



**Australian Government**  
**Jobs and Skills Australia**

# Skills Shortage Quarterly

**March 2023**



## Skills Shortage Quarterly

Skills Shortage Quarterly (SSQ) is a new report from Jobs and Skills Australia (JSA), presenting quarterly analysis on occupation shortage pressures. Data underpinning the analysis is drawn from JSA’s Survey of Employers who Recently Advertised (SERA). The insights in the SSQ complements and expands on skill shortage discussions in JSA’s quarterly Labour Market Update report.

The percentage of advertised occupation vacancies filled (fill rate) is a key metric from SERA and provides a valuable proxy for identifying occupations and parts of the labour market in potential shortage. Generally, lower fill rates imply greater employer difficulty with filling vacant positions and a higher likelihood of occupations in shortage. In contrast, higher fill rates imply fewer challenges (in general) with filling vacancies and a lower likelihood of shortages. The metric is consistent with the definition of shortage used for developing the annual Skills Priority List (SPL). Moreover, analysis of SERA data is pivotal to informing the SPL.

Additional metrics are also reported on. These include average number of total applicants, qualified applicants, and suitable applicants per vacancy; and average years of labour market experience sought by employers. The extra information provides further context to fill rate changes overtime, including the links between these measures and the fill rate.

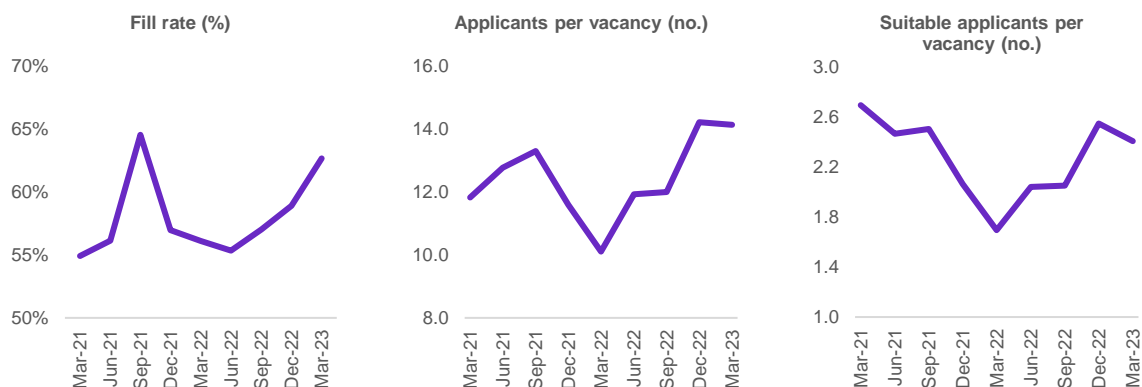
A new metric, the ‘suitability gap’, is introduced in the report to shed further light on skill gaps from the employer’s perspective.

The quarterly report will also present a spotlight piece to uncover how skill shortages are potentially manifesting in the labour market.

## National Snapshot

	Fill rate (%)	Applicants per vacancy (no.)	Qualified applicants per vacancy (no.)	Suitable applicants per vacancy (no.)
<b>March 2023 quarter</b>	<b>63%</b>	<b>14.1</b>	<b>4.7</b>	<b>2.4</b>
Change since December 2022 quarter	↑ 4% pts	↓ 0.1	No change	↓ 0.1

**Figure 1: Quarterly trends since March quarter 2021**



## Rising fill rates point to potential labour market softening

The fill rate for occupations within scope of this report increased in March 2023 quarter to 63% (see Table 1 in Appendix).<sup>1</sup> While there was little change in the number of applicants, qualified applicants, and suitable applicants per vacancy in the recent quarter, these measures have been trending up, generally since June quarter 2022.

The higher national fill rate was driven by New South Wales, where the fill rate increased by 10 percentage points to 64%. The fill rate moved up in all jurisdictions other than Victoria and South Australia.

The fill rate also rose sharply for Skill Level 4 occupations by 8 percentage points to 66%, in which the Carers and Aides sub-major occupation group are a large component.

