



Australian Government
Jobs and Skills Australia

Labour Market Update

*The data in this document reflect the quarter to December 2022,
and are current as at 16 February 2023*

February 2023

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Executive summary

Labour market conditions have been strong over the December 2022 quarter, with continuing strong demand and growth in labour supply. There are signs of a slight easing in the level of demand, however, from JSA's Internet Vacancy Index (IVI) and JSA's Recruitment Experiences and Outlook Survey (REOS). (This slight easing in demand has since flowed through into the January 2023 ABS Labour Force figures, with total employment declining slightly and the unemployment rate increasing from 3.5% to 3.7%).

Total employment continued to increase over the December 2022 quarter (noting that there has been a small decline in January). Significant strength in full-time employment growth, coupled with underemployment rates that have remained at very low levels (relative to the past 20 years), suggest that the labour market is making better utilisation of the workforce.

Total 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 36% of total employment growth has been in Skill Level 1 occupations, while just over 60% of total employment has been in Skill Level 2 to Skill Level 4 occupations (where VET qualifications are the primary pathway). This underscores the importance of both the higher education and VET systems to growing a highly skilled Australian workforce.

While recruitment activity has slowed over the December 2022 quarter, it is worth noting that the proportion of employers who were recruiting for turnover only in December 2022 was at the lowest rate recorded since December 2020. A decline in recruitment activity at a time where employment (and in particular, full-time employment) is still growing suggests that levels of worker retention may be improving.

As employment has continued to grow despite a decline in recruitment activity, levels of recruitment difficulty experienced by employers have declined, while the likelihood of filling an advertised role has increased slightly - albeit still well 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 greater than 4.5%. 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, where shortages persist.

Compared to previous years, the likelihood of filling vacancies has declined, as have the average number of applicants and average number of suitable applicants per vacancy. These recruitment challenges are more acute (per vacancy) for regional areas than for capital cities, while skills shortages for many Technicians and Trades Workers occupations appear to be persistent over time.

Occupations with the highest vacancy rates (that is, job vacancies as a proportion of employed people) are heavily concentrated around engineering and medical professions, mostly in regional areas. A more detailed analysis of vacancy rates for both Registered Nurses and Motor Mechanics also shows high vacancy rates in a number of regional areas, more so than in capital cities.

Jobs and Skills Australia has also undertaken preliminary analysis of the underlying drivers of skills shortage for the top 20 occupations in demand – in particular, 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). This preliminary analysis has found that of the top 20 occupations in demand, seven occupations have a shortage that is primarily driven by a lack of people with the essential technical skills, reinforcing the importance of the domestic skills system in addressing these shortages.

Recent labour market outcomes

Labour market conditions have been strong over the December 2022 quarter, with growth in labour supply and with continuing strong demand and growth in labour supply. There are signs of a slight easing in the level of demand, however, from JSA's Internet Vacancy Index (IVI) and JSA's Recruitment Experiences and Outlook Survey (REOS). (This slight easing in demand has since flowed through into the January 2023 ABS Labour Force figures, with total employment declining slightly and the unemployment rate increasing from 3.5% to 3.7%).

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

Employment	Monthly hours worked in all jobs	Labour force	Unemployment rate	Participation rate
↑ 0.6%	↑ 1.3%	↑ 0.6%	↓ 0.1% pts	Steady
13,747,100	1,888.0 million hours	14,246,900	3.5%	66.6%

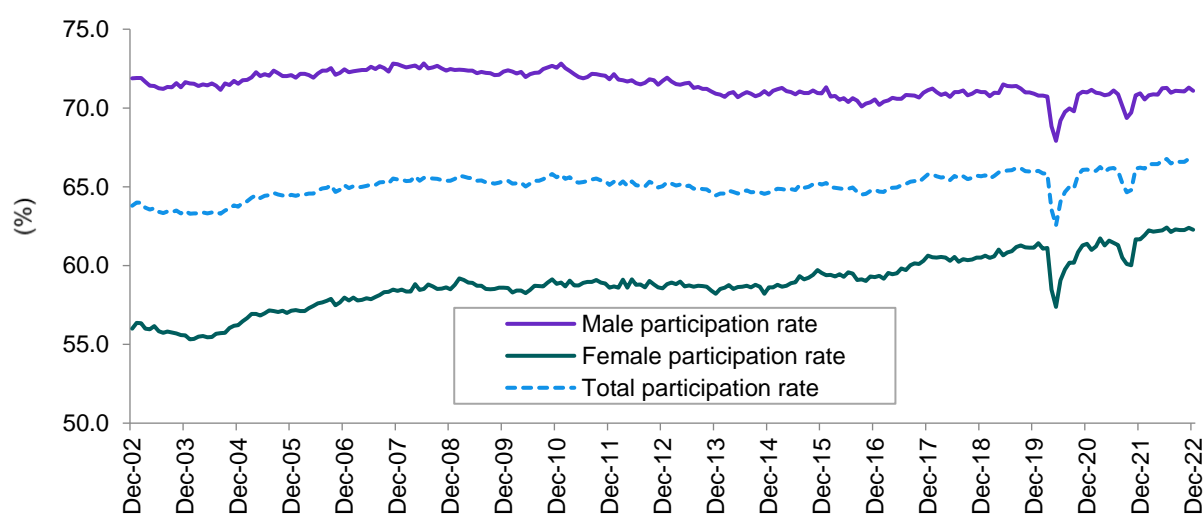
Source: ABS, *Labour Force, Australia, December 2022, seasonally adjusted data.*

ABS *Labour Force Survey* figures show that the level of employment increased by a robust 87,300 (or 0.6%) over the three months to December 2022. Encouragingly, this rise in employment was driven entirely by a strong increase in full-time employment, up by 107,000 (or 1.1%) over the three months to December 2022, while part-time employment decreased by 19,700 (or 0.5%). Full-time employment has increased by 496,800 (or 5.4%) over the 12 months to December 2022 (more recent data indicates there has since been a small decline in full-time employment in January).

The unemployment rate declined, from 3.6% in September 2022 to 3.5% in December 2022. Importantly, the fall in the unemployment rate occurred in conjunction with the participation rate rising to an equal record high of 66.8% in November 2022, before declining to 66.6% in December 2022. The female participation rate also increased to an equal record high of 62.4% in November 2022, before declining slightly to 62.3% in December 2022 (see Figure 1).

The employment-to-population ratio (for persons aged 15 and above) rose slightly over the quarter, from 64.2% in September 2022 to 64.3% in December 2022.

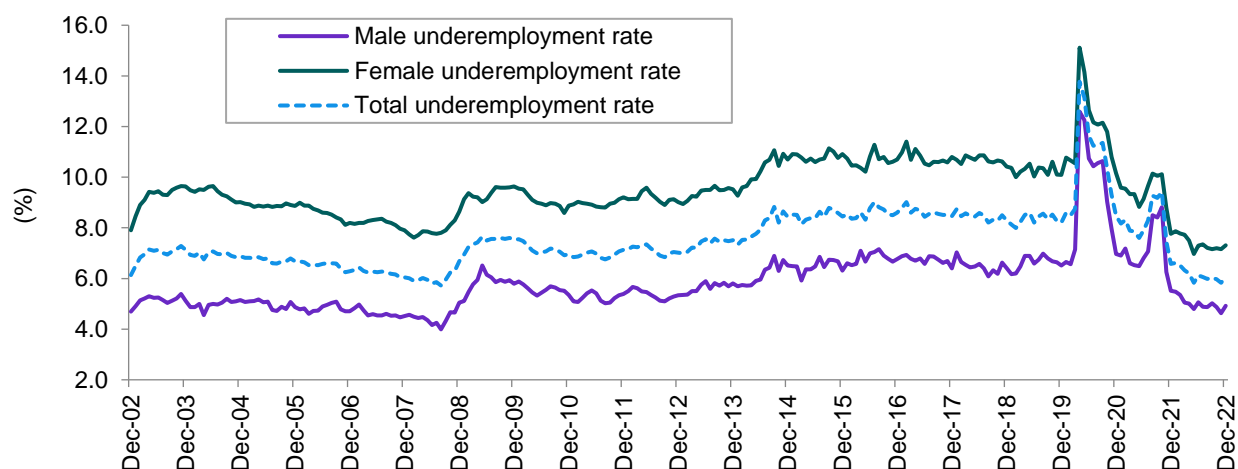
Figure 1: Participation rate by gender (%), December 2002 to December 2022



Source: ABS, *Labour Force, Australia, December 2022, seasonally adjusted data.*

The underemployment rate stood at 6.1% in December 2022 and has remained relatively stable from May 2022 onwards (see Figure 2). The underemployment rate recorded for both males and all persons from May 2022 onwards have been at their lowest levels since the second half of 2008. Similarly, prior to May 2022, the last time the female underemployment rate fell below 7.5% was in the first half of 1991.

Figure 2: Underemployment rate by gender (%), December 2002 to December 2022

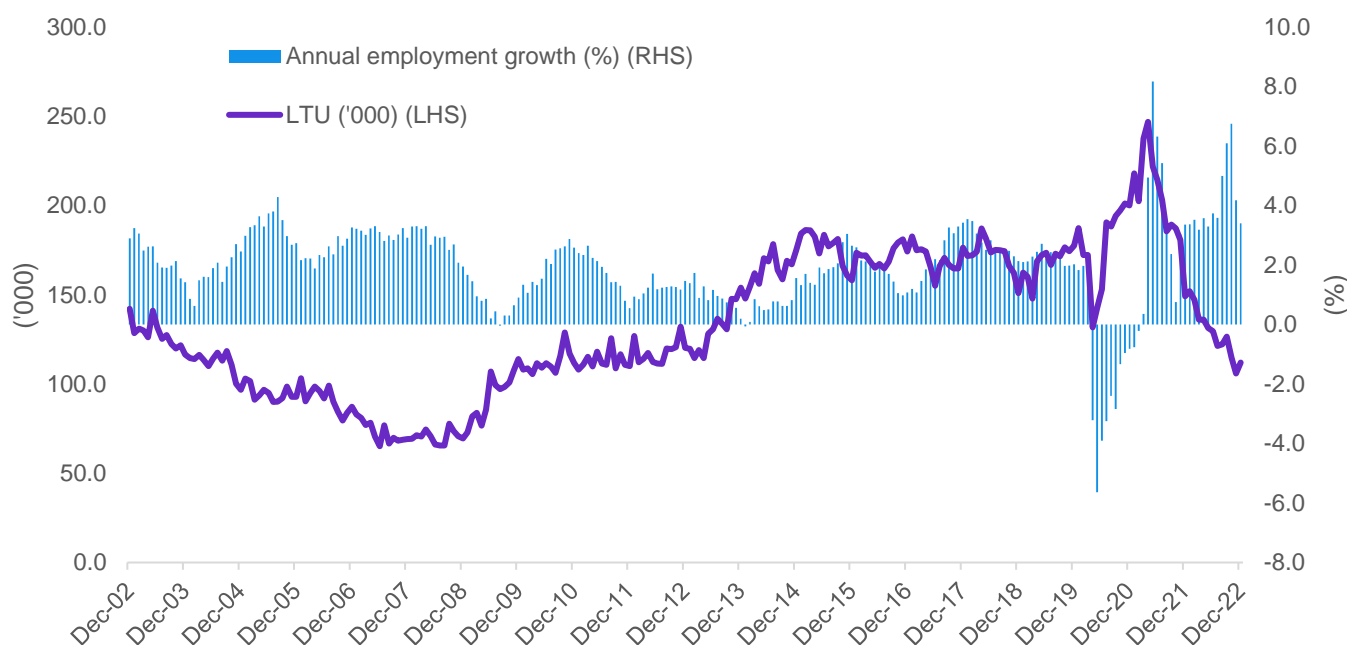


Source: ABS, *Labour Force, Australia*, December 2022, *seasonally adjusted data*.

