Nurses	5.4
	Nursing Support and Personal Care Workers	5.3
	Social Workers	5.1
	General Practitioners and Resident Medical Officers	5.0
Latrobe - Gippsland	Enrolled and Mothercraft Nurses	18.4
	Early Childhood (Pre-primary School) Teachers	18.4
	Occupational Therapists	15.4
	Pharmacists	11.5
	Audiologists and Speech Pathologists \ Therapists	11.3
	Physiotherapists	9.6
	Medical Imaging Professionals	8.7
	General Practitioners and Resident Medical Officers	8.6
	Chefs	8.4
	Cooks	7.6
	Registered Nurses	7.4
	Dental Assistants	6.1
	Nursing Support and Personal Care Workers	6.1
	Child Carers	5.0
	Social Workers	4.2

Victoria SA4 Region	Occupations	IVI vacancy ratio (%)
North West	Occupational Therapists	11.2
	General Practitioners and Resident Medical Officers	8.7
	Social Workers	7.1
	Physiotherapists	6.7
	Early Childhood (Pre-primary School) Teachers	6.1
	Enrolled and Mothercraft Nurses	4.8
	Motor Mechanics	4.7
	Registered Nurses	4.6
Shepparton	Early Childhood (Pre-primary School) Teachers	11.9
	General Practitioners and Resident Medical Officers	10.6
	Cooks	5.8
	Child Carers	4.7
	Chefs	4.0
Warrnambool and South West	General Practitioners and Resident Medical Officers	11.4
	Enrolled and Mothercraft Nurses	11.2
	Social Workers	10.7
	Early Childhood (Pre-primary School) Teachers	10.3
	Registered Nurses	9.4
	Physiotherapists	8.5
	Nursing Support and Personal Care Workers	6.9

Table A4: Top regional Queensland IVI vacancy ratios (IVI job advertisements as a proportion of employment), for occupations in shortage on the 2022 SPL

Queensland SA4 Region	Occupations	IVI vacancy ratio (%)
Cairns	Occupational Therapists	12.9
	Automotive Electricians	10.9
	Medical Imaging Professionals	9.1
	Audiologists and Speech Pathologists \ Therapists	8.8
	Early Childhood (Pre-primary School) Teachers	8.6
	Other Miscellaneous Technicians and Trades Workers	8.4
	General Practitioners and Resident Medical Officers	7.9
	Physiotherapists	6.8
	Metal Fitters and Machinists	6.8
	Motor Mechanics	5.4
	Cooks	5.4
	Pharmacists	4.6
	Drillers, Miners and Shot Firers	4.3
	Earthmoving Plant Operators	4.3
	Dental Assistants	4.2
	Psychologists	4.2
Central Queensland	Occupational Therapists	13.0
	General Practitioners and Resident Medical Officers	9.9
	Medical Imaging Professionals	9.8
	Pharmacists	7.1
	Physiotherapists	6.5
	Enrolled and Mothercraft Nurses	5.5
	Motor Mechanics	5.0
	Cooks	4.6
Darling Downs - Maranoa	General Practitioners and Resident Medical Officers	13.4
Gold Coast	Insurance Agents	10.8
	Cooks	9.3
	Enrolled and Mothercraft Nurses	9.2
	Occupational Therapists	7.5
	Audiologists and Speech Pathologists \ Therapists	6.5
Mackay - Isaac - Whitsunday	Mining Engineers	11.1
	Occupational Therapists	11.0
	Other Miscellaneous Technicians and Trades Workers	10.8
	Medical Imaging Professionals	9.7
	Enrolled and Mothercraft Nurses	9.3
	General Practitioners and Resident Medical Officers	7.7
	Pharmacists	7.1
	Aged and Disabled Carers	5.6
	Physiotherapists	5.3
	Registered Nurses	4.6
	Cooks	4.3
Queensland - Outback	Mining Engineers	26.0
	General Practitioners and Resident Medical Officers	20.0
	Chefs	14.1
	Registered Nurses	10.8
	Metal Fitters and Machinists	7.6

