



# **Connecting for impact**

Aligning productivity, participation and skills

Jobs and Skills report 2025





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#### Commissioner's Foreword



Australia's labour market is undergoing significant transformation, shaped by shifting economic demands, evolving worker priorities, and rapid technological advancement. In this dynamic environment, our shared focus must be on building a more productive, inclusive, and resilient workforce - one that empowers all Australians to participate fully and meaningfully in the economy.

Over the past year, Jobs and Skills Australia (JSA) has deepened our contribution to this mission. Through rigorous analysis and forward-looking insights, we have delivered a suite of reports and data products that capture important perspectives, challenge conventional approaches, and offer new ways of thinking about and strengthening Australia's skills system.

Productivity remains a central concern for policymakers. While technically it is a measure of output per hour of work – it is a reflection of match efficiency, job quality, and the design of roles and qualifications to make the best use of capital investments, such as investments in technology. Participation in the labour market is key for both economic output and social inclusion. I note that the Government's Economic Reform Roundtable highlighted the criticality of skills to Australia's future economic and productivity growth, by lifting both productivity and participation and ensuring that a well-functioning labour market delivers for people and the economy.

Australia's long-term productivity depends on how well our tertiary system equips people with the right mix of skills at the right time. This was a key focus at both the Government's Tertiary Productivity Roundtable and Economic Reform Roundtable. To deliver on this promise requires a national skills system that is more joined-up, more agile, inclusive and productive.

Technology, particularly generative artificial intelligence (Gen AI), is reshaping the way we live, learn, and work. It presents both challenges and opportunities, and JSA has taken a leading role in exploring its implications. Our research this year has focused on how these innovations can empower – not replace – Australian workers. We are committed to ensuring that technological progress enhances human capability and supports inclusive growth.

We have also examined more deeply this year how gender influences education choices and labour market outcomes, and how these patterns intersect with the composition of industries across Australia. This work is vital to understanding and addressing structural inequalities. JSA continues to harness the power of data and analytics to support evidence-based strategies that promote inclusive participation. We are confronting long-standing inequities by prioritising people-centred analysis and policy design.

To build a truly inclusive workforce, we must invest in lifelong learning, upskilling, and career mobility. Labour market policy must reflect not only industry demand, but also the aspirations and lived experiences of workers. A more balanced post-secondary education system – one that supports the care economy, the clean energy transformation, early childhood learning, and emerging technologies – is essential to Australia's future.

JSA's skills forecasting capabilities have provided policymakers, educators, and communities with deeper insights into emerging trends. Our work also shows that skill shortages are not merely a function of high demand – they reflect deeper systemic misalignments. By addressing these, we can unlock new opportunities for reform and growth.

A key part of our mission is to foster informed dialogue across the national skills system. We are building trust, strengthening connections, and convening stakeholders to ensure that system outcomes are effective, equitable, and future-ready.

Our vision is clear: a labour market where opportunity is shared, skills are recognised, and every Australian has a fair chance to thrive. I am proud of JSA's role in shaping this future – one where the benefits of productivity are broadly and fairly distributed, and where the contributions of workers are valued as the foundation of our national prosperity.

Professor Barney Glover AO

Commissioner

Jobs and Skills Australia

### **Contents**

Comm	nissioner's Foreword	<b>v</b>
Execu	tive summary	4
Inclus	ive participation	5
Barrie	rs to productivity and participation in today's labour market	6
The fu	ıture labour market	7
Impro	ved matching and the skills system	8
Activa	nting an informed dialogue	9
Recon	nmendations	11
Chapt	er 1 Productivity, participation and skills	13
1.1	Productivity in Australia	14
1.1.1	What drives productivity?	15
1.2	The importance of participation	16
1.2.1	Participation in Australia	17
1.2.2	Participation is uneven	18
1.3	Improved matching as an enabler	19
1.3.1	How efficient is matching between people and jobs in the Australian labour market?	20
1.3.2	How JSA contributes to improved matching efforts	23
1.4	Key points from chapter one	24
Chapt	er 2 Inclusive participation	27
2.1	First Nations people	28
2.2	People with disability	30
2.3	Women's workforce participation	32
2.3.1	Occupational segregation	33
2.3.2	Gender pay gaps	34
2.4	Youth and mature age employment	36
2.4.1	Employers' experiences of young job applicants	39
2.5	The role of foundation skills	41
2.6	Inclusivity and shortage pressures	43
2.6.1	First Nations people	43
2.6.2	People with disability	45
2.6.3	Younger and older workers	45
2.6.4	In summary	46
2.7	Key points from chapter two	47

Chapt	er 3 The barriers to productivity and participation in today's labour market	49
3.1	The occupational perspective – shortage analysis	50
3.1.1	Occupation shortage drivers	50
3.1.2	Persistent labour market shortages	53
3.1.3	Addressing occupation shortages	54
3.1.4	Workforce shortage and labour productivity growth	54
3.1.5	In focus – Veterinarians	55
3.2	Spotlight – expanding our understanding of job vacancies	57
3.3	The employer perspective – retention issues	58
3.3.1	Frequency of staff replacement	58
3.3.2	Reasons for staff replacement	59
3.3.3	Business impact	60
3.3.4	Strategies used to retain staff	61
3.4	The regional perspective – the picture across Australia	62
3.4.1	Roadmap for Regional Australia	62
3.5	Summary of chapter three	66
Chapt	er 4 The future labour market	67
4.1	Australia's changing labour market	68
4.1.1	Industry employment growth	68
4.1.2	Employment growth by occupation	70
4.1.3	Employment growth by skill level	72
4.2	Employment projections – 2025	73
4.2.1	Overall employment growth	73
4.2.2	Industry employment outlook	73
4.2.3	Employment outlook by occupation	75
4.2.4	Employment outlook for states and territories	76
4.2.5	Employment outlook by skill level	77
4.2.6	The impacts of education on the employment outlook	78
4.3	Emerging technology	81
4.3.1	Artificial intelligence – insights from the Gen Al capacity study	81
4.4	Key points from chapter four	84

Chapt	er 5 Improved matching and the skills system	. 87			
5.1	Outcomes in the current system	. 87			
5.1.1	Understanding VET outcomes	. 88			
5.1.2	Lifting the hood on apprenticeships and traineeships	. 90			
5.1.3	3 Understanding higher education outcomes				
5.1.4	Pathways between VET and higher education				
5.2	Supporting the system to work better together	104			
5.2.1	Tertiary harmonisation	104			
5.2.2	National Skills Taxonomy	107			
5.3	The skilled migration system	108			
5.3.1	International students study	109			
5.4	Key points from chapter five	110			
Chapt	er 6 Activating an informed dialogue	113			
6.1	Our reach and engagement	114			
6.1.1	Sharing our insights	114			
6.1.2	2 Working with you				
6.1.3	3 Spotlight: National roadshow and place-based engagement				
6.1.4	.4 Jobs and Skills Council collaboration				
6.1.5	1.5 International connections				
6.2	Our impact	119			
6.2.1	Supporting policy and other initiatives	120			
6.2.2	2 Broader influence across the skills system				
6.3	Key points from chapter six	122			
	••				
Ap	pendices				
Appen	Appendix A References				
Appen	Appendix B Glossary				
Appendix C Figures					
Appen	Appendix D Employment Projections 2025 133				

### **Executive summary**

Australia's economic future depends not only on how much we produce, but on how effectively people, employers, and the skills system interact within a dynamic labour market. Productivity and participation are distinct yet deeply interwoven forces that shape national prosperity and individual wellbeing. As the labour market evolves, strengthening the alignment between people's skills and job opportunities is emerging as a practical and powerful enabler – supporting individuals to thrive in meaningful work and helping employers build resilient, innovative workforces.