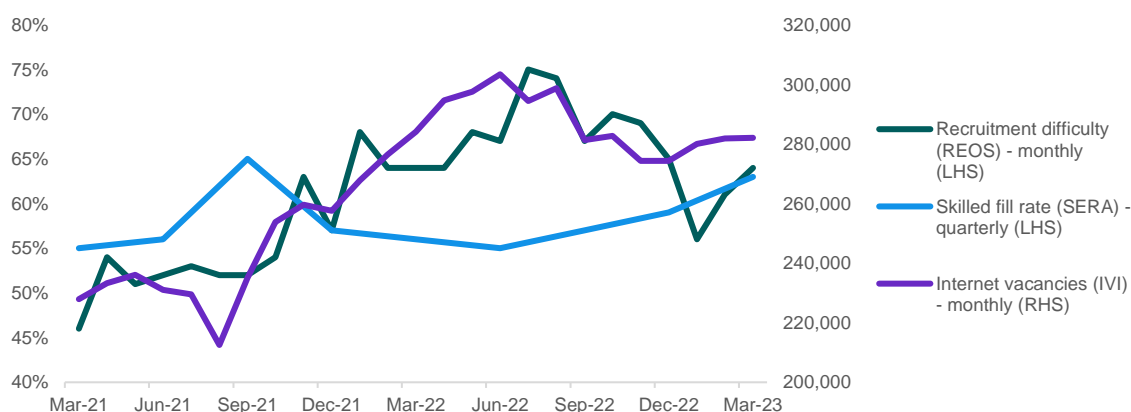
Metro area fill rates (63%) were almost level with fill rates in regional areas (62%), as regional fill rates strengthened by 7 percentage points.

Since around mid-2022, fill rates moved up alongside easing number of internet vacancies as measured by the JSA's Internet Vacancy Index and recruitment difficulty rate as measured by JSA's Recruitment Experiences and Outlook Survey.

Going forward, occupation shortages may unwind if fill rates continue to pick up and the number of qualified and suitable applicants per vacancy increase.

However, fill rates remain lower than previous years, and internet vacancies and recruitment difficulty remain elevated compared to 12 months prior. With largely unchanged numbers of total, qualified and suitable applicants per vacancy, the uplift in the fill rate in the current quarter may be due to employers lowering their requirements to fill vacancies. This may be an indication that, overall, labour market conditions are still tight. The latest data from the Australian Bureau of Statistics support this, with employment growth being driven by an increase in full-time jobs and unemployment steady at 3.5%.

**Figure 2: Fill rate (%), recruitment difficulty rate (%) and internet vacancies (no.)**



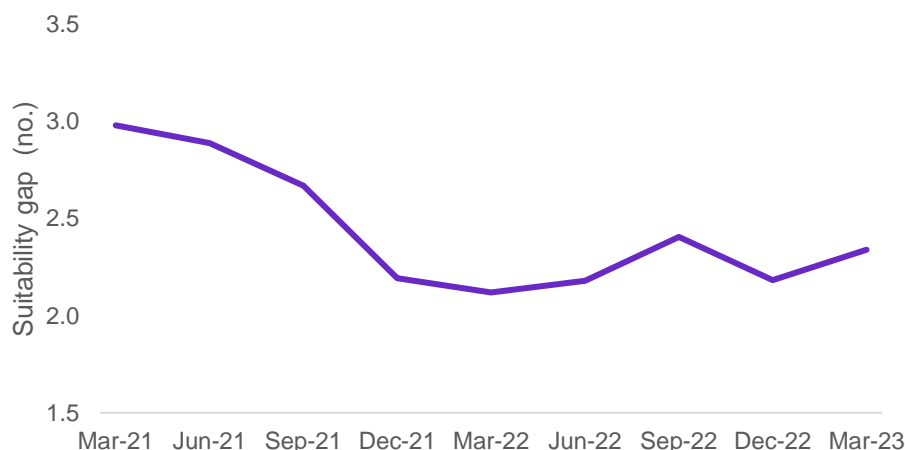
Source: Jobs and Skills Australia - Survey of Employers who Recently Advertised (SERA), Recruitment Experiences and Outlook Survey (REOS) and Internet Vacancy Index (IVI) (seasonally adjusted).

<sup>1</sup> The scope of occupations analysed in this publication is outlined in the notes section in the Appendix.

## The gap between qualified and suitable applicants remain

In March quarter 2023, across Australia, there was a gap of 2.3 between qualified and suitable applicants per vacancy (see Figure 3).<sup>2</sup> That is, the number of qualified applicants per vacancy employers received was 4.7, while the number of suitable applicants per vacancy was 2.4. The divergence between the two metrics can be viewed as an indicator that formal qualifications alone are not sufficient to meet employer needs.

**Figure 3: Suitability gap (no.), National level, March 2021 to March 2023**



Realistically, the suitability gap is highly unlikely to be zero, given the level of on-the-job-learning that take place in the labour market. Therefore, the existence of a gap may not be meaningful in and of itself. But a large or widening suitability gap may signal that the labour market is relatively weak, and employers can afford to be more discerning in their assessment of applicants. Persistently high suitability gaps may signal that there is a role for education and training providers to play in narrowing that gap.