Long-term unemployment (LTU)¹ decreased by 14,600 (or 11.6%) over the three months to December 2022, to stand at 111,900. The level of LTU is now 37,200 (or 25.0%) lower than it was a year ago, while the November 2022 LTU level (of 105,900) was the lowest level recorded since March 2010 (see Figure 3).

- Female LTU decreased by 12,000 (or 21.5%) over the three months to December 2022, to stand at 43,900. Prior to the most recent quarter, female LTU had not been this low since July 2010.
- Male LTU decreased by 2,600 (or 3.7%) over the three months to December 2022, to stand at 68,100. Prior to the most recent quarter, male LTU had not been this low since April 2013.

Figure 3: LTU and annual employment growth – December 2002 to December 2022



Source: ABS, *Labour Force, Australia, Detailed*, December 2022, *seasonally adjusted data* for LTU; ABS, *Labour Force, Australia*, December 2022, *seasonally adjusted data* for annual employment growth.

¹ Persons who are unemployed for 52 weeks or more.

State and Territory labour market outcomes

Employment increased in seven jurisdictions and fell modestly in Queensland over the three months to December 2022. New South Wales (up by 57,200 or 1.3%) and Victoria (up by 22,600 or 0.6%) recorded the largest increases in the number of employed people over the period.

Unemployment rates were low across all states and territories in December 2022. The Northern Territory recorded the highest unemployment rate of all the states and territories (of 4.0%), while the Australian Capital Territory recorded the lowest rate (of 2.8%). The unemployment rate in South Australia in December 2022 (of 3.9%) has not been lower since the inception of the monthly series in February 1978.

The Northern Territory recorded the highest participation rate, of 74.4% in December 2022, while Tasmania recorded the lowest participation rate, of 62.6%.

Total hours worked continued to be affected by illness

While employment has continued to increase in the December 2022 quarter, trends in hours worked have been more volatile. Nationally, the number of monthly hours worked rose by 25.0 million hours (or 1.3%) over the three months to December 2022. While the number of monthly hours worked increased significantly in October 2022, it then fell slightly in both November and December 2022.

Some of the volatility in hours worked reflects the ongoing disruptions due to illness. Indeed, the number of people working reduced hours due to 'Own illness, injury or sick leave' increased by 85,900 (or 16.5%) over the month, to 606,500 in December 2022, and is over 50% above the average level recorded in December over the previous 8 years (of 396,300).

Wages: variability in annual growth between different indicators

The most recent wage price index for the September 2022 quarter showed wages growth of 3.1% through the year. The 1.0% growth for the September 2022 quarter was the strongest quarterly result since March 2012. The Federal Budget released by the Treasurer on 25 October 2022 showed Treasury's forecast for nominal growth in the wage priced index is 3¾% through the year to both June 2023 and 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 4.8% for the year to September 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 most recent SEEK ASI data showed annual growth in advertised salaries of 4.7% for the year to December 2022².

² SEEK, *Advertised Salary Index*, December 2022

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

The most recent detailed ABS Labour Force Survey data for the November quarter 2022 shows that employment increased in Skill Level 1, 3 and 4 occupations, but declined in Skill Level 2 and 5 occupations³. Table 2 shows that over the quarter to November 2022 employment in Skill Level 4 Occupations was up by 50,100, or 1.5%, Skill Level 1 Occupations was up by 29,000, or 0.6% and Skill Level 3 Occupations was up by 10,400, or 0.5%). Falls were recorded in Skill Level 5 Occupations (down by 38,900, or 1.9%) and Skill Level 2 Occupations (down by 16,600, or 1.0%).

Over the year to November 2022, employment increased in all five skill level groups. The largest employment gains were in Skill Level 1 Occupations (up by 198,700, or 4.4%), Skill Level 4 Occupations (up by 195,000, or 6.2%) and Skill Level 3 Occupations (up by 117,400, or 6.1%).

Over this period, around 36% of total employment growth has been in Skill Level 1 occupations, while around 60% of total employment has been in Skill Level 2 to Skill Level 4 occupations. This underscores the importance of both the higher education and VET systems to growing a high-skilled Australian workforce.

Table 2: Employment by Skill Level, November 2022 ('000)

Skill Levels	Nov 2022	Aug 2022	Quarterly change	Quarterly change (%)	Annual change	Annual change (%)
Skill Level 1 Occupations	4699.7	4670.7	29.0	0.6	198.7	4.4
Skill Level 2 Occupations	1659.6	1676.1	-16.6	-1.0	20.4	1.2
Skill Level 3 Occupations	2045.3	2034.8	10.4	0.5	117.4	6.1
Skill Level 4 Occupations	3347.7	3297.6	50.1	1.5	195.0	6.2
Skill Level 5 Occupations	1965.7	2004.6	-38.9	-1.9	18.9	1.0

Source: ABS, *Labour Force, Australia, Detailed*, November 2022, data seasonally adjusted by Jobs and Skills Australia.

Table 3 shows that at a major occupational group level, over the quarter to November 2022:

- Employment increased in 4 occupation groups and declined in 4.
- The largest employment gains were in Professionals (up by 75,700, or 2.2 per cent), Community and Personal Service Workers (up by 28,700, or 1.9 per cent) and Labourers (up by 20,800, or 1.8 per cent).
- The largest falls were in Sales Workers (down by 41,200, or 3.6 per cent), Clerical and Administrative Workers (down by 30,000, or 1.7 per cent) and Technicians and Trades Workers (down by 25,300, or 1.3 per cent).

Over the year to November 2022:

- Employment increased in 7 occupation groups and declined in one.
- The largest employment gains were in Professionals (up by 222,900, or 6.7 per cent), Community and Personal Service Workers (up by 118,900, or 8.4 per cent) and Technicians and Trades Workers (up by 71,900, or 4.0 per cent).
- A fall in employment was recorded in Sales Workers (down by 5,400, or 0.5 per cent).

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	Nov 2022	Aug 2022	Quarterly change	Quarterly change (%)	Annual change	Annual change (%)
Managers	1837.5	1828.3	9.1	0.5	40.6	2.3
Professionals	3550.8	3475.1	75.7	2.2	222.9	6.7
Technicians and Trades Workers	1869.7	1895.0	-25.3	-1.3	71.9	4.0
Community and Personal Service Workers	1537.3	1508.6	28.7	1.9	118.9	8.4
Clerical and Administrative Workers	1724.7	1754.7	-30.0	-1.7	7.2	0.4
Sales Workers	1097.5	1138.6	-41.2	-3.6	-5.4	-0.5
Machinery Operators and Drivers	890.8	906.7	-15.9	-1.8	38.4	4.5
Labourers	1205.1	1184.3	20.8	1.8	53.2	4.6

Source: ABS, *Labour Force, Australia, Detailed*, November 2022, 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 November 2022:

- Employment increased in 11 industries and declined in 8.
- The largest gains in employment were in Financial and Insurance Services (up by 31,600, or 6.0 per cent), Education and Training (up by 27,500, or 2.5 per cent), Transport, Postal and Warehousing (up by 26,200, or 3.7 per cent) and Administrative and Support Services (up by 24,600, or 5.6 per cent).
- The largest falls were in Retail Trade (down by 34,600, or 2.5 per cent), Wholesale Trade (down by 26,300, or 7.0 per cent), Public Administration and Safety (down by 19,600, or 2.3 per cent) and Rental, Hiring and Real Estate Services (down by 18,300, or 7.7 per cent).

Table 4 shows that over the year to November 2022:

- Employment increased in 13 industries and declined in 6.
- The largest gains in employment were in Health Care and Social Assistance (up by 163,400, or 8.6 per cent), Construction (up by 136,200, or 11.8 per cent), Accommodation and Food Services (up by 95,000, or 11.2 per cent) and Transport, Postal and Warehousing (up by 72,700, or 11.1 per cent).
- The largest falls were in Public Administration and Safety (down by 78,400, or 8.4 per cent), Other Services (down by 30,300, or 5.5 per cent), Agriculture, Forestry and Fishing (down by 28,800, or 8.8 per cent) and Rental, Hiring and Real Estate Services (down by 15,900, or 6.8 per cent).

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

Industry	Nov 2022	Aug 2022	Quarterly change	Quarterly change (%)	Annual change	Annual change (%)
Agriculture, Forestry and Fishing	297.4	293.6	3.8	1.3	-28.8	-8.8
Mining	284.0	284.9	-1.0	-0.3	-0.5	-0.2
Manufacturing	874.4	873.4	1.0	0.1	11.7	1.4
Electricity, Gas, Water and Waste Services	165.3	162.7	2.6	1.6	30.1	22.3
Construction	1288.9	1273.3	15.6	1.2	136.2	11.8
Wholesale Trade	347.2	373.5	-26.3	-7.0	-14.9	-4.1
Retail Trade	1331.9	1366.5	-34.6	-2.5	45.6	3.5
Accommodation and Food Services	946.6	939.5	7.1	0.8	95.0	11.2
Transport, Postal and Warehousing	726.3	700.1	26.2	3.7	72.7	11.1
Information Media and Telecommunications	190.7	197.5	-6.8	-3.4	0.4	0.2
Financial and Insurance Services	560.5	528.9	31.6	6.0	43.1	8.3
Rental, Hiring and Real Estate Services	218.6	236.9	-18.3	-7.7	-15.9	-6.8
Professional, Scientific and Technical Services	1259.6	1275.0	-15.4	-1.2	47.9	3.9
Administrative and Support Services	462.6	438.1	24.6	5.6	15.6	3.5
Public Administration and Safety	851.7	871.3	-19.6	-2.3	-78.4	-8.4
Education and Training	1145.1	1117.6	27.5	2.5	34.2	3.1
Health Care and Social Assistance	2062.2	2041.1	21.1	1.0	163.4	8.6
Arts and Recreation Services	249.1	233.5	15.7	6.7	18.0	7.8
Other Services	520.5	535.2	-14.7	-2.8	-30.3	-5.5
TOTAL EMPLOYMENT	13,785.0	13,674.5	110.5	0.8	558.8	4.2

Source: ABS, *Labour Force, Australia, Detailed*, November 2022, *seasonally adjusted data*.