Making stronger connections between the skills that workers have and the skills required for jobs is not merely a technical fix, but a strategic lever for lifting both productivity and participation. When individuals are equipped with the right skills and capabilities for current and future roles, they are more likely to succeed at work, remain engaged in the labour market, and contribute to a more innovative and resilient economy. At a system level, better matching between jobs and skills enables more inclusive participation and ensures that diverse skills are used effectively across the economy.

For employers, better matching improves recruitment efficiency, reduces turnover, and supports workforce adaptability. At the same time, employers play a critical role in shaping job opportunities, job quality, attraction and retention of workers with the desired skills and workforce demand. The skills system must respond to these signals, equipping workers with the capabilities needed to access and retain meaningful employment. Government plays a critical enabling role, fostering conditions for inclusive participation and productivity.

JSA plays a central role in enabling this alignment. Through data, analysis, and deep engagement, we help build a more inclusive, responsive, and productive labour market. We highlight the responsibilities of system actors and identify opportunities for strategic intervention. Our work underscores the importance of better matching – not only to lift productivity and participation, but to ensure that economic growth is broadly shared and that the workforce is future-ready.

This report explores the complex dynamics of Australia's labour market and the strategic interventions needed to address persistent frictions. It examines how productivity and participation are shaped by structural barriers, shifting workforce demands and employment practices, and the evolving role of education, migration and technology. Drawing on JSA's data, analysis and engagement, the report highlights where improved connections between skills and jobs can unlock opportunity – supporting individuals to thrive, employers to adapt, and the system to become more inclusive, resilient and prepared for the challenges ahead.

#### Inclusive participation

Inclusive participation is both a social and economic imperative. Structural inequalities continue to shape employment outcomes, and many Australians face barriers to full participation. Unlocking participation across all cohorts is essential to sustaining productivity, strengthening communities, and ensuring that no one is left behind.

JSA provides evidence-based insights into the barriers to inclusive participation in the labour market. Our analysis highlights the importance of foundation and employability skills, inclusive workplaces, and diverse pathways into employment. These insights help inform targeted interventions and support more responsive workforce planning.

#### Key insights:

- Persistent disparities in education and employment outcomes for First Nations peoples reflect ongoing structural challenges within systems not designed with First Nations perspectives at their core. First Nations workers bring rich cultural knowledge, community leadership, and diverse skills to the workforce, yet are often concentrated in gendered roles and undervalued sectors. First Nations women, in particular, demonstrate remarkable strength and capability, despite facing the largest gender pay gap in Australia. Addressing these inequities requires urgent, co-designed approaches that elevate First Nations voices, honour cultural knowledge and lived experience, and foster inclusive pathways into education, training, and meaningful employment. By centring First Nations leadership and strengths, we can build systems that support equity, opportunity, and long-term success.
- There are persistent and systemic barriers to equitable labour market participation for people with disability. People aged 15-64 with disability had a participation rate of 60.5% in 2022, up from 53.4% in 2018, but still well below the 84.9% rate for those without disability. The unemployment rate was more than double (7.5% for people with disability compared to 3.1% for those without disability). Labour market disadvantage also increases with the severity of disability, and people with disability are over-represented in lower-skill jobs.<sup>1</sup>
- Despite recent gains, the rate of women's labour force participation is still lower than that of men. Women's employment grew more than men's over the 15 years to 2021, alongside strong gains in the achievement of tertiary qualifications. Yet, men outearn women in 98% of the 688 occupations (6-digit Australian and New Zealand Standard Classification of Occupations (ANZSCO)) considered for the pay gap analysis in JSA's Gender Economic Equality Study. These gaps widen and worsen at the highest rates of occupational gender segregation. Occupational segregation remains entrenched, with only 21% of the Australian workforce in gender balanced occupations.
- Employment patterns for both young and older workers highlight both untapped potential and structural vulnerabilities. While the number of young people who are not in employment, education or training has declined over the year, youth disengagement continues to present a significant challenge, and youth unemployment is at more than double the national rate. Youth employment is also concentrated in lower-skilled,

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<sup>&</sup>lt;sup>1</sup> Australian Bureau of Statistics (ABS) Survey of Disability, Ageing and Carers, 2022.

economically vulnerable sectors. Over the past six decades, Australia's rising labour force participation has been shaped in part by the sustained involvement of mature-aged workers, alongside a significant increase in participation among women. The depth of experience and practical knowledge that mature workers bring to the labour force is a vital asset, so ensuring effective skills and knowledge transfer occurs across generations of workers is key to maintaining workforce capability and supporting new entrants.

- Foundation skills underpin participation in meaningful work, society, and community. New analysis using administrative data highlights differences in foundation skill levels across priority groups, including lower numeracy and digital literacy among Culturally and Linguistically Diverse (CALD) participants, strong oral communication among First Nations participants, and gender-based variation, with women showing slightly higher literacy and slightly lower numeracy proficiency than men. Gaps in employability skills may contribute to occupation shortages and hinder job placement and participation.
- Occupations with more inclusive workforces are less likely to be in shortage, especially when inclusivity is accompanied by well-developed and well-matched skills. This is true across cohorts including First Nations people, people with disability, and different age cohorts. The benefits of greater representation were also more pronounced in highly skilled roles and for certain occupational groups.

## Barriers to productivity and participation in today's labour market

Australia's labour market continues to evolve in response to demographic shifts, technological change, and economic transformation. Yet persistent frictions remain – limiting the ability of individuals, businesses and regions to fully contribute to and benefit from opportunities for growth. These barriers are not uniform; they emerge in different ways across occupations, employers and regions, and often reflect deeper structural constraints in how skills are developed, connected to work, and deepened.

It is important to understand labour market dynamics from a range of perspectives. At the occupational level, shortages signal inefficiencies in labour allocation and reveal where training pathways, qualification design, workforce planning, investment in training and retention challenges are impeding workforce responsiveness. From the employer perspective, recruitment and retention difficulties are affecting business performance and productivity. Regionally, uneven access to opportunity – shaped by infrastructure, service availability and foundational skill gaps – continues to constrain participation, particularly in areas facing compounding disadvantage.

By examining these barriers in detail, JSA provides a foundation for targeted, evidence-based responses. Our insights help identify where interventions are most needed and how they can be tailored to address the specific challenges facing different parts of the labour market. This includes improved training design, integration of services to better support people to navigate their way into and through the labour market, place-based policy reform, and identifying opportunities for employers to improve their attraction and retention of workers with the desired skills (such as improved workforce planning, culture, and inclusivity). Addressing these frictions is essential to building more inclusive, resilient and productive workplaces.