The suitability gap fell from 3 in March quarter 2021, when the labour market was relatively less tight, to 2.1 in March quarter 2022. Since then, the gap has persisted at slightly above 2. The narrowing suitability gap coincided with falling filling rates: both measures troughed around mid-2022 when labour market tightness was at or close to its peak.

Generally, the positive correlation between the suitability gap and fill rates also holds by state and territory and at the sub-major occupation group level explored in this publication (see Table 1).

The dynamic between the suitability gap and fill rate resonates with research, which found evidence that employers raised education and experience requirements in times of softer labour market conditions.<sup>3</sup> Therefore, the current pattern of movements in fill rates may, in part, reflect employers lowering their requirements in response to tight the labour market to fill vacancies.

The suitability gap was between 2 and 3 for New South Wales, Victoria, and Queensland and under 2 for the mid-sized and smaller jurisdictions. South Australia was an outlier, with the widest suitability gap at 3.5.

Skill Level 1, generally, had the most qualified and suitable applicants per vacancy. But suitability gap was also the widest at 4.1. This was followed by Skill Level 2 occupations, which had a suitability gap of 2.7.

The wider suitability gap among higher skilled occupations could be the driven by technology advances and globalisation, augmenting tasks within occupations and employer's business models. The changing nature of work, shaped by these megatrends, may be resulting in employers demanding

<sup>2</sup> For readability this metric was not included in Table 1.

<sup>3</sup> Modestino AS, Shoag D, Ballance J (2020) Upskilling: Do Employers Demand Greater Skill When Workers Are Plentiful? *The Review of Economics and Statistics* 2020; 102 (4): 793–805.

more skills and experience pertaining to client relations, project management, data and digital technology use, critical thinking, communication, and teamwork among others.<sup>4</sup>

The number of qualified applicants and suitable applicants per vacancy were greater in metro labour markets than in regional labour markets. This is driven by the concentration of economic activity and population in capital cities. However, the suitability gap was also larger in metro areas (2.8) compared to regions (1.3).

## Professionals Snapshot

	Fill rate (%)	Applicants per vacancy (no.)	Qualified applicants per vacancy (no.)	Suitable applicants per vacancy (no.)
<b>March 2023 quarter</b>	<b>63%</b>	<b>14.6</b>	<b>6.0</b>	<b>2.5</b>
Change since December 2022 quarter	↑ 2% pts	↓ 1.2	↑ 0.1	No change

The fill rate increased in the March quarter 2023 for occupations within the Professional major group, while the number of applicants per vacancy fell slightly. The suitability gap was 3.5, which was the largest compared to the other major group occupations.

### Regions

The fill rate for Professionals was lower in regional areas (59%) than in metro locations (65%). While the number of applicants, qualified applicants and suitable applicants per vacancy were substantially lower in regional areas, the suitability gap in metro areas was greater.

The difference in suitability gap between metro locations (4.1) and regional areas (2.0) was much more apparent for Professionals than for Technicians and Trades Workers and Community and Personal Service Workers. For these latter two major occupation groups, the difference in suitability gap between metro and regional labour markets was under one.

The larger difference in the suitability gap could be driven by the greater composition of high skilled occupations in metro areas compared to regional locations within Professionals compared to the other major occupation groups where the distribution of occupations between the two locations are more balanced.

### Sub-major groups

Fill rates picked up for 5 of the 6 sub-major groups. Except for Education and Health Professionals, the fill rate for the sub-major groups surpassed their rate in March quarter 2021. Further, excluding Health Professionals, current quarter sub-major occupation fill rates were above their three-year average quarter fill rates.

For Health Professional, fill rates have remained low consistently at around 50%. This quarter, the rate fell 13 percentage points to 40%. This is the lowest rate since the series began in the March quarter 2021 and is 11 percentage points below its three-year average quarterly fill rate of 51%. The outcomes highlight that occupation shortages may still be prevalent in the health sector.