Job advertisements and recruitment activity have declined

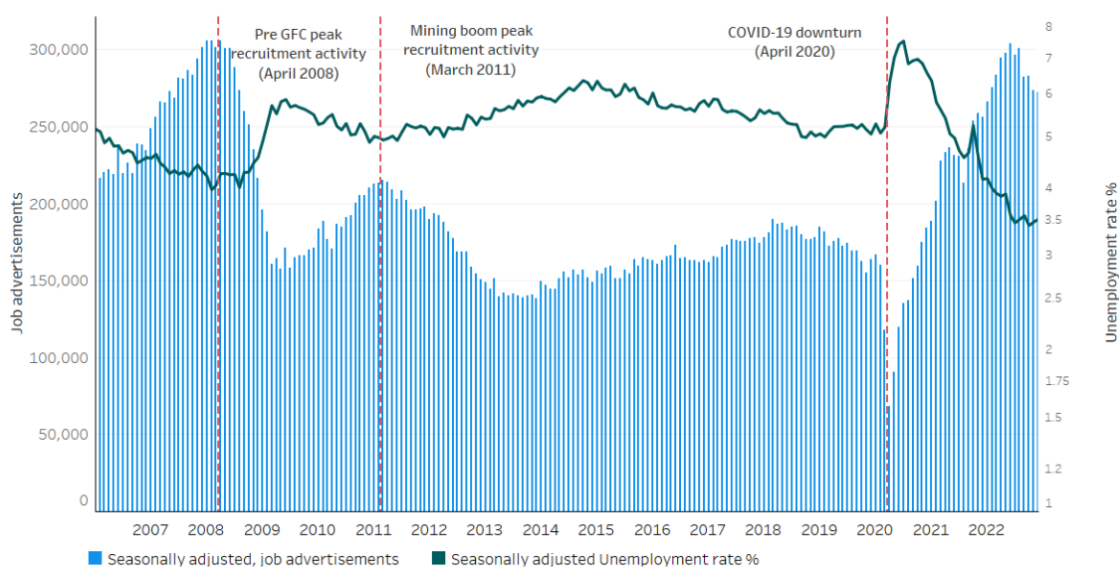
The volume of job advertisements has declined from its mid-2022 peak

JSA's Internet Vacancy Index (IVI) (Figure 4) shows that job advertisements decreased by 3.5% (or 9,800 job advertisements) between September 2022 and December 2022, to stand at 272,500. While there has been overall growth in recruitment activity over the 12 months to December 2022, with job advertisements 6.3% (or 16,200 job advertisements) higher than in December 2021, activity has declined by 10.4% (or 31,600 job advertisements) since the June 2022 peak.

That said, the level of job advertisements nationally remains significantly elevated compared to pre-COVID-19 levels⁴. 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 similar movements. The most recent ABS data recorded 444,200 job vacancies in the November 2022 quarter⁵, representing a decrease of 22,700 job vacancies (or 4.9%) over the quarter. Over the year though, job vacancies increased by 46,000 (or 11.6%).

Figure 4: Internet Vacancy Index job advertisements and unemployment rate, January 2006 to December 2022



Source: JSA, *Internet Vacancy Index*, December 2022 and ABS, *Labour Force, Australia*, December 2022, seasonally adjusted data.

Many employers are still recruiting – but fewer are doing so for turnover only

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

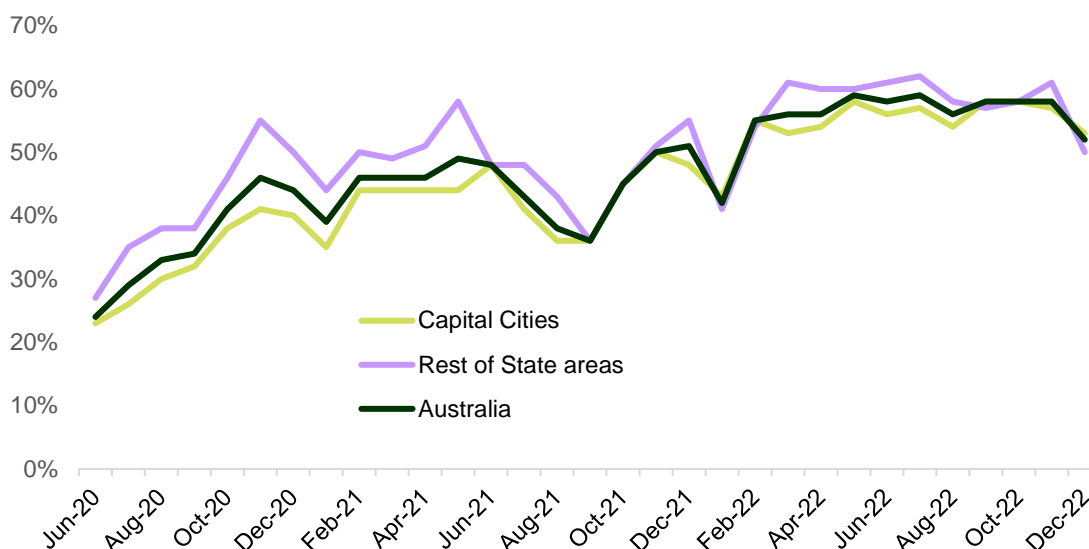
Figure 5 shows that the proportion of employers recruiting (currently or in the past month) reached a peak of 59% in both May 2022 and July 2022, was steady at 58% from September 2022 to November 2022, and then declined to 52% in December – noting that REOS recruitment activity usually decline during each of December and January.

For the quarter to December 2022, the recruitment activity rate was 56%. While this is a decline of 1 percentage point compared to the quarter to September 2022, it is 8 percentage points above the result for the quarter to December 2021.

⁴ Pre-COVID-19 job advertisement levels are defined as the 12-month average in the seasonally adjusted IVI series to February 2020.

⁵ ABS, *Job Vacancies, Australia*, November 2022, seasonally adjusted data.

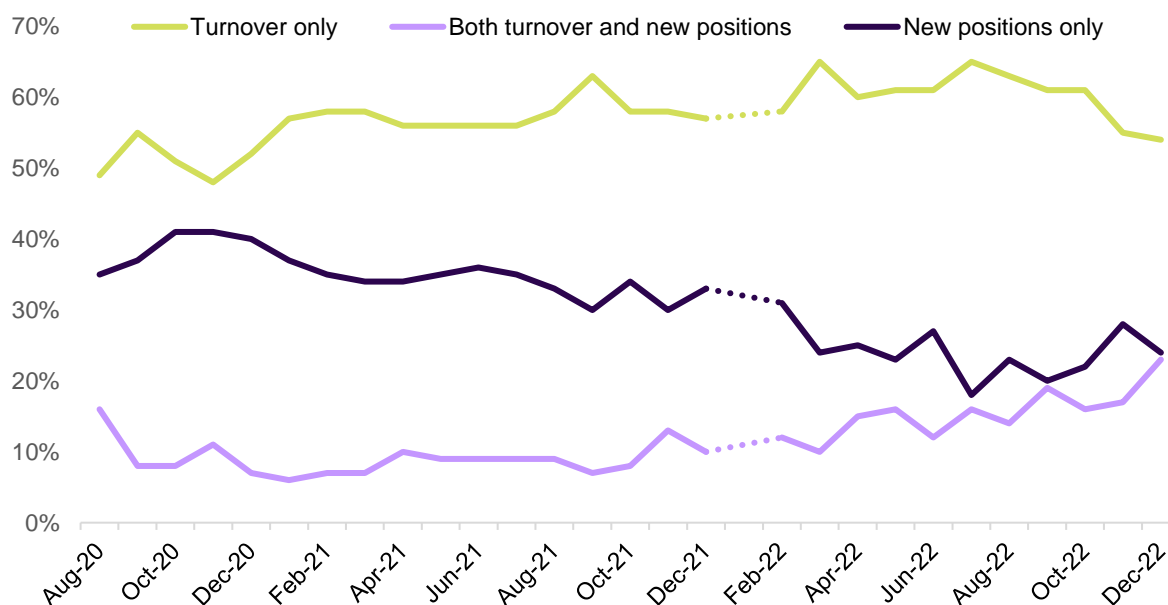
Figure 5: Proportion of employers currently recruiting or who recruited in the past month, June 2020 to December 2022



Source: JSA, *Recruitment Experiences and Outlook Survey*, December 2022.

Figure 6 shows that turnover remains the primary reason for employers to recruit, with 54% of employers recruiting for turnover only and a further 23% recruiting for a mix of both turnover and new roles in December 2022. However, recruiting for turnover only has declined from the peak (of 65%) recorded in March 2022 and July 2022. Indeed, 54% of employers recruiting for turnover only is the lowest rate recorded since December 2020.