#### Key insights:

- Occupation shortages reflect structural constraints. Limited access to training,
  misalignment between qualifications and job readiness, and challenges in attracting and
  retaining workers can constrain the supply of suitable candidates. This is exacerbated by
  demand outpacing supply. For example, population ageing is fuelling demand for health
  services, but limits in training placements and long lead times through training are
  constraining supply in many health roles.
- Employer recruitment and retention challenges are widespread, with these difficulties impacting business productivity. Almost a quarter of employers who are recruiting indicate they are doing so to replace at least one of their current staff at least every 6 months, with JSA's employer survey data citing job switching and physically demanding or repetitive work as common drivers of this staffing turnover. These patterns contribute to high recruitment costs, increased workload for remaining staff, and reduced productivity and revenue. Employers can help address these challenges through job design and investment in training in some cases.
- Regional participation is disproportionately affected by socioeconomic and structural barriers. These include essential service vacancies, infrastructure and transport limitations, and foundational skill gaps. Such barriers are often interlinked – limiting access to opportunity and reducing workforce capacity.

#### The future labour market

Preparing for the future requires a dynamic and responsive skills system – one that equips individuals to reskill throughout their careers and enables employers to adapt to change. Improved matching will be central to realising the productivity gains offered by innovation and technological advancement.

JSA's employment projections and targeted studies, such as the Gen Al Capacity Study, provide critical foresight into emerging trends and help shape proactive responses to change. Our insights support a skills system that is not only reactive, but agile and anticipatory – capable of responding to disruption, unlocking new opportunities, and supporting inclusive participation.

Through data, analysis and deep engagement, we support strategic planning across government, education and industry, helping to build a future-ready workforce and a more resilient economy.

#### Key insights:

- Australia's labour market has undergone significant structural change, with the
  workforce shifting toward service industries and higher-skilled roles. Service
  industries accounted for nearly 90% of employment growth over the past decade. In
  contrast, employment in some producing industries has declined, including Manufacturing
  and Agriculture, reflecting a long-term shift away from traditional production sectors.
- Workforce composition is evolving. Participation by women and mature-aged workers has increased substantially over recent decades, and employment growth over the 10 years to May 2025 has been strongest in higher-skilled occupations. Lower skilled occupations have seen modest growth by comparison, reflecting the shift to higher-skilled roles overall.

- JSA's employment projections to 2035 provide a forward-looking view of workforce demand. These projections help governments, industry and education providers anticipate shifts driven by technology, demographic change and evolving industry needs. A long-term structural shift in employment towards services-related industries is projected to continue over the next decade, with the 3 largest service industries contributing close to half of the projected employment growth in Australia over this period.
- **Gen Al is reshaping work.** JSA's Gen Al Capacity Study the first national, whole-of-labour-market analysis of its impact shows that Gen Al is more likely to augment tasks than automate them, enhancing productivity through time savings, improved output quality, and reallocation of effort to higher-value work.
- Gen Al is accelerating skill change. Gen Al is more likely to augment tasks and jobs
  rather than fully automate and replace them. Demand is rising for digital literacy and higher
  order human skills such as critical thinking, communication and adaptability.
- Risks must be managed. Gen Al raises concerns around workload, job quality, and uneven
  effects across vulnerable cohorts. Women, older workers, First Nations people and people
  with disability may face disproportionate risks due to occupational exposure and digital
  access barriers.
- Inclusive design and coordinated action are essential. Ensuring equitable access to training, supporting labour mobility, and enabling organisational adaptability will be critical to managing disruption and realising the benefits of Gen AI.

#### Improved matching and the skills system

Improved matching in the labour market depends on a national skills system that is connected, coordinated, and responsive. As Australia's labour market evolves, stronger alignment across education, migration, and workforce planning is essential to support inclusive participation, improve productivity, and ensure the system can meet future challenges. The Government's Economic Reform Roundtable highlighted the criticality of skills to Australia's future economic and productivity growth.

JSA contributes to this goal by providing data-driven insights and supporting system-wide reform. Our VET National Data Asset (VNDA) project continues to shed light on vocational education and training (VET) outcomes, while new administrative data work is expanding understanding of higher education pathways. We are deepening our understanding of apprenticeships and traineeships, and working on important reform-enablers such as the development of a National Skills Taxonomy (NST). We also play a role in targeting skilled migration by ensuring local workers' skills and job opportunities are prioritised, that it complements the domestic skills and training system, and that it is guided to areas that support productivity and deliver good employment outcomes. Through deep engagement and integrated data assets, we help identify mismatches, support more coherent pathways, and inform practical interventions.

#### Key insights:

- VNDA data shows increased full-time employment after training. Nationally, and for all priority groups, full-time employment rates increased after training. The biggest increase in full-employment post-training was reported for women and for First Nations people (up 16 percentage points), with part-time employment also increasing slightly for these cohorts. Further analysis into the voluntary or involuntary nature of part-time work could reveal possible social or structural barriers to full-time employment.
- Apprenticeships and traineeships remain vital but are evolving. Of the 100 largest apprenticeship and traineeship occupations, 68 have grown since 2019. Growth has been most significant in key trades and care occupations. Although overall female participation in trades remains low (11.5%), in 2025 there were around 4 times as many female Electrician apprentices than in 2015 with significant growth also observed for Carpenters and Joiners, Motor Mechanics, Plumbers, and Sheetmetal Workers. Combined, there were more female apprentices in these male dominant trades than there were undertaking a hairdressing apprenticeship in 2025.
- Higher education outcomes are being explored through administrative data. JSA is
  developing a new longitudinal data asset to complement survey-based approaches and
  provide deeper insights into enrolment decisions, study patterns, completion rates, financial
  outcomes, and workforce alignment.
- Transitions between VET and higher education in both directions are increasingly common. Learners increasingly move between education sectors to meet evolving career goals and changing job requirements. These transitions support lifelong learning and highlight the need for a more flexible and harmonised system to support the continued ability of people to adapt to evolving skills needs.
- **Tertiary harmonisation is advancing.** Harmonisation supports clearer pathways, improved credit recognition, and enhanced alignment between education and workforce needs especially for underrepresented cohorts.
- The NST is under development. Providing a shared language, the NST will use evidence-based language for describing skills across education and employment contexts. It will support qualification design, skills-first hiring, and improved labour market insights.
- Skilled migration continues to complement domestic supply. JSA provides
   evidence-based advice on the Core Skills Occupation List (CSOL), helping ensure migration
   policy aligns with labour market needs and supports positive outcomes for both employers
   and workers.

#### Activating an informed dialogue

JSA plays a central role in activating an informed, evidence-based conversation and collaboration across the national skills system. Through strategic engagement, collaboration, and outreach, we help shape a shared understanding of workforce needs and identify practical pathways for action, grounded in data and lived experience. Our work is designed to empower individuals and institutions, strengthen workforce planning, and contribute to long-term productivity growth. JSA's reach and influence continue to grow, reflecting strong demand for accessible labour market insights and practical tools that support decision-making across the economy.