In contrast to above, Health Professionals had the smallest suitability gap (less than one). On the other hand, the suitability gap was largest for Design, Engineering, Science and Transport and ICT Professionals sub-major occupations (6.6 and 9.4 respectively). For these latter occupation groups, the

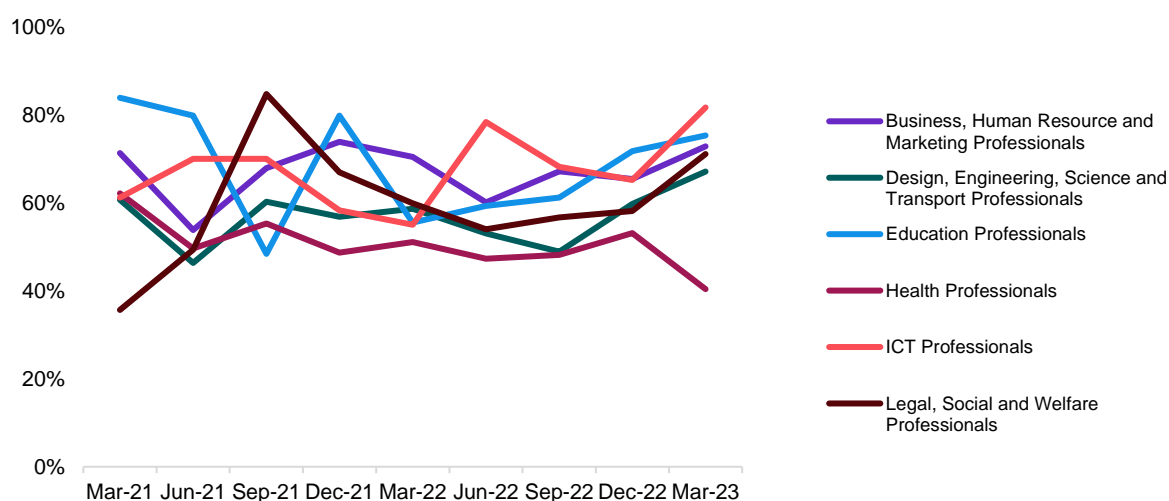
<sup>4</sup> National Skills Commission, *The State of Australia's Skills 2021: Now and Into the Future* (2021) and *Australia's Current, Emerging and Future Workforce Skills Needs* (2022).

suitability gap has been persistently high overtime. In the last three years, the suitability gap for both occupation groups averaged above 6.5 each quarter.

The magnitude of the gap may not be of concern as it may signify that the acquisition of skills occurs to a greater extent through on-the-job-learning and labour market experience for these occupations relative to others. Supporting this view is that the average years of relevant labour market experience required by employers is highest for these occupations (between 3.5 to 4 years) compared to all occupations across all the major occupation groups. Further analysis also demonstrates that average required experience (in years) and suitability gap has a strong positive relationship.

For ICT Professionals, the suitability gap increased over the quarter by 3. The gap has been generally increasing since March 2022 quarter. But since the have movements have coincided with uplifts in the fill rates, the change in the suitability gap may be driven more by employers being more scrupulous when recruiting than due to any deterioration of applicant skills.

**Figure 2: Quarterly fill rates(%), March 2021 to March 2023, by sub-major groups**



## Technicians and Trades Workers

	Fill rate (%)	Applicants per vacancy (no.)	Qualified applicants per vacancy (no.)	Suitable applicants per vacancy (no.)
<b>March 2023 quarter</b>	<b>49%</b>	<b>10.1</b>	<b>2.7</b>	<b>1.5</b>
Change since December 2022 quarter	↑ 1% pts	↓ 2.0	↓ 1.2	↓ 0.5

The fill rate moved up marginally for the Technicians and Trades Workers major occupation group, but the number of applicants per vacancy fell from 12.1 to 10.1. Fill rates for this broad group, at 49%, was much lower than for the other two major groups, which had rates above 60%.

The results indicate that the labour market for occupations among Technicians and Trades Workers may continue to be tight. Fill rates have been persistently low over time for occupations with an apprenticeship training pathway.

## Regions

The fill rate for Technicians and Trades Workers rose considerably by 7 percentage points to be slightly higher in regional areas (52%) compared with metro areas (48%), where the rate fell by 2 percentage points.

But the various applicants per vacancy metrics were all lower in regional areas than in metro locations, owing to the greater number of workers in metro locations. Compared to Professionals, the suitability gap in metro and region labour markets were not too dissimilar at 1.4 and 0.8 respectively.