Figure 6: Reasons for recruitment (proportion of recruiting employers), August 2020 to December 2022

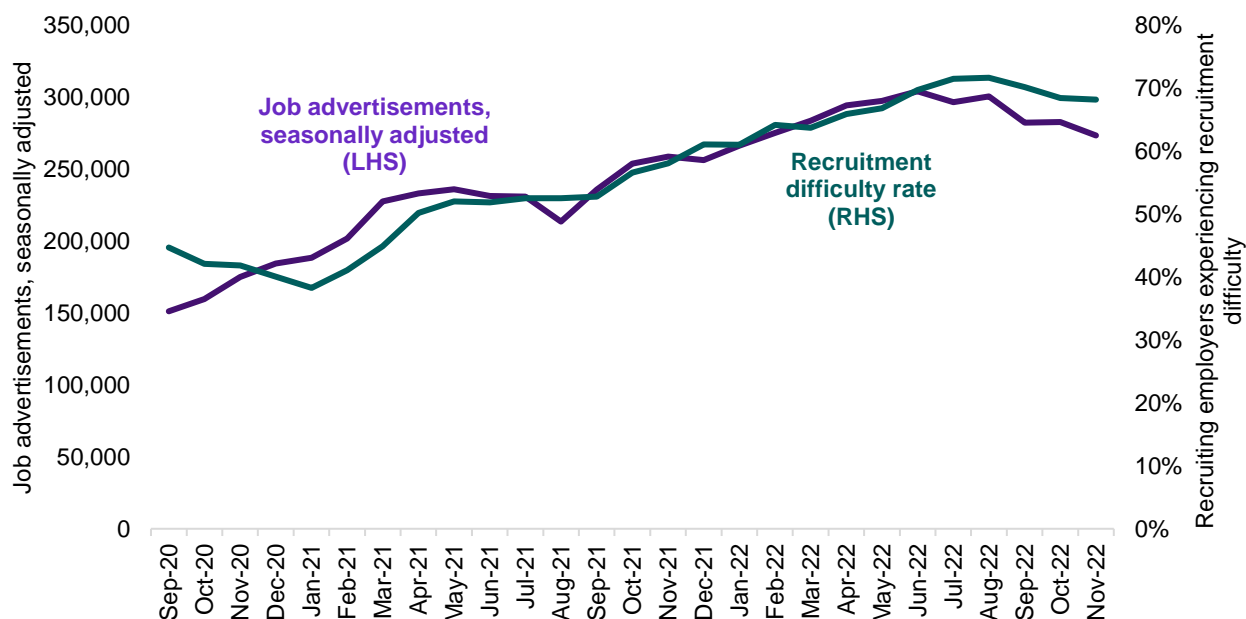


Source: JSA, *Recruitment Experiences and Outlook Survey*, December 2022. Please note: Disaggregated data was not publishable in January 2022; hence data points from December 2021 to February 2022 by region type have been joined by a dotted line.

As job advertisements have declined, employers' recruitment difficulty has eased slightly

Figure 7 shows that the surge in online job advertisements in early 2021, and again from August 2021 to mid-2022, was reflected in increases in the recruitment difficulty rate during those periods. However, just as the volume of job advertisements has declined since mid-2022, difficulty for recruiting employers has declined from 72% for the quarter to September 2022 to 68% for the quarter to December 2022. Monthly data shows that difficulty rates peaked in July 2022 (when 75% of recruiting employers experienced difficulty) but have since declined to 65% in December 2022.

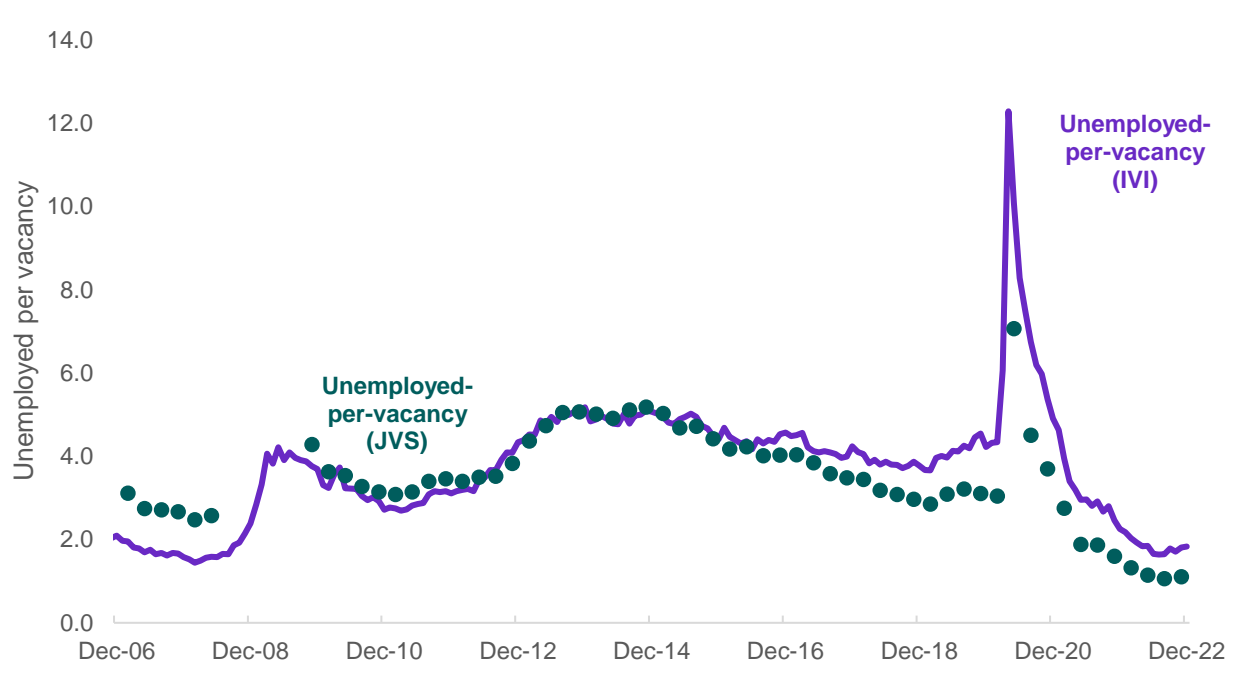
Figure 7: Recruitment difficulty (3-month moving average) and IVI job ads (seasonally adjusted), September 2020 to December 2022



Source: JSA, *Recruitment Experiences and Outlook Survey*, December 2022, three month moving average reported in the middle month; *Internet Vacancy Index*, December 2022

Over 2021 and well into 2022, the sustained growth in labour demand, as recorded by IVI and REOS, contributed to a reduction in the number of unemployed persons per job vacancy (see Figure 8) and an increase in the proportion of employers who have reported difficulty filling their vacancies. While rates of recruitment difficulty have declined slightly in recent months, they remain significantly above rates recorded in previous years.

Figure 8: Unemployed persons per job vacancy, December 2006 to December 2022



Source: JSA, *Internet Vacancy Index*, December 2022; ABS, *Labour Force, Australia*, December 2022, ABS, *Job Vacancies, Australia*, November 2022, all seasonally adjusted data.

The likelihood of filling advertised roles has improved in recent months, but remains worse than in previous years

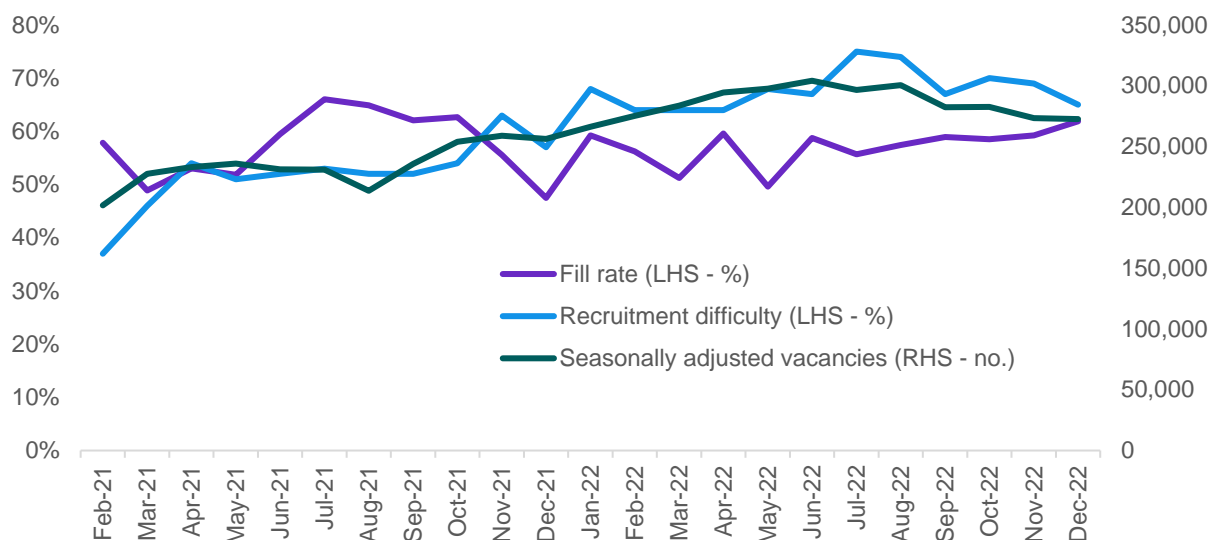
Results from JSA's Survey of Employers who have Recently Advertised (SERA), which covers skilled occupations, offer further insight to the labour market.⁶

Over the past two years, changes in the number of job advertisements and recruitment difficulty have been inversely reflected in the likelihood of filling vacancies advertised by employers (known as the fill rate). That is, a rise in recruitment difficulty and job advertisements are often associated with lower fill rates.

After peaking between June and August 2022, both the rate of recruitment difficulty and job vacancy numbers have fallen slightly. In turn, the fill rate has started increasing (Figure 9). While the labour market remains tight, as indicated by other labour market indicators, the current movements could be early signs of labour market conditions easing.

⁶ The survey primarily covers ANZSCO Skill Level 1-3 occupations.

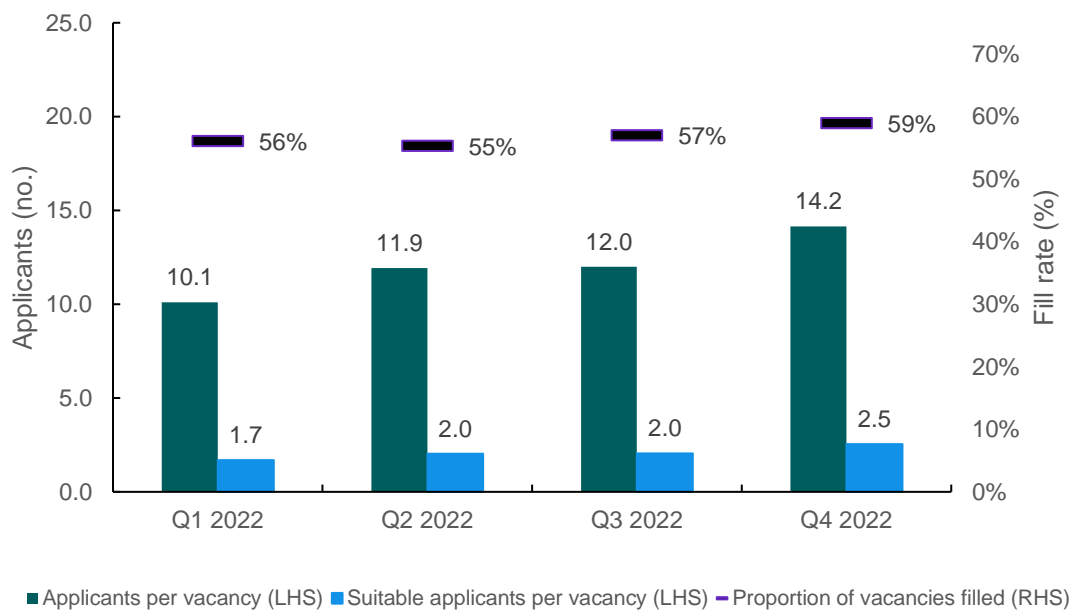
Figure 9: Monthly fill rate (SERA), recruitment difficulty (REOS) and internet vacancies (IVI), February 2021 to December 2022



Source: JSA, Survey of Employers who have Recently Advertised, 2022; JSA, Recruitment Experiences and Outlook Survey, December 2022; JSA, Internet Vacancy Index, December 2022.