#### Key insights:

- Public engagement with JSA's insights continues to grow. Between July 2024 and June 2025, our website attracted over 7.7 million views (up 77%) and 1.68 million unique users (up 88%), with over 200,000 downloads demonstrating strong demand for clear, practical information on jobs, skills and the labour market.
- Conversational artificial intelligence (AI) is amplifying reach. Referrals from ChatGPT increased more than 518-fold, highlighting the emerging role of Gen AI in disseminating JSA's insights and supporting workforce conversations.
- Traditional and social media engagement surged. LinkedIn impressions grew by 23%, shares grew by 37%, and likes by 28%, with over 4,227 new followers. JSA has received more than 1,000 mentions in news coverage items including print, digital, radio and TV. In the same span of time, Commissioner Barney Glover received 242 mentions, demonstrating JSA's growing influence in national and global workforce dialogue.
- Our national roadshow fostered place-based engagement. Over 1,000 attendees
  participated across capital cities, engaging with tools such as the Jobs and Skills Atlas,
  Occupation Shortage List (OSL), and Nowcast of Employment by Region and Occupation
  (NERO), and contributing to discussions on regional participation, the alignment of skills with
  jobs, and the net zero transition.
- Collaboration with Jobs and Skills Councils (JSCs) strengthened workforce
  planning. Shared data and joint analysis informed major capacity studies and contributed to
  a more coordinated national evidence base.
- International partnerships shaped global thinking. Engagements with the Organisation for Economic Co-operation and Development (OECD), World Bank, International Labour Organization, and World Economic Forum supported knowledge exchange and advanced skills-first approaches and taxonomies. Bilateral relationships across Europe, Asia, North America and the Pacific deepened Australia's global profile in workforce reform.
- JSA's work has informed government and other initiatives, including the *Migration Strategy* and CSOL development, clean energy workforce planning, early childhood education reform, the National Skills Agreement Outcomes Framework, tertiary harmonisation including the establishment of Australian Tertiary Education Commission (ATEC), and the VET Workforce Blueprint development.

Together, these insights reflect the breadth and depth of JSA's contribution to Australia's skills system. By integrating data, analysis and engagement, we help shape a more inclusive, responsive and future-ready labour market. Whether informing national reform, supporting regional resilience, or enabling practical action across sectors, our work continues to activate informed dialogue and support better matching and alignment of skills – ensuring that Australia's workforce is equipped not only for today's challenges, but for the opportunities ahead.

#### Recommendations

This report highlights 5 recommendations aimed at enhancing individual employment and skills outcomes while supporting broader national objectives of productivity and economic growth. As part of our ongoing commitment, JSA will continue to collaborate with governments and stakeholders to provide strategic advice across the jobs and skills landscape. These recommendations are designed to address current and emerging workforce challenges, ensuring that Australia's labour market remains adaptive, inclusive, and resilient in the face of change.

- 1. The tertiary education attainment minimum targets should be aligned with labour market demand. The minimum targets in the VET and higher education systems should consider the skills required by the labour market both in the medium and long term.
- 2. Australian governments should commit to digital and Al capability uplift across the skills system as a priority. Whole-of-system efforts should target uplift across the population, in line with the spectrum of needs and aspirations of learners and industry.
- 3. Australian governments should prioritise efforts to embed contemporary data, digital and AI skills in the design and delivery of higher education and VET qualifications. This should include consideration of mechanisms to enable qualification design and delivery to respond to fast-evolving digital and AI skill requirements for different study and career pathways.
- 4. System actors should work towards a national credit transfer system.
- 5. System actors, governments and stakeholders should work closely with JSA to accelerate the development of a National Skills Taxonomy.



## Chapter 1 Productivity, participation and skills

Productivity and participation are different but important contributors to economic output and the wellbeing of individuals. In simple terms, productivity considers how efficient we are at creating goods and services, while a higher participation rate means more people are available to contribute to the economy, which can increase total output and improve individual and societal wellbeing. Increased labour force participation could also help countries deal with pressing social issues such as ageing populations by mobilising potential labour (OECD, 2017). More resources both shared and individual – can help increase wellbeing and help build stronger communities.

In practice, however, the relationship between productivity and participation – and their resulting impact on economic growth and societal wellbeing – is both complex and multidirectional. While productivity can influence labour market participation, and in both directions, the inverse is also true.

Productivity can influence labour market participation by increasing economic growth and the demand for labour and wages. This can incentivise people to enter the workforce, including underrepresented groups (such as women or mature aged workers), while unmet labour demand may induce employers to consider a broader range of candidates. On the other hand, technological advancements that boost productivity can significantly change the nature of certain jobs. This can reduce the demand for some occupations. Technological change can disrupt established workflows and, without the right skills in place, may lead to a temporary decline in productivity as the market adjusts. However, when employers and governments invest in reskilling initiatives, they empower workers to adapt, improve productivity, and take advantage of new opportunities created by innovation. Supporting people through these transitions strengthens the workforce while ensuring that technological progress delivers broad and lasting benefits.

Increased participation with a larger, more diverse workforce positively impacts people's individual standard of living, social connections and wellbeing. It can also enhance productivity, with JSA research showing that occupations with less diverse workforces are more likely to face skills shortages. Diverse perspectives, experiences, and viewpoints can enhance innovation and creative problem solving – leading to new and more effective approaches, ideas, and solutions. A broad talent pool of workers with diverse skillsets, knowledge, and expertise can also support organisations in adapting to changing needs and priorities.

While increased participation is essential to building a more inclusive and dynamic labour market, it does not automatically translate into higher productivity. Short term declines may occur if new entrants lack optimal skills or are not well matched to job requirements. However, supported by strong systems for skills development and improved job matching, individuals can thrive in meaningful work and contribute to a more productive and resilient economy. This highlights the importance of a responsive skills system that grows capability alongside workforce participation.

Australia's economic future depends not only on how much we produce, but on how well we harness both the talents and latent human capital of our people. Productivity and participation are distinct yet deeply interwoven forces that shape both national prosperity and individual wellbeing. As the labour market evolves, more effective connection of people with jobs emerges as a practical and powerful enabler.

#### 1.1 Productivity in Australia

Recent estimates show that productivity growth in Australia has stalled, growing by less than a quarter of its 60-year average in the past 10 years (Productivity Commission, 2025). While a 'labour productivity bubble' emerged during the COVID-19 pandemic – where lockdowns reallocated labour away from disrupted and less productive industries, and productivity continued to rise for a period after lockdowns eased – labour productivity declined rapidly between March 2022 and June 2023 to return to its December 2019 level (Productivity Commission, 2025).

This overall slowing or stalling of productivity has not been limited to Australia, however, with the Reserve Bank of Australia noting that "internationally, trend productivity growth has slowed across advanced economies, after a strong period of growth in the 1990s and early 2000s" (Bruno, Dunphy, & Georgiakakis, 2023). Comparatively, recent OECD data highlights that Australia sits roughly in the middle of OECD countries (ranked 17 out of 37) in terms of levels of labour productivity (measured as Gross Domestic Product (GDP) per hour worked). As shown in Figure 1, this is just above the OECD average.