## Sub-major groups

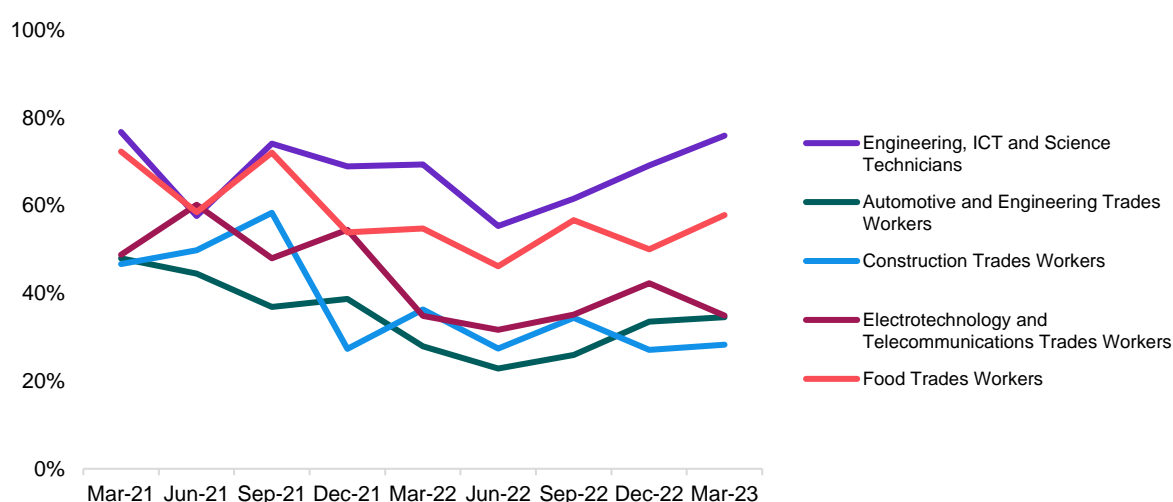
Fill rates increased over the quarter for 4 of the 5 sub-major occupation groups, but there was significant variation in the change in fill rates within those groups. In the current quarter, fill rates for Engineering, ICT and Science Technicians rose by 7 percentage points, while the rate declined by the same magnitude for Electrotechnology and Telecommunications Trades Workers.

Other than Engineering, ICT and Science Technicians (76%), the fill rates were low for the other sub-major groups (below 60%). Fill rates for these other sub-major occupations were also far below their March quarter 2021 rates. Of particular concern is the rate for Construction Trades Workers of 28% in the current quarter, dropping from 58% in September quarter 2021. The outcome may signify that shortages may be more acute and persistent for occupations in the Construction Trades Workers sub-major group.

The suitability gap for Engineering, ICT and Science Technicians occupations (3.2) far exceeded that of the other Technician and Trades Workers sub-majors, which had suitability gaps at or below one. This was despite Engineering, ICT and Science Technicians having a greater number of qualified and suitable applicants per vacancy than the other sub-majors.

The suitability gap for Engineering, ICT and Science Technicians sub-major was large even compared to Professionals sub-major occupation groups. Moreover, the gap has averaged over 4 each quarter in the last three years. Like Design, Engineering, Science and Transport and ICT Professionals, skills acquisition through on-the-job-learning may play a greater role for Engineering, ICT and Science Technicians relative to other sub-major occupation groups within Technicians and Trades Workers. Employers' experience requirements of applicants for this occupation group were also extensive at almost 3 years.

**Figure 3: Quarterly fill rates (%), March 2021 to March 2023, by sub-major groups**



## Community and Personal Service Workers

	Fill rate (%)	Applicants per vacancy (no.)	Qualified applicants per vacancy (no.)	Suitable applicants per vacancy (no.)
<b>March 2023 quarter</b>	<b>62%</b>	<b>8.4</b>	<b>3.1</b>	<b>1.7</b>
Change since December 2022 quarter	↑ 1% pts	No change	↑ 0.2	↓ 0.5

There was little overall change in the labour market for Community and Personal Service Workers in the most recent quarter, with only a slight change in the fill rate and little change in applicant metrics. As such, the suitability gap for this broad occupation group was largely unchanged.

### Regions

The fill rate for Community and Personal Service Workers was significantly higher in regional areas (67%) than metro areas (60%), reflecting the 14-percentage point increase in regional fill rates.

Unlike the other two major groups reported on above, the difference in the various applicants per vacancy metrics were marginal, with the suitability gap in the two labour markets almost at par.