Reflecting the moderate upward trend in fill rates, average number of applicants and suitable applicants per vacancy have also been rising each quarter during 2022 (see Figure 10), with the largest increases occurring in the most recent December quarter.

Figure 10: Proportion of vacancies filled (%), average number of applicants and suitable applicants per vacancy (no.), 2022, quarterly



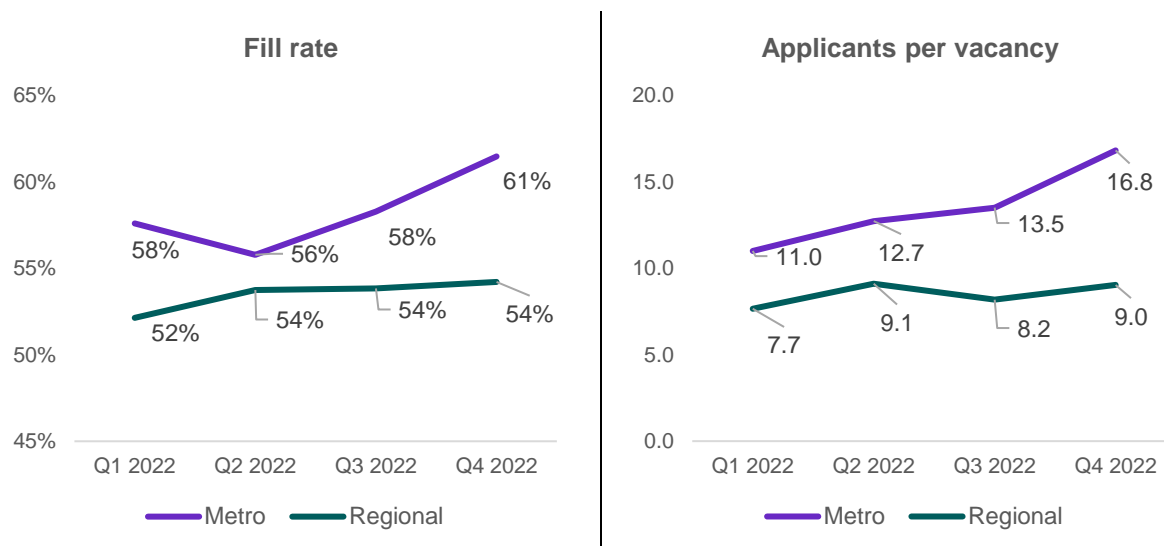
Source: JSA, Survey of Employers who have Recently Advertised, 2020 - 2022.

While the likelihood of filling vacancies has increased slightly over recent months, it remains below the level recorded in previous years. In annual terms since 2020:

- the fill rate has declined from 65% in 2020 to 57% in 2022;
- the number of applicants per vacancy has declined from 14.2 in 2020 to 11.9 in 2022; and
- the number of suitable applicants per vacancy has declined from 3.0 in 2020 to 2.0 in 2022.

Data from the SERA also highlights the challenges regional labour markets compared to capital cities. Employers in regional areas have consistently reported a lower fill rate and fewer applicants per vacancy than those in capital cities (see Figure 11). Capital city areas have seen a rise in both these measures over the past quarter. However, in regional areas the fill rate has remained unchanged, with only a minor increase in the number of applicants per vacancy in the December quarter.

Figure 11: Metro and Regional areas - proportion of vacancies filled (%) and average number of applicants (no.), 2022, quarterly



Source: JSA, Survey of Employers who have Recently Advertised, 2022.

From a major occupational group perspective, employers had the most difficulty filling vacancies for Technicians and Trades Workers, with just 44% of vacancies filled in 2022 (down from 50% in 2021). Shortages within this broad group of occupations appear to be persistent over time. The proportion of vacancies filled has been particularly low during 2022 for:

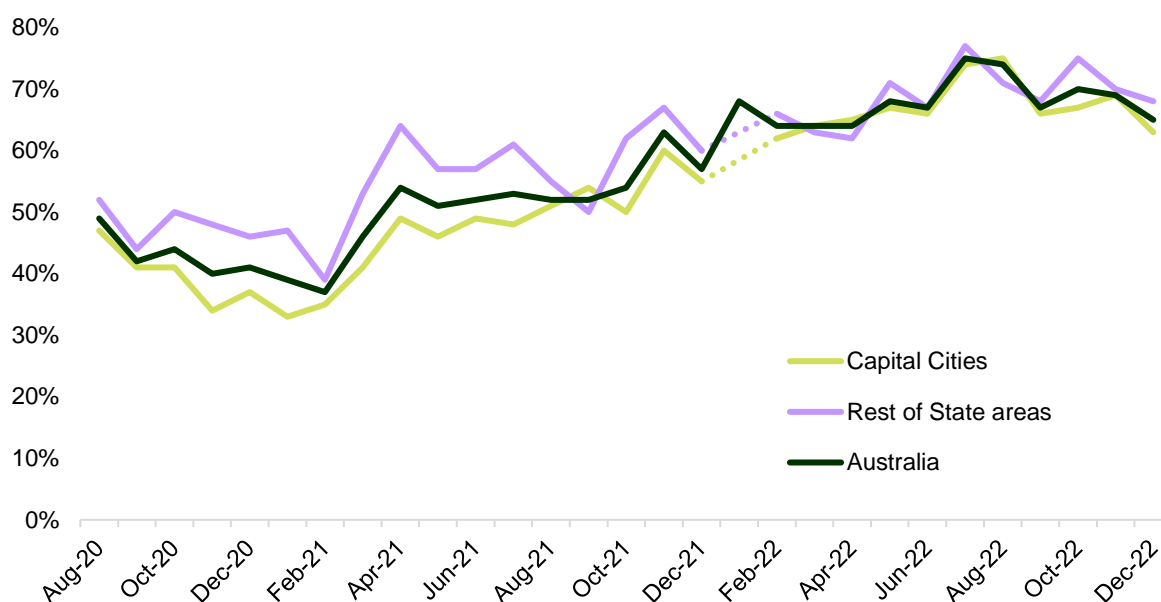
- Automotive and Engineering Trades Workers (down from 43% in 2021 to 27% in 2022)
- Construction Trades Workers (down from 45% in 2021 to 32% in 2022); and
- Electrotechnology and Telecommunications Trades Workers (down from 54% in 2021 to 36% in 2022)

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 (2.0 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.

Comparing recruitment difficulty in capital cities and regional areas

Figure 12 shows that recruitment difficulty (for recruiting employers) has declined in both capital cities and regional areas in the second half of 2022. In capital cities, recruitment difficulty peaked at 75% in August 2022 but has since declined to 63% in December 2022. For rest of state areas, recruitment difficulty peaked at 77% in July 2022 but has since declined to 68% in December 2022. Recruitment difficulty has been higher in rest of state areas than in the capital cities in seven out of the last eight months.

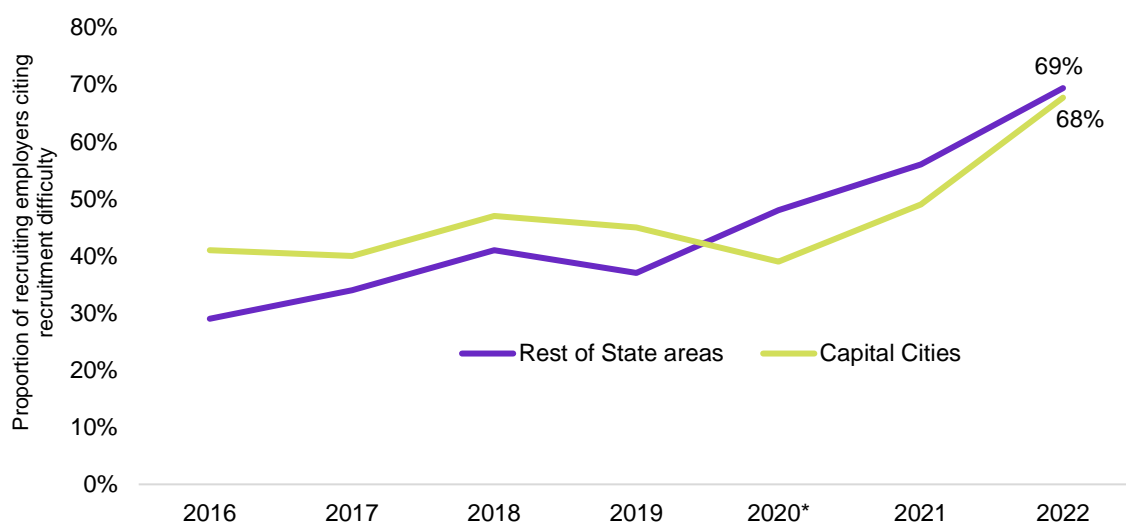
Figure 12: Difficulty by region type (as a proportion of recruiting employers), August 2020 to December 2022



Source: JSA, *Recruitment Experiences and Outlook Survey*, December 2022. Please note: Disaggregated recruitment difficulty data was not publishable in January 2022; hence data points from December 2021 to February 2022 by region type have been joined by a dotted line.

Figure 13 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. Additionally, in both cases, the rate of recruitment difficulty over 2022 has exceeded that seen in prior years.