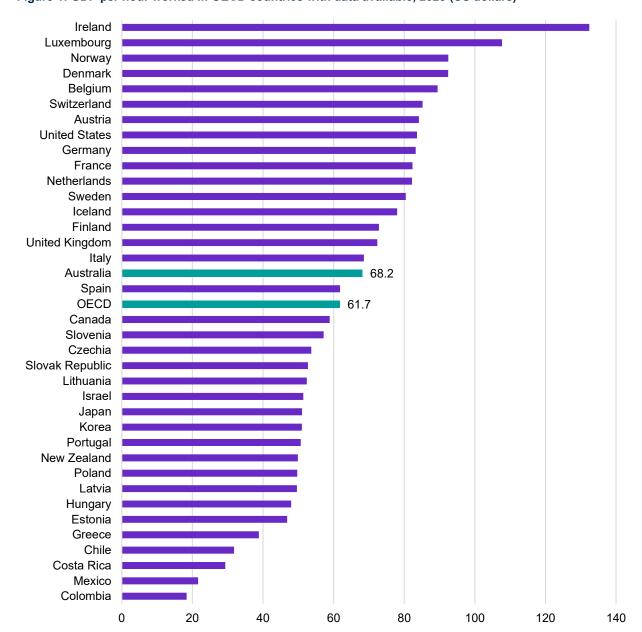


Figure 1: GDP per hour worked in OECD countries with data available, 2023 (US dollars)

Source: OECD Data explorer, 2023.

Note: GDP per hour worked is measured in US dollars per hour, PPP converted, constant prices, 2020. GDP per hour worked in OECD countries with available data, 2023.

#### What drives productivity? 1.1.1

A range of factors affect the overall productivity level, and its growth rate in an economy. Generally, factors like flexibility in resource allocation and competition are considered to be important to productivity since they encourage resources to be deployed to their highest value uses. A key driver of productivity growth in the long term is innovation - creating new goods and services and new ways of doing things is often associated with higher productivity.

In Australia, several potential causes for the slowing in productivity growth have been proposed. These have included slowing global trade growth, a changing industrial base (away from mining and into non-market sectors where productivity is difficult to both measure and improve), business factors such as low investment in capital and declining adoption of technology and

other innovation, and demographic change with an ageing population (Bruno, Dunphy, & Georgiakakis, 2023) (Chalmers, 2025).

Skills and human capital have an important role to play in productivity. Matching the skills and capabilities of workers and the requirements of jobs is key to lifting productivity. This highlights the importance of skills acquisition and development. It also requires employers to design jobs in a way that they are attractive to workers and best utilise their skills. With innovation driving long term productivity growth, workforce skills need to be constantly updated in order to design and develop new innovations and apply them in the workforce. Therefore, matching of skills and jobs is critical both now and for the future.

Productivity is about working more effectively, not necessarily putting in more effort. Working more hours might increase production but it will not necessarily increase productivity and may actually reduce it. It is about making sure people have the right skills that meet the requirements of current and future jobs and making sure jobs are designed to make the most of people's skills. When people have the right capabilities for their roles, they can work smarter, not harder. A skilled workforce can also lead to more innovation, the development of improved business processes, and the uptake of technology in the workplace, which are key factors in improving and sustaining productivity.

#### 1.2 The importance of participation

Labour market participation refers to the percentage of people aged 15 years and older who are either currently working or actively looking for work. Historically, higher participation in the labour market leads to improved economic output. Further, "decent and fairly paid jobs drive consumer demand, thriving businesses and growth" (Commonwealth of Australia, 2023).

When accompanied by strong systems for skills development and more effective alignment of skills to jobs, participation can deliver substantial benefits to productivity. A larger pool of available workers will supply more diverse perspectives, experiences, and viewpoints which can lead to more effective and innovative ideas and solutions. Organisations are more likely to be able to adapt to change and match workers to evolving needs if they have a larger pool of workers with diverse skillsets, knowledge, and expertise. Occupations with less diverse workforces are more likely to face skills shortages.

There are also important social benefits to increased labour market participation, such as stronger communities and reduced inequality. For individuals, engagement in paid work is also associated with lower mortality, improved physical and mental health outcomes, and a greater sense of overall wellbeing (De Witte, 1999) (Butterworth, et al., 2011).

The Australian Government's White Paper on Jobs and Opportunities, *Working Future*, outlines the Government's vision for:

sustained and inclusive full employment, which means everyone who wants a job should be able to find one without having to search for too long. This recognises that decent jobs and opportunities are central to a strong economy and a prosperous and inclusive society (Commonwealth of Australia, 2023).

Key agents to achieving this vision are overcoming barriers to employment and reducing labour market inequality.

#### 1.2.1 Participation in Australia

Australia's participation rate has risen over the past six decades, driven largely by the increased participation of women and mature aged workers (Commonwealth of Australia, 2023). Comparatively, OECD data show that Australia's participation rate is quite high – ranked in the top 10 of OECD countries (Figure 2). It ranks above the OECD average and above many of the world's biggest economies including the United States, Germany, Japan, and the United Kingdom.

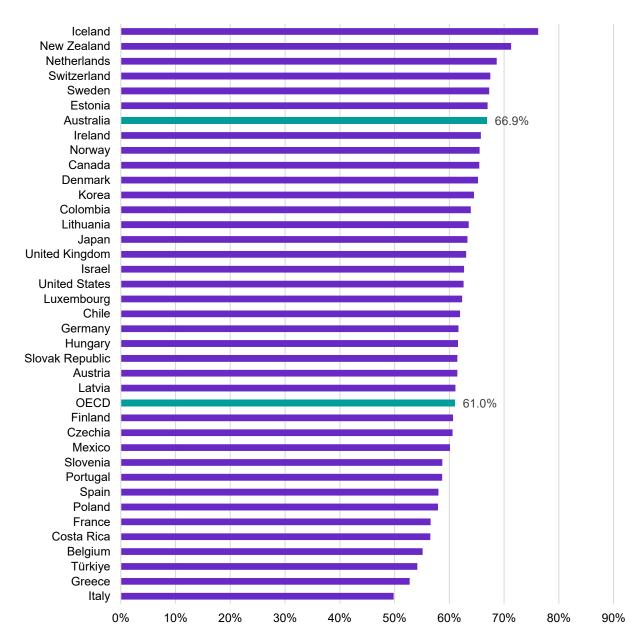


Figure 2: Labour force participation rate across OECD countries

Source: OECD Data explorer, Labour force participation rate (15 years and over), annual, 2024, calendar and seasonally adjusted.

Note: The labour force participation rate is calculated as the number of the labour force population as a percentage of the working age population.

#### 1.2.2 Participation is uneven

The macro story of participation – especially when headline rates are high – can mask a range of micro-level issues that affect the quality, stability, and equity of workforce engagement. Despite increased participation at the macro level, barriers persist for some cohorts, showing a different story when looking across some industries, or across different Australian regions. Some people may also be underemployed (working fewer hours than they would prefer or need) or be engaged in insecure employment (short-term contract or gig roles, and roles with limited protections). Workers may also face issues within the work environment that affect their ability to thrive, despite technically participating. These can include mismatch between skills and roles, barriers to advancement, limited access to flexibility, or exclusionary environments.