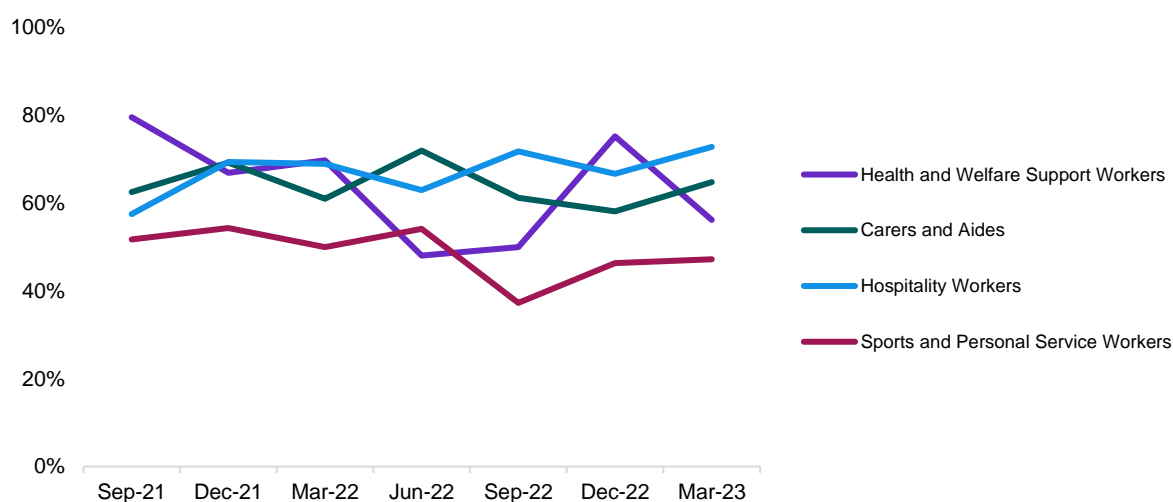
### Sub-major groups

Fill rates increased over the quarter for 3 of the 4 sub-major occupation groups. For the Health and Welfare Support group, the fill rate declined by almost 20 percentage points to 56%, while for Carers and Aides (65%) the rate rose by 7 percentage points. Health and Welfare Support occupations was the only sub-major group where the fill rate remained well below their rate in the March 2021 quarter.

For Sports and Personal Service Workers – a group which includes beauty therapists, fitness instructors and sports coaches – fill rates have been consistently low (currently 47%) since the survey started including these occupations in the September quarter 2021.

The suitability gap across the sub-major occupations was relatively low. The gap was highest for Health and Welfare Workers (2.4), which comprises the largest share of higher skilled occupations within Community and Personal Service Workers group.

**Figure 4: Quarterly fill rates (%), March 2021 to March 2023, by sub-major groups**





## Spotlight piece: implications for our education sectors

The analysis in this publication reveals insights on the role of higher education and Vocation Education and Training (VET) providers in equipping workers with the skills and experiences demanded by employers in Australia's labour market.

Sub-major occupations can be grouped into four quadrants based on where their standardised qualified applicants per vacancy and suitable applicants per vacancy lie in relation to the standardised average (across all sub-major occupations) of these metrics (see Figure 5).

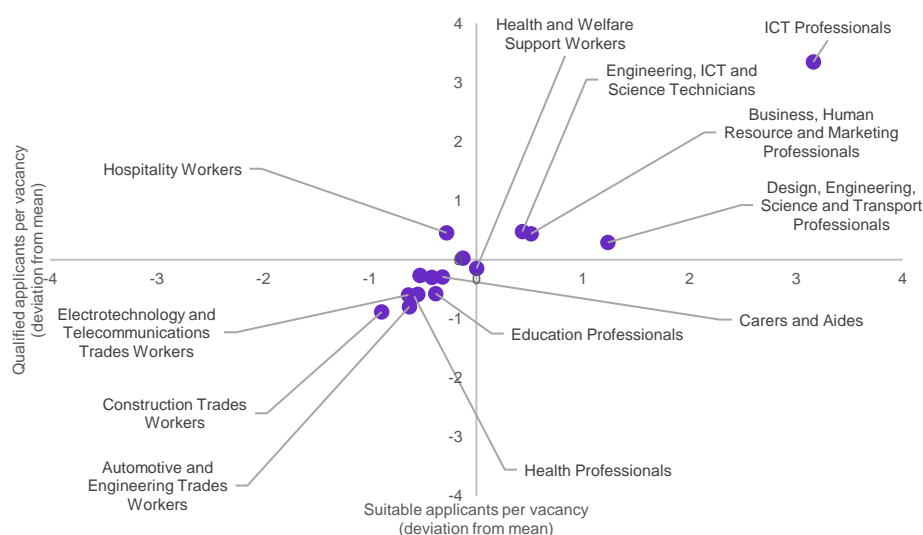
The average number of qualified applicants per vacancy across all sub-major groups was 4.3 and is more than twice the average number of suitable applicants per vacancy at 2.1. Standardising these averages converts them to zero. As a result, any sub-major occupation group with average level qualified and suitable applicants per vacancy would lie at the origin of (0,0).

Standardising the values in this manner assists with visually presenting both qualified and suitable applicants per vacancy simply and on the same scale.

Quadrant 2 (the upper right section of Figure 5) is defined as sub-major occupation groups with standardised qualified and suitable applicants per vacancy values above zero. Therefore, these occupations have qualified applicants per vacancy greater than 4.3 and suitable applicants per vacancy of more than 2.1. Quadrant 4 (the lower left section of Figure 5) is defined as those occupation groups with both standardised qualified and suitable applicants per vacancy values below zero (or below-average qualified and suitable applicants per vacancy).