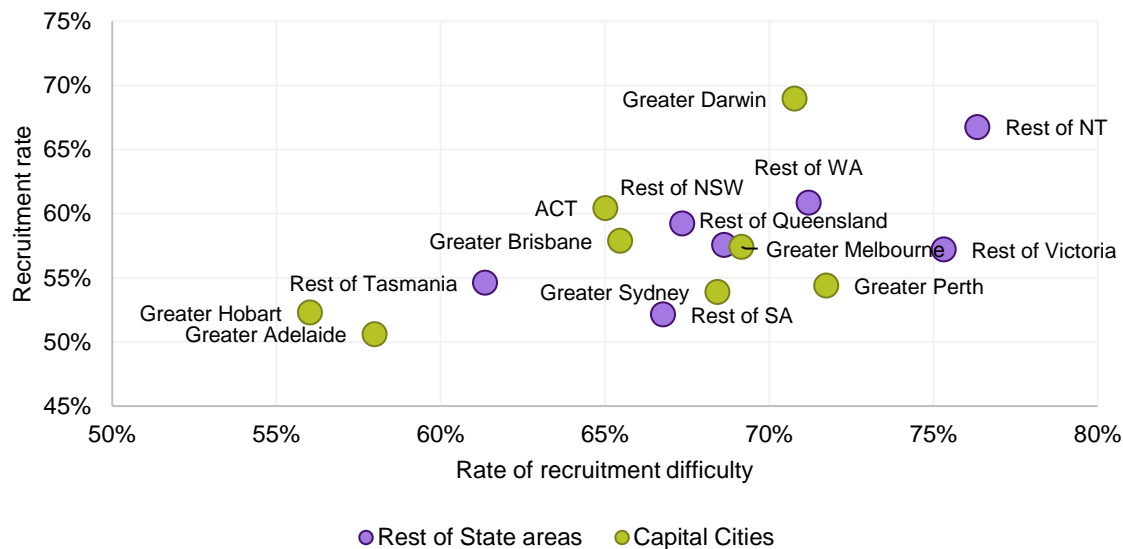
Figure 13: Proportion of recruiting employers who experienced difficulty with their most recent recruitment, 2016 to 2022



Source: JSA, *Survey of Employers' Recruitment Experiences (2016-2019)*, *Recruitment Experiences and Outlook Survey (2020-2022)*. *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 14 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 14: Rates of recruitment and recruitment difficulty by region



Source: JSA, *Recruitment Experiences and Outlook Survey, December 2022*

It is important to note that recruitment difficulty doesn't necessarily mean that positions go unfilled. Based on REOS data collected in 2022, of those employers that cited recruitment difficulty:

- 11% of employers filled vacancies within a month;
- 20% filled vacancies but it took longer than a month;
- 15% had not yet filled vacancies but had been looking for less than a month; and
- 54% had unfilled vacancies for more than a month.

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 11.7%) and lowest for Skill Level 5 (down by 7.9%), 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 just over one-third of all advertisements.

Table 5: Internet Vacancy Index job vacancies by Skill Level – December 2022

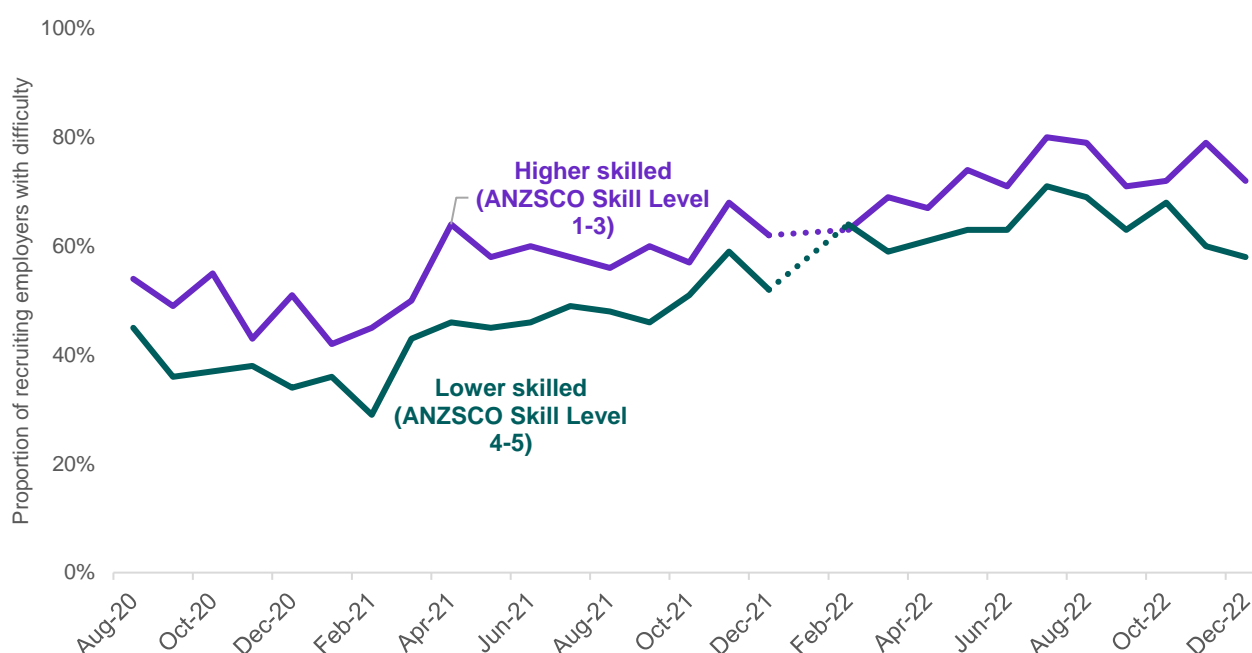
IVI by Skill Level - December 2022	Monthly change (%)	Monthly change (no.)	Annual change (%)	Annual change (no.)	Number of job advertisements
Skill Level 1 - Bachelor degree or higher	0.2%	160	11.7%	10,500	99,900
Skill Level 2 - Advanced Diploma or Diploma	-0.6%	-190	9.8%	2,600	28,700
Skill Level 3 - Certificate IV or III* (Skilled VET)	2.5%	-960	7.7%	2,900	39,900
Skill Level 4 - Certificate II or III	-1.8%	-1,300	3.6%	2,500	71,300
Skill Level 5 - Certificate I or secondary education	-2.5%	-840	-7.9%	-2,800	32,300
Australia	-0.3%	-820	6.3%	16,200	272,500

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*, December 2022

Figure 15 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 58% (for Skill Level 4 and 5 occupations) respectively in December 2022.

Figure 15: Difficulty by skill level of occupation (as a proportion of recruiting employers), August 2020 to December 2022



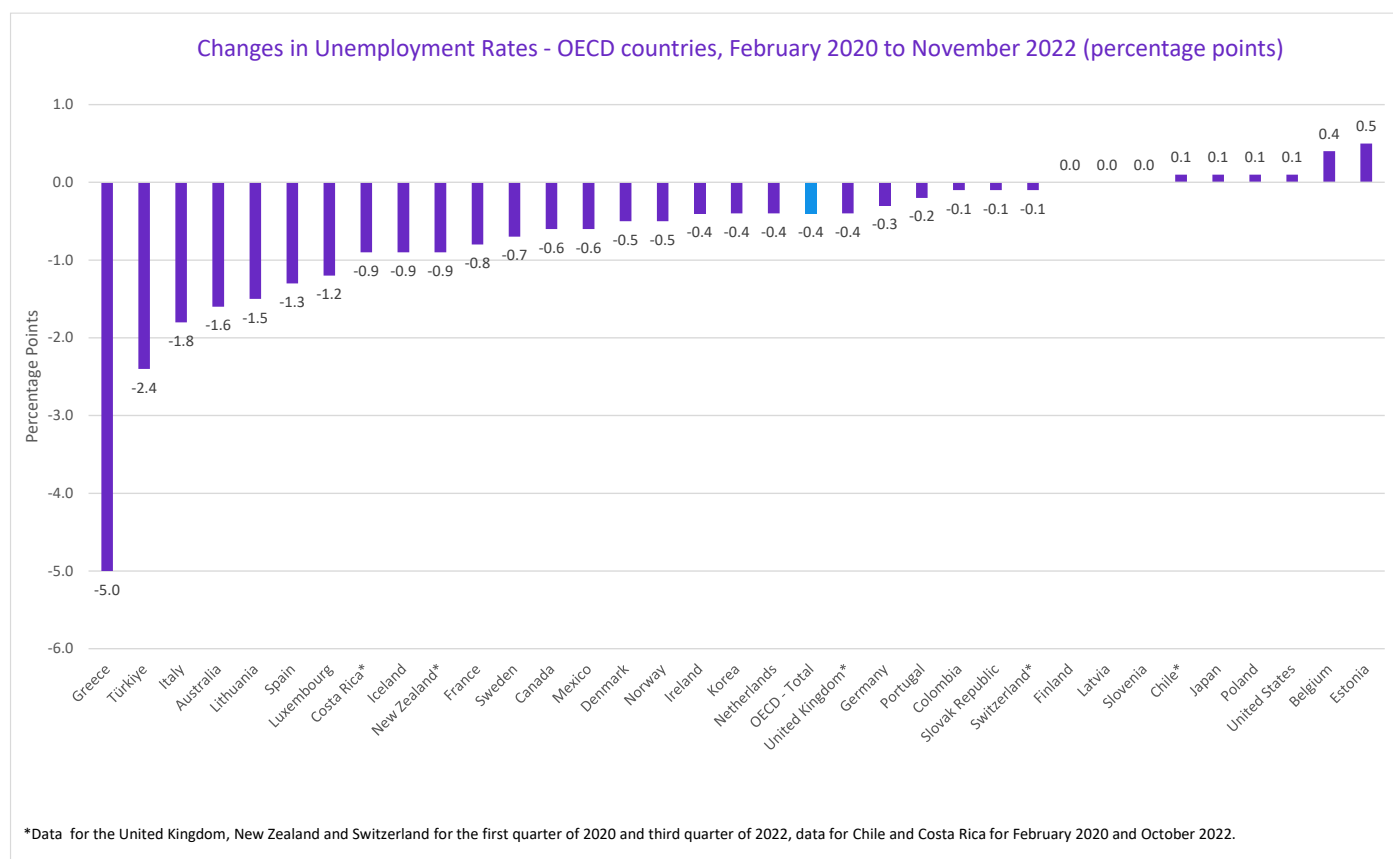
Source: JSA, *Recruitment Experiences and Outlook Survey*, December 2022. Please note: Disaggregated recruitment difficulty data was not publishable in January 2022; hence data points from December 2021 to February 2022 have been joined by a dotted line.

Labour markets are similarly tight in many other countries

Recent OECD data points toward similarly tight labour markets in many other countries, highlighting increasing global challenges for employers in finding workers with the required skills.