Early signs from the Free TAFE initiative suggest targeted investment can help overcome barriers to participation in training, particularly for priority cohorts. Since its launch in 2023, Free TAFE has supported over 685,000 enrolments and 191,555 completions across Australia, with strong uptake among First Nations Australians, job seekers, and women.

The most enrolled and completed courses align with national priority sectors such as care, technology and digital, early childhood education and care, construction and hospitality and tourism, indicating that the program is helping students gain footholds in high-demand areas. These early outcomes demonstrate the potential of signature skills programs to support participation and build capacity, especially in the formative years of implementation. While long-term impacts will become clearer over time, initial data points to Free TAFE playing a meaningful role in enabling more equitable access to training and employment pathways.

Many workers across the Australian economy experience underemployment. Of the 14.7 million employed persons in Australia in May 2025, roughly 897,000 were underemployed<sup>2</sup>. This includes full time workers whose hours were reduced due to economic conditions – such as being stood down or insufficient work being available – and part time workers who would prefer and are available to work more hours than they usually do.

Insecure work is a normal or structural feature of some work arrangements, and this can be due to the nature of demand, funding, or industry norms. For example, insecurity is a structural feature of many roles in creative and cultural fields including musicians, performers, and freelance writers or editors. Freelance developers, consultants, and contractors are also common in many professional fields. While they lack the stability and protections of ongoing direct employment, these roles are not always problematic. Insecure work becomes an issue where it is used as a substitute for what could feasibly be ongoing direct employment. Evidence presented to the Senate Select Committee on Job Security highlights that such arrangements can create persistent uncertainty and financial insecurity, with potential impacts on physical and mental health (Commonwealth of Australia, 2022).

Last year's Jobs and Skills Report noted that while insecure work can be incredibly difficult to define, income volatility (or fluctuating pay) is one indicator (ACTU, 2012). Another is multiple job holdings. The proportion of employees with more than one job decreased significantly in 2023–24 (Table 1).

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<sup>&</sup>lt;sup>2</sup> ABS, Labour Force Survey, May 2025.

Table 1: Total number of employees with additional jobs

Financial year	Total number of employees	Total number of employees with more than one job	Percentage of employees with more than one job
2021-22	13,081,200	3,630,700	27.8%
2022-23	13,600,400	3,709,100	27.3%
2023-24	13,831,900	3,451,100	24.9%

Source: ABS, Person Level Integrated Data Asset (PLIDA) 2025: Single Touch Payroll (STP) (1 July 2021-30 June 2024). ATO Income Tax Return (ITR) Context, (Financial Year 2022–23). Census 2021. Total number of employees rounded to the

Further analysis of the data shows that differences can be observed across key cohorts. For example, women (27%) were more likely than men (23%) to work in two or more jobs in 2023-24, and First Nations people were also more likely to work two or more jobs in the same time period (29% as compared to 25% of all employees).

The barriers for different cohorts across Australia are explored more in the following chapters. There is more work to do to ensure that everyone – regardless of age, gender, ethnicity, disability, socioeconomic status, or other personal characteristic – has equitable access to employment opportunities and the ability to participate to the full extent that they want or are able to. Overcoming systemic and structural barriers to participation is complex, however better connection of skills with job requirements is an important factor. To support workers to participate more fully in the labour market, we must ensure they have the right skills to obtain and succeed at work, and that employers design jobs that best take advantage of their skills and abilities.

#### 1.3 Improved matching as an enabler

Quality jobs offer more than just employment – they provide fair pay, security, safe conditions, and opportunities for growth and development. They enable people to enjoy their work and feel a sense of purpose. For people to be engaged in quality work and share in the benefits of participation, they need the right skills to succeed in today's jobs and the jobs of the future. When individuals are in roles that align with their skills, capabilities, interests, and aspirations, they are more likely to experience job satisfaction, perform effectively, and remain engaged in the labour market. This alignment also helps employers fill vacancies more efficiently, reduces turnover, and fosters a more productive and resilient workforce.

Enabling broader participation across cohorts in the Australian population, and lifting the level of Australia's productivity, depend on more effective matching of people and jobs.

#### Improved matching:

- will lift the level of productivity in Australia. On its own, skills matching can go some way to lifting the level of productivity in the short term. In the long term, a key driver of productivity growth is innovation, so making sure the workforce has the skills to develop and apply new innovations is key to matching people and jobs in the long term.
- is necessary to help raise participation and make it more inclusive. Including the full range of skills and abilities in the labour market is an economic imperative as well as a social one.

- supports lowering the rate of unemployment that would still be consistent with stable inflation. Improved matching of people and jobs will help lower unemployment and increase productivity without creating upward pressure on inflation. This will make it easier to manage macroeconomic fluctuations with monetary and fiscal policy.
- requires a joined up and cohesive national skills system. Key partners need to align efforts more closely, and there needs to be a rebalancing of the Australian tertiary education system to help meet the skills challenges of the future.

To support this, effort is required from across the skills system. Employers could consider and look to improve aspects such as their workforce planning practices, job design, hiring practices, and on-the-job training opportunities. There also needs to be employer investment in management capability as well as productivity improving capital such as AI and automation.

To support workers, investment is needed in the development of technical skills (supported by training products that meet industry needs), and the development of employability and foundation skills. This requires a joined-up tertiary education system that facilitates the movement of people into and through the education system throughout their working lives, and a workplace relations system that supports the flexibility to move between industries, jobs and locations.

Employers play a key role in building employability skills. By providing workers with support, mentoring, and employer-based training, firms can position themselves as an employer of choice and proactively manage workforce planning and recruitment challenges.

The skilled migration system can also support these efforts with a target program aimed at helping fill short term skills gaps in the labour market and at boosting Australia's human capital and skills in the areas of greatest need within the economy in the long term.

## 1.3.1 How efficient is matching between people and jobs in the Australian labour market?

Labour economists use various analytical tools to examine how well people are being matched with jobs in the real world. For example, they can consider factors such as the average duration of unemployment, or the job-finding rate (the proportion of unemployed people who find jobs within a given period). Both a long average duration of unemployment and a low job-finding rate can signal inefficiencies in matching, particularly in the presence of stable or rising vacancies.

As shown in Figure 3, JSA's Roadmap for Regional Australia (Phase 1) considered data from 2019 to 2025 to produce Beveridge curves for labour markets in Regional Australia and for Australian Major City Areas. It showed that on average, labour markets in Regional Australia may have been more efficient over this time period (Jobs and Skills Australia, 2025).

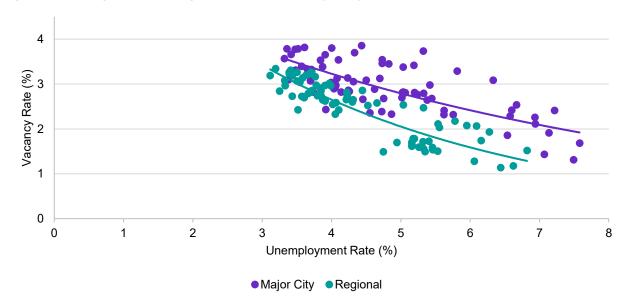


Figure 3: Beveridge curve for Regional Australia and Major City areas of Australia, 2019 to 2025

Source: JSA, Internet Vacancy Index (IVI) (adjusted for proportion of jobs advertised online – JSA, Recruitment Experiences and Outlook Survey (REOS), April 2025), ABS, Labour Force, Detailed, March 2025, modelled estimates.