Most occupations fall within quadrants 2 and 4. That is, their standardised qualified and suitable applicants per vacancy figures fall either above or below zero.

**Figure 5: standardised qualified and suitable applicants per vacancy, sub-major occupations, March quarter 2023**



Note: Quadrant 1 (upper left), Quadrant 2 (upper right), Quadrant 3 (lower right), Quadrant 4 (lower left).

Quadrant 2 contains a mix of sub-major occupations within Professionals and Technician and Trades Workers major occupation groups. These sub-major groups share several commonalities, including being high skilled, having large and persistent suitability gaps, and extensive labour market experience requirements.

Higher education and VET providers may be providing job seekers, within quadrant 2 occupations, with a 'reasonable' level of technical and employability skills given their above-average outcomes in terms of qualified and suitable applicants per vacancy. This may partly explain the generally higher fill rates, including the consistent improvements in fill rates among these sub-major groups in recent quarters.

But the persistently large suitability gap prevalent in these occupation groups and extensive labour market experience required by employers suggests a need for education and training providers – in collaboration with industry – to tailor their products, placing greater emphasis on boosting job seekers’ ‘soft skills’ and experience deemed essential by employers.

In quadrant 4, most occupations belong to Technician and Trades and Community and Personal Service Workers. Sub-major occupations in this quadrant generally have VET qualifications as the main pathway to employment. The below-average outcomes may also explain the reason for the generally low fill rates amongst these sub-major groups. Although, working conditions and wages are also a key contributing factor for some of these, particular for those in Carers and Aides – a group that includes aged or disabled carers and childcare workers – and Health and Welfare Support Workers.

For quadrant 4 occupations, the below-average outcomes also reflect the lack of total and qualified applicants (see Table 1 in Appendix). The result pertains to occupations related to technicians and trades, health, and early childhood education sectors.

An implication for quadrant 4 occupations is that both the quality and volume of technical and employability skills of labour may need to be significantly improved to alleviate shortage pressures. This is especially important given the role these occupations play in the productivity growth and well-being of the economy and society. The grouping therefore assists with identifying the ‘lagging’ occupations, where skills development and supply need to be greatly prioritised.

Hospitality Workers sub-major occupation is an outlier, falling within quadrant 1 (upper left section of Figure 5). This quadrant is defined to include sub-major occupations with below-zero standardised qualified applicants per vacancy but above-zero standardised suitable applicants per vacancy.<sup>5</sup> A reason for this result could be due to only 30% of employers in the sub-major requiring mandatory qualifications, whereas for the other occupation groups, most employers require mandatory post-school qualifications. Further, employers in Hospitality Workers also require relatively very few years of relevant labour experience (an average of 1.6 years).

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<sup>5</sup> That is, the occupation group has qualified applicants per vacancy below the 4.3 average across all occupations but has suitable applicants per vacancy above the average of 2.1.

## Appendix – Table 1: March 2023 quarter data

Category	Fill rate (%)		Applicants per vacancy		Qualified applicants per vacancy		Suitable applicants per vacancy	
	March quarter 2023	Quarterly change	March quarter 2023	Quarterly change	March quarter 2023	Quarterly change	March quarter 2023	Quarterly change
<b>Overall</b>	<b>63%</b>	<b>+4% pts</b>	<b>14.1</b>	<b>-0.1</b>	<b>4.7</b>	<b>0</b>	<b>2.4</b>	<b>-0.1</b>
<i>States and territories</i>								
New South Wales	64%	+10% pts	14.4	+1.0	4.6	0	2.3	-0.3
Victoria	58%	-2% pts	14.8	-0.2	5.6	+0.1	2.7	-0.1
Queensland	67%	+4% pts	14.6	+2.4	4.7	+0.8	2.6	+0.3
South Australia	61%	-5% pts	15.8	-2.3	5.9	+0.9	2.4	-0.4
Western Australia	66%	+4% pts	12.0	-3.2	3.5	-1.3	1.8	-0.3
Tasmania*	60%	+4% pts	16.3	-4.1	5.7	-1.4	4.0	+0.7
Northern Territory*	58%	+4% pts	8.6	-0.8	2.1	-0.1	1.7	-0.1
Australian Capital Territory*	60%	+2% pts	10.5	+1.0	3.0	+0.4	1.7	-0.5
<i>Skill level<sup>6</sup></i>								
Skill Level 1	66%	+3% pts	17.4	+0.3	6.9	+0.3	2.8	0
Skill Level 2	72%	+4% pts	19.3	+2.3	5.7	0	3.0	-0.1
Skill Level 3	46%	+1% pts	7.0	-2.1	1.8	-0.6	1.2	-0.5
Skill Level 4	66%	+8% pts	12.7	+0.6	4.0	+0.6	2.6	+0.2

<sup>6</sup> Skill level categories are based on the [Australian and New Zealand Standard Classification of Occupations](#) (ANZSCO).