Queensland SA4 Region	Occupations	IVI vacancy ratio (%)
	Motor Mechanics	4.9
	Structural Steel and Welding Trades Workers	4.5
Sunshine Coast	General Practitioners and Resident Medical Officers	12.5
	Enrolled and Mothercraft Nurses	6.6
	Other Miscellaneous Technicians and Trades Workers	5.0
	Cooks	4.3
	Bakers and Pastrycooks	4.3
	Child Carers	4.3
	Medical Imaging Professionals	4.3
Townsville	Mining Engineers	49.0
	Pharmacists	14.1
	Other Miscellaneous Technicians and Trades Workers	14.0
	Occupational Therapists	12.0
	Early Childhood (Pre-primary School) Teachers	12.0
	Automotive Electricians	10.7
	Medical Imaging Professionals	10.1
	Hotel and Motel Managers	9.0
	Audiologists and Speech Pathologists \ Therapists	8.9
	Chefs	7.6
	Physiotherapists	7.2
	General Practitioners and Resident Medical Officers	7.0
	Motor Mechanics	6.7
	Metal Fitters and Machinists	5.0
	Dental Assistants	5.0
	Drillers, Miners and Shot Firers	4.5
	Earthmoving Plant Operators	4.4
	Registered Nurses	4.4
	Cooks	4.2
Wide Bay	Occupational Therapists	8.8
	Chefs	8.1
	Medical Imaging Professionals	6.8
	Civil Engineering Professionals	6.8
	Physiotherapists	4.8
	General Practitioners and Resident Medical Officers	4.7
	Pharmacists	4.7
	Cooks	4.2
	Early Childhood (Pre-primary School) Teachers	4.1

*No occupations in the Toowoomba SA4 region had at least 10 job vacancies per month (on average) and a vacancy rate of at least 4 per cent – Earthmoving Plant Operators were the closest occupation to meeting these two criteria.

Table A5: Top regional South Australia IVI vacancy ratios (IVI job advertisements as a proportion of employment), for occupations in shortage on the 2022 SPL

South Australia SA4 Region	Occupations	IVI vacancy ratio (%)
Barossa - Yorke - Mid North	General Practitioners and Resident Medical Officers	9.4
South Australia - Outback	Registered Nurses	5.9
South Australia - South East	Registered Nurses	4.7
	Enrolled and Mothercraft Nurses	4.2

Table A6: Top regional Western Australia IVI vacancy ratios (IVI job advertisements as a proportion of employment), for occupations in shortage on the 2022 SPL

Western Australia SA4 Region	Occupations	IVI vacancy ratio (%)
Western Australia - Outback (North)	Mining Engineers	32.5
	Motor Mechanics	19.7
	Earthmoving Plant Operators	16.6
	Automotive Electricians	11.3
	Registered Nurses	8.1
	General Practitioners and Resident Medical Officers	7.9
	Structural Steel and Welding Trades Workers	6.5
	Civil Engineering Professionals	6.4
	Construction Managers	6.2
	Security Officers and Guards	6.2
	Structural Steel Construction Workers	6.1
	Cooks	5.8
	Metal Fitters and Machinists	5.7
	Electricians	5.1
	Chefs	4.9
	Carpenters and Joiners	4.4
	Crane, Hoist and Lift Operators	4.2
Western Australia - Outback (South)	Mining Engineers	34.4
	Motor Mechanics	17.5
	Automotive Electricians	10.8
	Earthmoving Plant Operators	8.8
	Registered Nurses	7.1
	Geologists, Geophysicists and Hydrogeologists	6.6
	Metal Fitters and Machinists	5.9
	Structural Steel and Welding Trades Workers	5.6
	Cooks	5.0
	Construction Managers	4.8
	Civil Engineering Professionals	4.7
	General Practitioners and Resident Medical Officers	4.3
Western Australia - Wheat Belt	Electricians	4.2
	Mining Engineers	33.0
	General Practitioners and Resident Medical Officers	9.0
Western Australia - Wheat Belt	Motor Mechanics	6.3

Table A7: Top regional Tasmania IVI vacancy ratios (IVI job advertisements as a proportion of employment), for occupations in shortage on the 2022 SPL

Tasmania SA4 region	Occupations	IVI vacancy ratio (%)
Launceston and North East	Occupational Therapists	4.6
	Motor Mechanics	4.5
West and North West	General Practitioners and Resident Medical Officers	6.0

*No occupations in the Tasmania South East SA4 region had at least 10 job vacancies per month (on average) and a vacancy rate of at least 4 per cent – Registered Nurses were the closest occupation to meeting these two criteria.

Table A8: Top regional Northern Territory IVI vacancy ratios (IVI job advertisements as a proportion of employment), for occupations in shortage on the 2022 SPL

Northern Territory SA4 region	Occupations	IVI vacancy ratio (%)
Northern Territory - Outback	Welfare, Recreation and Community Arts Workers	4.2