Figure 16 shows that while 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 16: Changes in Unemployment Rates—OECD countries, February 2020 to November 2022 (percentage points)



Source: OECDStat (JSA staff calculations)

Key skills needs

Top 20 occupations in demand nationally

The 2022 Skills Priority List (SPL) produced by Jobs and Skills Australia's predecessor, the National Skills Commission, highlighted the impacts of Australia's tight labour market. As detailed in the *2022 SPL: Key Findings Report*, the proportion of occupations assessed as being in shortage increased from 19 per cent in 2021 (153 out of 799) to 31 per cent in 2022 (286 out of 914)⁷.

While skills shortages are currently observed in a wide range of occupations, there are several key areas of the labour market, notably caring occupations and digital and data occupations, where shortages may be more pressing. The SPL provides a point-in-time assessment of occupations in shortage. Combining the SPL with other data sets produced by Jobs and Skills Australia, such as job vacancies and five-year employment projections, provides an estimate of some of the economy's key skills needs.

For example, Table 6 provides a list of the top 20 occupations in demand nationally using:

- the national 2022 SPL skills shortage ratings;
- job vacancies data from the IVI (monthly average of internet job vacancies during the three-month period from October to December 2022 inclusive); and
- projected growth in national employment over the five years to November 2026.

The list is ordered by the number of internet vacancies for each respective occupation. The equivalent analysis for each state and territory is provided in Appendix A.

Table 6: Top 20 occupations in demand nationally

No.	Occupation	IVI job ads*
1	Registered Nurses	8,377
2	Software and Applications Programmers	6,269
3	Aged and Disabled Carers	4,642
4	Child Carers	4,277
5	Construction Managers	4,230
6	Motor Mechanics	3,924
7	Retail Managers	3,777
8	Chefs	3,725
9	Generalist Medical Practitioners	3,352
10	Metal Fitters and Machinists	3,137
11	ICT Business and Systems Analysts	3,053
12	Civil Engineering Professionals	2,871
13	Electricians	2,839
14	Early Childhood (Pre-primary School) Teachers	2,493
15	Contract, Program and Project Administrators	2,392
16	Advertising and Marketing Professionals	2,265
17	Physiotherapists	1,262
18	Gardeners	1,015
19	Mining Engineers	957
20	Database and Systems Administrators, and ICT Security Specialists	942

Notes: IVI data are October to December 2022 monthly average

Source: National Skills Commission, *Skills Priority List, 2022*; National Skills Commission, *Employment outlook Industry and occupation trends over the five years to November 2026, 2022*; JSA, *Internet Vacancy Index, December 2022*

⁷ NSC (2022) *2022 Skills Priority List: Key Findings Report*, 6 October 2022.

This list, like the SPL, represents a diverse mix of occupations including, health care, digital, construction and engineering professionals, as well as traditional trades workers. It is important to recognise, however, that there are many, many more occupations of key significance to the economy and the wellbeing of Australians.

Regional skills pressures

To help gain a better understanding of regional skills pressures, the National Skills Commission developed an indicator based on the ratio of online job ads (IVI) to employment at the regional level, which Jobs and Skills Australia will continue to develop and use in the future. This regional skills pressure indicator can be combined with findings from the SPL to test current labour demand pressures for occupations on a region-by-region basis⁸.

Table 7 presents the top 10 vacancy rates (job ads as a proportion of employment) from the regional skills pressure indicator, for larger employing occupations that have been assessed as in shortage for the SPL. Occupations with the highest vacancy rates are heavily concentrated around Mining Engineers and medical professions, mostly in regional areas.

Table 7: Top 10 regions/occupations by vacancy rate (November 2022), for occupations in shortage on the 2022 SPL

Region	Occupation	Vacancy Rate (%)
Western Australia - Outback (North)	Mining Engineers	38.0
Western Australia - Outback (South)	Mining Engineers	29.4
Newcastle and Lake Macquarie	Mining Engineers	22.7
Far West and Orana	General Practitioners and Resident Medical Officers	18.1
Queensland - Outback	Chefs	17.6
Latrobe - Gippsland	Occupational Therapists	17.5
Latrobe - Gippsland	Enrolled and Mothercraft Nurses	17.3
Central Queensland	Mining Engineers	17.2
Australian Capital Territory	Other Miscellaneous Technicians and Trades Workers	16.9
Queensland - Outback	General Practitioners and Resident Medical Officers	16.0

Notes: 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.

Source: National Skills Commission, *2022 Skills Priority List*, *JSA, Internet Vacancy Index*, November 2022; *Nowcast of employment by Region and Occupation*, November 2022.

It's important to note that some occupations and locations can consistently report high vacancy rates over time. This can sometimes be a result of greater opportunities for job mobility (leading to a higher number of job advertisements as a result of higher turnover), particularly where it occurs within capital cities that have larger populations and labour forces (providing more opportunities for job switching).

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.

Table 8 presents a list of the regions that have the 10 highest vacancy rates for Registered Nurses and for Motor Mechanics – two of the current top 20 occupations in demand nationally. While both occupations are in high demand nationally, only three regions appear in both of their top 10 vacancy rate lists. High vacancy rates in capital cities are also observed more frequently for Motor Mechanics than for Registered Nurses.

⁸ 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.

Table 8: Top 10 regional vacancy rates for Registered Nurses and Motor Mechanics, November 2022

Top 10 regional vacancy rates for Registered Nurses	Vacancy Rate (%)	Top 10 regional vacancy rates for Motor Mechanics	Vacancy Rate (%)
South Australia - Outback	9.6	Western Australia - Outback (North)	15.8
Queensland - Outback	8.3	Western Australia - Outback (South)	12.9
Western Australia - Outback (North)	8.3	Darwin	7.7
Latrobe - Gippsland	7.8	Townsville	7.4
Western Australia - Outback (South)	7.6	Newcastle and Lake Macquarie	6.7
Geelong	7.3	Cairns	6.0
Warrnambool and South West	6.1	Riverina	5.7
Riverina	6.1	Perth	5.7
Far West and Orana	5.8	Central Queensland	5.2
West and North West	5.4	Brisbane	5.1

Notes: 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.

Source: JSA, *Internet Vacancy Index*, November 2022; *Nowcast of employment by Region and Occupation*, November 2022.

Categorising skills pressures – preliminary analysis

As outlined in the 2022 SPL, skills shortages increased significantly compared to those assessed in 2021. However, 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 government.

In 2007, Sue Richardson⁹ suggested the following scheme for classifying skills shortages:

- **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.
- **Quality gap:** 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 NCVET. 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 'Quality 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. Of the top 20 occupations in demand:

⁹ Richardson S, *What is a skills shortage?*, National Centre for Vocational Education Research paper, 2007

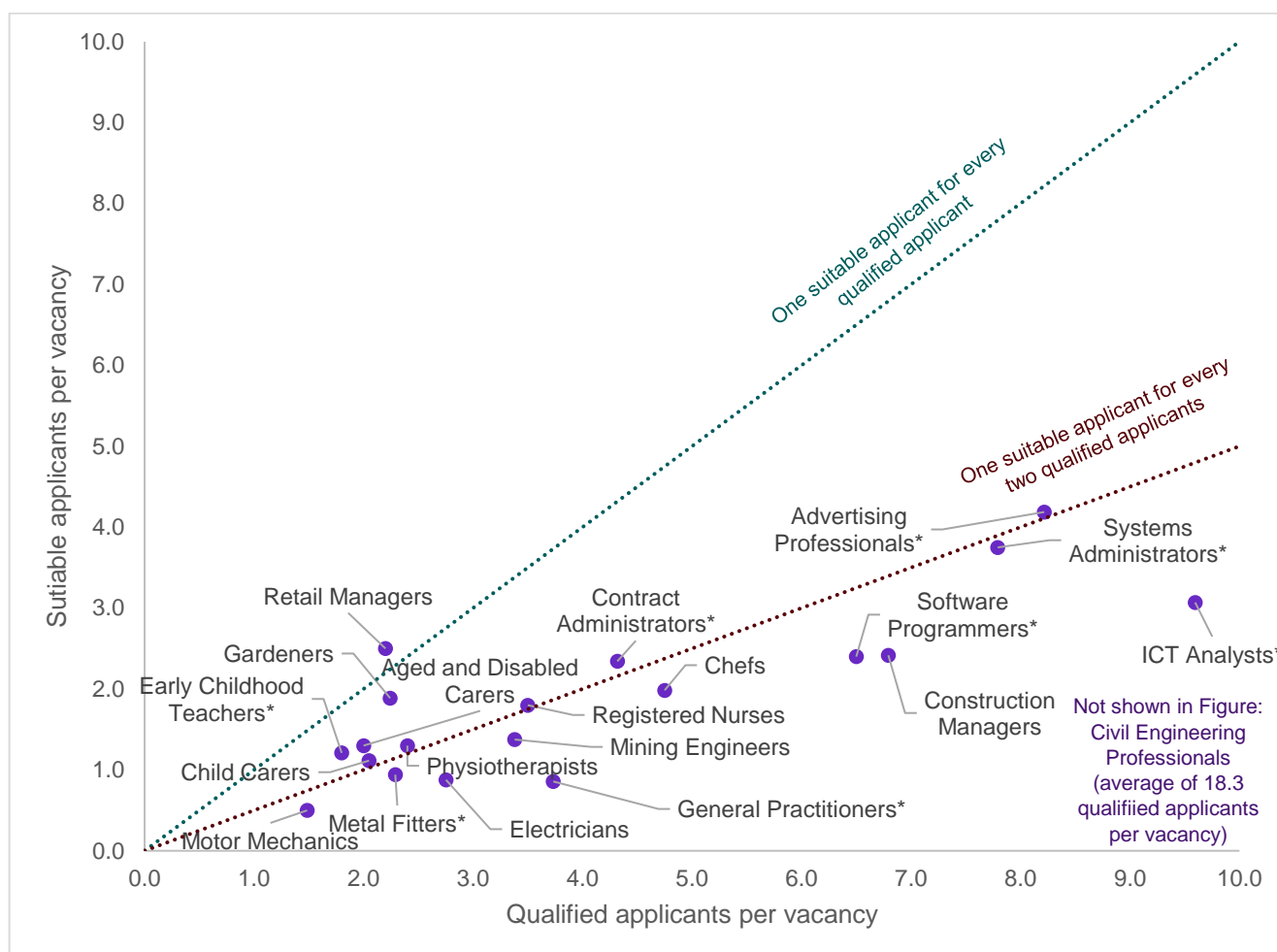
- Three occupations had a job mobility rate that was significantly above the economy-wide figure, indicating challenges with retention of existing workers (Contract, Program and Project Administrators; Child Carers; and Aged and Disabled Carers);
- Nine occupations had a job mobility rate that was within 2 percentage points of the economy-wide figure; and
- The remaining eight occupations had a job mobility rate that was significantly below the economy-wide figure, indicating strong rates of worker retention (Gardeners; Software and Applications Programmers; Motor Mechanics; ICT Business and Systems Analysts; Civil Engineering Professionals; Mining Engineers; General Practitioners and Resident Medical Officers; and Physiotherapists).