<i>Occupations – select categories<sup>7</sup></i>								
Professionals	63%	+2% pts	14.6	-1.2	6.0	+0.1	2.5	0
Business, Human Resource and Marketing	73%	+7% pts	18.5	-1.2	6.3	+0.7	2.8	-0.2
Design, Engineering, Science and Transport	67%	+7% pts	19.7	-2.9	9.2	+0.1	2.6	-0.2
Education	75%	+3% pts	5.5	-0.3	2.7	-0.7	1.2	-0.7
Health	40%	-13% pts	4.0	-3.3	1.9	-1.2	1.1	-0.5
ICT	82%	+17% pts	36.5	+5.8	16.9	+5.6	7.5	+2.6
Legal, Social and Welfare	71%	+13% pts	10.2	+4.2	3.7	+1.3	2.1	+0.7
Technicians and Trades Workers	49%	+1% pts	10.1	-2.0	2.7	-1.2	1.5	-0.5
Engineering, ICT and Science Technicians	76%	+7% pts	20.2	-5.8	6.0	-3.8	2.8	-1.6
Automotive and Engineering Trades	35%	+1% pts	5.1	-0.2	1.7	+0.4	0.8	0
Construction Trades	28%	+1% pts	4.0	-0.2	0.7	-0.4	0.7	-0.1
Electrotechnology and Telecomm. Trades	35%	-7% pts	6.0	-3.7	1.7	-0.5	1.1	-0.2
Food Trades	58%	+8% pts	9.0	+0.6	2.6	+0.4	1.6	+0.1
Community and Personal Service Workers	62%	+1% pts	8.9	+0.5	3.1	+0.2	1.7	-0.5
Health and Welfare Support	56%	-19% pts	10.9	0	4.2	-0.5	1.8	-1.3
Carers and Aides	65%	+7% pts	7.0	+0.5	3.0	+0.6	1.6	-0.1
Hospitality	73%	+6% pts	14.8	+0.4	3.1	+0.4	2.8	-1.0
Sports and Personal Service	47%	+1% pts	6.3	+0.4	2.0	+0.2	1.1	-0.2

<sup>7</sup> Sub-industries are based on the 2-digit ANZSCO level and only includes industries with a large enough sample size over the quarter.

<i>Metro/regional</i>								
Metro	63%	+2% pts	15.8	-0.9	5.4	-0.3	2.6	-0.2
Regional	62%	+7% pts	10.2	+0.9	3.3	+0.5	2.0	0
<i>Metro/regional – broad occupation groups</i>								
Professionals								
Metro	65%	+2% pts	16.5	-1.7	6.9	0	2.8	0
Regional	59%	+3% pts	9.8	-0.2	3.7	+0.2	1.7	-0.1
Technicians and Trades Workers								
Metro	48%	-2% pts	10.9	-3.2	3.0	-1.7	1.6	-0.6
Regional	52%	+7% pts	8.1	-0.4	2.2	-0.3	1.4	-0.3
Community and Personal Service Workers								
Metro	60%	-5% pts	8.8	-0.3	3.1	-0.1	1.7	-0.5
Regional	67%	+14% pts	7.3	+0.6	2.9	+0.7	1.8	-0.3

Source: Jobs and Skills Australia, Survey of Employers who Recently Advertised (SERA), March 2023 quarter

## Notes

- SERA is based on approximately 2,000 responses each quarter. The survey covers occupations, as defined by [Australian and New Zealand Standard Classification of Occupations](#) – generally requiring a university degree, trade apprenticeship or Certificate III or IV. As a result, the survey outcomes are reflective of occupations requiring post-school education.
- Only those occupations with a sufficient quarterly sample size are included for analysis in this report to ensure data changes are more reflective of labour market developments.
- SERA is designed for the specific purpose of assessing occupational shortages and provides a direct measure of the employer experience when recruiting.
- Data found in Skilled Shortage Quarterly is not an indicator of occupations appearing on the 2023 SPL. Additional to SERA, the SPL is based on modelling, analysis of other labour market data and stakeholder consultation.
- Caution should be used for data for Tasmania, the Northern Territory and the Australian Capital Territory given the lower sample sizes compared to the larger states.