Note: The job vacancy rate is the total number of job vacancies (a new total vacancy measure is estimated by adjusting JSA IVI data according to the proportion of vacancies advertised online using JSA REOS data) divided by the total labour force.

This may reflect a range of factors. There is a strong unmet demand for labour in Regional Australia, with many jobs in chronic long-term shortage. Employers may be more willing to fill jobs with available candidates, be more flexible about job and qualification requirements or more willing to use on-the-job training as a replacement for formal qualifications where possible. This work-based training and support can often enhance the productivity of the employee over time (Jobs and Skills Australia, 2025).

Matching functions are mathematical models that are used to understand how well people are being connected to jobs. JSA has developed an experimental model, the Matching, unemployment, vacancies, efficiency, residual (MUVER) model, to interrogate how labour market efficiency varies across Australia. Overall, results from the model tend to suggest that matching efficiency in the Australian labour market has improved broadly in recent years, and is currently relatively high (Lake, Shamiri, Sharma, & Bialowas, 2024).

A deeper dive into the relevant data suggests that matching efficiency is not homogenous across regions and demographics. Skills mismatching is higher for women compared to men, with around 1 in 3 women (33%) working in occupations below their skill level compared to 27% of men. CALD women and First Nations men have the highest rate of skills mismatch at 35% (Jobs and Skills Australia, 2025). Additionally, matching efficiency varies across regions, including regions with similar levels of unemployment.

When we compare regional matching efficiency with employment services caseload numbers, an interesting picture also appears. As shown in Figure 4, for some regions, there is a high matching efficiency, as well as a high caseload. This could indicate the issue here is a lack of job opportunities in these regions. In other regions, there is a low matching efficiency, but also a low caseload. This could indicate more of a disjoint between the skills workers have and the skills required for jobs.

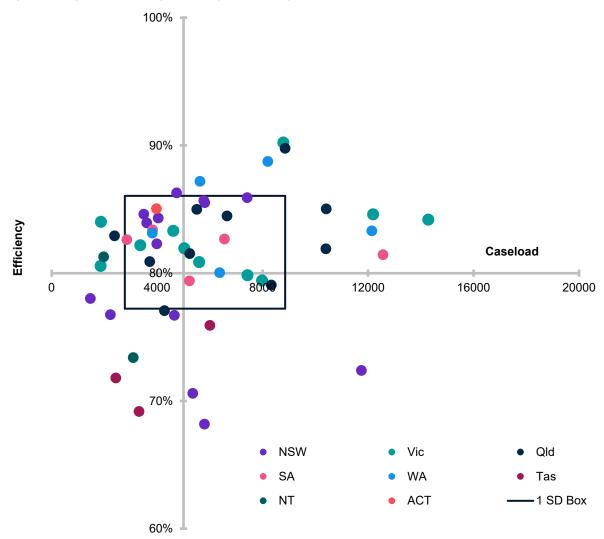


Figure 4: Regional matching efficiency and employment services caseload numbers

Source: JSA analysis and Department of Employment and Workplace Relations (DEWR), Workforce Australia Caseload Data

Combining estimates of matching efficiency with other data in this way can help inform more tailored policy responses to improve matching, participation, and productivity. For example, previous analysis has combined matching estimates with regional relative labour market strength from JSA's Regional Labour Market Indicator (RLMI) to categorise regions into four main types (Table 2) (Lake, Shamiri, Sharma, & Bialowas, 2024).

Table 2: Approach to combining estimates of regional matching efficiency and regional relative labour market strength to categorise regions

Categorisation	Matching efficiency (JSA MUVER)	Relative labour market strength (JSA RLMI)	Description
Best practice regions	High	Strong	Experiencing good conditions and an efficient rate of matching.
'Mismatched' regions	Low	Strong	Strong conditions, but lower matching efficiency. May reflect local unemployed persons being overlooked for candidates from other nearby regions (such as cities), either due to employer preferences or a mismatch in suitability.
'Job deficit' regions	High	Weak	A relatively high rate of matching is occurring. Vacancies are filled quickly but there are insufficient vacancies to sufficiently reduce or clear unemployment.
'Challenging' regions	Low	Weak	Weak conditions, but also lower matching efficiency when a vacancy arises.

For 'mismatched' regions, policy responses could include targeted wage subsidies to encourage employers to hire locally or training subsidies for workers in those regions. 'Job deficit' regions may benefit from policies that support job creation, while 'challenging regions' may require more comprehensive responses that deal with multiple barriers (Lake, Shamiri, Sharma, & Bialowas, 2024).

Importantly, while tools that estimate matching efficiency typically provide insights into the incidence or rate at which matching between people and jobs occurs, they do not generally attempt to evaluate the quality of a match. This would include factors such as job satisfaction, job tenure, skills matching and other factors that may be relevant to labour productivity. Particularly for challenging regions, but for all parts of Australia and all Australians, it is important to understand the other factors at play in the matching process including barriers for both employers and individuals.

#### 1.3.2 How JSA contributes to improved matching efforts

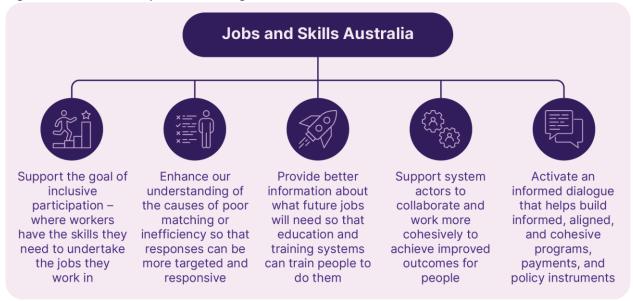
To strengthen matching efforts, the right information, analysis, and insights are required to support targeted education and training, better job design, and individual choice. This includes information on employer demand for labour, training outcomes, barriers in the current skills system, and the requirements of future jobs – as well as mechanisms that help actors across the skills system to work more cohesively.

JSA contributes to improved matching efforts by providing insights and analysis that (Figure 5):

- **support the goal of inclusive participation** where workers have the skills they need to undertake the jobs they work in
- enhance our understanding of the causes of poor matching or inefficiency so that responses can be more targeted and responsive
- **provide better information about what future jobs will need** so that education and training systems can train people to do them

- support system actors to collaborate and work more cohesively to achieve improved outcomes for people
- **activate an informed dialogue** that helps build informed, aligned, and cohesive programs, payments, and policy instruments.

Figure 5: JSA's role in improved matching efforts



#### 1.4 Key points from chapter one

Improving productivity and participation in Australia's labour market depends on improving the connection between people and jobs. When individuals are equipped with the right skills and capabilities for current and future roles, they are more likely to succeed at work, remain engaged in the labour market, and contribute to a more innovative and resilient economy. This alignment also enables employers to fill vacancies more efficiently, reduce turnover, and foster a more productive workforce.