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.

If every qualified applicant was also suitable for a position, there would be a one-to-one relationship between these metrics. That is, the occupations would all lie on the 45° line in Figure 17 below. However, as the figure reveals, most occupations in shortage fall well below this line. Indeed, many occupations in shortage have fewer than one suitable applicant for every two qualified applicants. Retail Managers appear to be exception to this trend, with some employers not requiring mandatory qualifications in order to assess an applicant as suitable for filling these vacancies.

Figure 17: Qualified applicants per vacancy and suitable applicants per vacancy, select occupations, 2022¹⁰



Source: JSA, Survey of Employers who have Recently Advertised, 2022.

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

The average number of qualified applicants is also important to consider when considering underlying drivers of skills shortage. For example, the number of qualified applicants per vacancy for the top 20 occupations in demand range from below two for Motor Mechanics to 18.3 for Civil Engineering Professionals (not shown in the figure above). While these were both listed as in shortage in the 2022 Skills Priority List, the metrics listed above markedly contrast for these two occupations.

Using available ABS and SERA data, occupations can be classified into the four categories outlined above using this data (see Table 9).

- Occupations with 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 quality 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.

¹⁰ Occupations titles marked with * have been shortened for chart clarity. Advertising Professionals* includes Marking Professionals. Contract Administrators* includes Program and Project Administrators. General Practitioners* includes Resident Medical Officers. ICT Analysts* includes ICT Business and Systems Analysts. Metal Fitters* includes Machinists. Software Programmers* includes Applications Programmers. Systems Administrators* includes Database Administrators and ICT Security Specialists.

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 quality 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 9: Preliminary JSA shortage classifications for top 20 occupations in demand, December 2022

Classification of skills shortage	Occupations (from top 20 occupations in demand)
<p>Level 1 shortage</p> <p>Few qualified applicants per vacancy, Bachelor degree, Certificate IV or apprenticeship required</p>	<ul style="list-style-type: none"> • Motor Mechanics • Early Childhood (Pre-primary School) Teachers • Electricians • Metal Fitters and Machinists • Physiotherapists
<p>Level 2 shortage</p> <p>Few qualified applicants per vacancy, Certificate I-III or less required</p>	<ul style="list-style-type: none"> • Gardeners • Retail Managers
<p>Quality gap</p> <p>Many qualified applicants per vacancy, but few suitable applicants per qualified applicant</p>	<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
<p>Skills mismatch</p> <p>Above-average job mobility (below-average rates of retention), potentially reinforced by low number of new applicants per vacancy</p>	<ul style="list-style-type: none"> • Contract, Program and Project Administrators • Aged and Disabled Carers • Child Carers
<p>Yet to be determined</p> <p>Further data and analysis required before these occupations can be confidently classified</p>	<ul style="list-style-type: none"> • Registered Nurses • General Practitioners and Resident Medical Officers • Mining Engineers

Of the seven occupations assessed as having a Level 1 or Level 2 shortage, more than half are Skill Level 3 occupations, which reinforces the importance of the VET system (along with the Higher Education system) in addressing skills shortages. Moreover, previous analysis suggests that electrician, motor mechanic and metal machinist-based occupations have been in shortage for a number of years.

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.

Appendix A: Top 20 occupations in demand for each state and territory

The analysis that follows is based on:

- the 2022 Skills Priority List ratings of current skills shortages (for each state and territory) and expected future demand (national rating only);
- data on job vacancies, based on the most recent three-month average of internet job vacancies from October to December 2022 for each state and territory; and
- projected growth in national employment over the five years from November 2021 to November 2026 (both in number of jobs and in percentage terms).

Table A1: Top 20 occupations in demand in New South Wales*(Note: occupations are ordered by the monthly average of internet job vacancies from October to December 2022)*

Top 20 occupations in demand	IVI job ads
Registered Nurses	2,443
Software and Applications Programmers	2,118
Aged and Disabled Carers	1,442
Construction Managers	1,309
Child Carers	1,279
Retail Managers	1,245
ICT Business and Systems Analysts	1,150
Chefs	1,116
Motor Mechanics	1,011
Advertising and Marketing Professionals	926
Generalist Medical Practitioners	903
Civil Engineering Professionals	843
Electricians	783
Early Childhood (Pre-primary School) Teachers	776
Contract, Program and Project Administrators	752
Metal Fitters and Machinists	742
Physiotherapists	349
Database and Systems Administrators, and ICT Security Specialists	298
Gardeners	278
Computer Network Professionals	168

Table A2: Top 20 occupations in demand in Victoria*(Note: occupations are ordered by the monthly average of internet job vacancies from October to December 2022)*

Top 20 occupations in demand	IVI job ads
Registered Nurses	2,492
Software and Applications Programmers	2,128
Aged and Disabled Carers	1,300
Construction Managers	1,159
Child Carers	1,098
Retail Managers	1,068
Chefs	982
Early Childhood (Pre-primary School) Teachers	957
Cooks	860
ICT Business and Systems Analysts	859
Motor Mechanics	846
Bar Attendants and Baristas	835
Education Aides	829
Generalist Medical Practitioners	733
Advertising and Marketing Professionals	710
Civil Engineering Professionals	615
Contract, Program and Project Administrators	585
Social Workers	478
Electricians	445
Database and Systems Administrators, and ICT Security Specialists	257

Table A3: Top 20 occupations in demand in Queensland*(Note: occupations are ordered by the monthly average of internet job vacancies from October to December 2022)*

Top 20 occupations in demand	IVI job ads
Registered Nurses	1,595
Child Carers	1,105
Aged and Disabled Carers	1,079
Motor Mechanics	925
Software and Applications Programmers	894
Chefs	890
Generalist Medical Practitioners	868
Metal Fitters and Machinists	863
Construction Managers	832
Truck Drivers	787
Electricians	729
Civil Engineering Professionals	676
Retail Managers	663
Contract, Program and Project Administrators	506
ICT Business and Systems Analysts	486
Early Childhood (Pre-primary School) Teachers	453
Mining Engineers	276
Drillers, Miners and Shot Firers	245
Gardeners	244
Physiotherapists	236

Table A4: Top 20 occupations in demand in South Australia*(Note: occupations are ordered by the monthly average of internet job vacancies from October to December 2022)*

Top 20 occupations in demand	IVI job ads
Registered Nurses	536
Aged and Disabled Carers	359
Software and Applications Programmers	299
Motor Mechanics	229
Generalist Medical Practitioners	204
Metal Fitters and Machinists	196
Construction Managers	193
Chefs	191
Truck Drivers	182
Child Carers	173
Electricians	173
Retail Managers	145
Nursing Support and Personal Care Workers	141
Civil Engineering Professionals	121
ICT Business and Systems Analysts	114
Contract, Program and Project Administrators	99
Early Childhood (Pre-primary School) Teachers	81
Physiotherapists	69
Gardeners	60
Database and Systems Administrators, and ICT Security Specialists	36

Table A5: Top 20 occupations in demand in Western Australia

(Note: occupations are ordered by the monthly average of internet job vacancies from October to December 2022)

Top 20 occupations in demand	IVI job ads
Registered Nurses	790
Metal Fitters and Machinists	758
Motor Mechanics	726
Electricians	582
Civil Engineering Professionals	495
Mining Engineers	460
Retail Managers	458
Structural Steel and Welding Trades Workers	437
Child Carers	432
Generalist Medical Practitioners	411
Chefs	411
Truck Drivers	408
Construction Managers	399
Software and Applications Programmers	353
Drillers, Miners and Shot Firers	309
Aged and Disabled Carers	302
Earthmoving Plant Operators	287
ICT Business and Systems Analysts	187
Early Childhood (Pre-primary School) Teachers	159
Database and Systems Administrators, and ICT Security Specialists	77

Table A6: Top 20 occupations in demand in Tasmania

(Note: occupations are ordered by the monthly average of internet job vacancies from October to December 2022)

Top 20 occupations in demand	IVI job ads
Registered Nurses	187
Generalist Medical Practitioners	89
Motor Mechanics	52
Aged and Disabled Carers	50
Chefs	49
Truck Drivers	45
Construction Managers	40
Electricians	38
Retail Managers	37
Occupational Therapists	36
Metal Fitters and Machinists	32
Physiotherapists	32
Civil Engineering Professionals	28
Software and Applications Programmers	23
Internal Medicine Specialists	21
Child Carers	21
Contract, Program and Project Administrators	20
Speech Professionals and Audiologists	19
ICT Business and Systems Analysts	17
Early Childhood (Pre-primary School) Teachers	9

Table A7: Top 20 occupations in demand in the Northern Territory*(Note: occupations are ordered by the monthly average of internet job vacancies from October to December 2022)*

Top 20 occupations in demand	IVI job ads
Registered Nurses	141
Motor Mechanics	76
Aged and Disabled Carers	56
Electricians	52
Metal Fitters and Machinists	49
Construction Managers	46
Welfare, Recreation and Community Arts Workers	45
Child Carers	43
Generalist Medical Practitioners	40
Civil Engineering Professionals	38
Social Workers	38
Welfare Support Workers	34
Chefs	29
Human Resource Professionals	28
Contract, Program and Project Administrators	28
Storepersons	27
Waiters	25
Occupational and Environmental Health Professionals	23
Software and Applications Programmers	12
Early Childhood (Pre-primary School) Teachers	12

Table A8: Top 20 occupations in demand in the Australian Capital Territory*(Note: occupations are ordered by the monthly average of internet job vacancies from October to December 2022)*

Top 20 occupations in demand	IVI job ads
Software and Applications Programmers	440
Construction Managers	252
ICT Business and Systems Analysts	226
Registered Nurses	193
Child Carers	126
Retail Managers	117
Database and Systems Administrators, and ICT Security Specialists	117
Security Officers and Guards	110
Contract, Program and Project Administrators	108
Generalist Medical Practitioners	103
Chefs	58
Computer Network Professionals	56
Civil Engineering Professionals	55
Aged and Disabled Carers	54
Early Childhood (Pre-primary School) Teachers	47
Social Workers	43
Advertising and Marketing Professionals	43
Electricians	38
Physiotherapists	35
Auditors, Company Secretaries and Corporate Treasurers	32