While increasing participation can expand the labour supply and support economic growth, it does not automatically lead to higher productivity. In fact, productivity may decline in the short-term if new entrants are not well matched to job requirements or lack the necessary skills to perform job requirements effectively. This underscores the importance of a skills system that supports quality matching and equips workers to succeed in meaningful employment.

Australia's recent productivity performance highlights the urgency of this challenge. After a temporary boost during the COVID-19 pandemic, labour productivity has stalled, returning to pre-pandemic levels. Structural factors such as demographic change, low investment in capital and technology, and poor alignment between workforce skills and business needs have contributed to this trend. Addressing these issues requires a coordinated national effort to improve skills development, workforce planning, and job design.

Labour market participation is central to both individual wellbeing and national prosperity. While Australia's participation rate is high by international standards, many people remain underemployed, in insecure work, or face systemic barriers to full participation, limiting income stability, social inclusion, and the effective use of skills across the economy. Increasing participation not just a matter of expanding the labour supply, but ensuring that all Australians have equitable access to meaningful work by removing barriers to full engagement.

More effective alignment between people and jobs is essential to realising the full benefits of participation. When individuals are in roles that align with their skills, capabilities, and aspirations, they are more likely to thrive – experiencing greater job satisfaction, stronger engagement, and improved wellbeing. For employers, it supports efficient recruitment and reduces turnover. At a system level, it lifts productivity in the short term by improving how existing skills are used, and in the long term by ensuring the workforce is equipped to drive and adapt to innovation. It also supports more inclusive participation by recognising and valuing the full range of skills and abilities across the population. Achieving this requires coordinated effort across the skills system including investment in foundational and technical skills, improved job design and workforce planning, and a more cohesive tertiary education system that supports lifelong learning and mobility.

While job matching efficiency has improved, it varies across regions and sectors. In some regional areas, stronger matching outcomes may reflect greater employer flexibility, including a willingness to invest in on-the-job training or adapt qualification requirements. However, in other areas, persistent mismatches point to deeper structural issues, such as limited job availability or misalignment between the skills of jobseekers and the needs of employers. These insights are critical to designing targeted policy responses that improve both the rate and quality of job matching, support more inclusive participation and strengthen productivity outcomes.

JSA plays a central role in supporting better matching efforts by providing insights into labour market trends, skill requirements, and barriers to participation. Our work informs policy, supports collaboration across the skills system, and helps build a more inclusive and productive workforce. The following chapters outline our work and insights against these areas.



## Chapter 2 Inclusive participation

Australia's future prosperity depends on a labour market that enables all people to contribute meaningfully and realise their potential. Inclusive participation is not only a matter of fairness – it is a strategic imperative for lifting productivity, addressing skills shortages, and ensuring that economic gains are broadly shared.

Employment is not only a source of income and economic security, but is also linked to wellbeing, including mental and physical health, and a sense of purpose and self-worth. Difficulties in finding or maintaining work can therefore have wide-ranging negative impacts on individuals, their families, and the broader community (AIHW, 2024). JSA works to identify the barriers that prevent people from fully participating in the labour market, and highlights opportunities for more inclusive participation, using data to understand how different groups – such as First Nations people, people with disability, women, young and mature workers, and culturally diverse communities – experience the labour market. These insights inform policies that reflect workforce realities and improve outcomes.

This chapter explores how inclusion, participation, and productivity intersect, including how structural inequalities continue to shape employment outcomes, and how targeted action from across the skills system, including in building foundational skills and inclusive workplaces, can help alleviate occupation shortages.

Inclusive participation is not just about increasing the number of people in work. It is about ensuring that all Australians – regardless of background, age, gender, or ability – have the opportunity to develop their skills, contribute to the economy, and share in its benefits. By improving the quality of job matching and supporting diverse pathways into employment, we can build a more resilient, innovative, and productive workforce.

#### 2.1 First Nations people

Longstanding gaps in education and employment outcomes between First Nations people and other Australians remain at the population level, and many First Nations people continue to face structural barriers to participation in work and study. Australian governments remain committed to working in partnership with First Nations communities through the implementation of the National Agreement on Closing the Gap (Commonwealth of Australia, 2024).

The Closing the Gap Annual Data Compilation Report July 2025 notes mixed progress, with four targets continuing to worsen, but improvements across others (although some are not progressing at a sufficient rate to meet their relevant 2031 target measure). Progress for some areas are still unable to be measured – including access to essential services, family violence, languages being spoken, and home internet access (Productivity Commission, 2025).

The latest data for Outcome 8: Strong economic participation and development of Aboriginal and Torres Strait Islander people and communities is from the 2021 Census, which showed that since the baseline year (2016), there was an improvement of 4.7 percentage points in the proportion of Aboriginal and Torres Strait Islander people who were employed (to 55.7%), with the target (62%) on track to be met by 2031. A new supporting measure has been introduced this year to help build a fuller picture of economic participation. Indicator 8C now reports on the employment status of people with caring responsibilities (Productivity Commission, 2025).

Unpaid care is a vital part of many communities, and it is often deeply embedded in Aboriginal and Torres Strait Islander cultures through kinship systems that shape mutual responsibilities (Brinckley, Jones, Batterham, Calear, & Lovett, 2022) (SNAICC, 2008). In 2021, nearly 160,000 Aboriginal and Torres Strait Islander people aged 25-64 reported providing unpaid care or assistance, and employment rates among carers increased compared to 2016. Among those caring for children, 61.1% were employed (up 5.6 percentage points) while employment among those assisting someone with disability, health condition or due to age rose by 6.2 percentage points to 52.7% (Productivity Commission, 2025).

Despite this progress, carers were still more likely to work part-time or be employed but away from work (for those caring for a child), or unemployed or not in the labour force (for those caring for a person with disability, a health condition or old age) than non-carers. This highlights the impact of unpaid care responsibilities on economic participation. The time and resources devoted to unpaid care work can mean that people with these responsibilities may have reduced capacity to participate in paid work compared to those without caring roles (Productivity Commission, 2025).

First Nations workers are more likely to be employed in Community and Personal Services roles and less likely to work in Professional occupations (Jobs and Skills Australia, 2023). Welfare Support Workers is a notable example – a moderately female-dominated, higher-skill occupation that ranks among the top 20 employing roles for First Nations workers. In contrast, it sits outside the top 50 for CALD workers and only reaches the top 40 for the total workforce.

More broadly, First Nations workers are more likely to be employed in occupations that are highly gender segregated. As shown in Table 3, only 10% work in gender-balanced roles (compared to 21% of the total workforce), and 26% are employed in occupations that are almost entirely male or female dominated (compared to 21% of the total workforce). This reflects a higher concentration of First Nations men in trades and labouring roles, including mining, and First Nations women in care, education, and health-related jobs. These patterns also reinforce

earlier findings: First Nations workers are more likely to be employed in occupations experiencing shortages and in VET-qualified Skill Level 3 roles.

Table 3: Employment share of total workforce and First Nations workforce by gender segregation intensity

Gender segregation intensity	Total workforce %	% of First Nations workforce
Gender balanced	21%	10%
Moderately male or female dominated	29%	31%
Highly male or female dominated	29%	33%
Almost completely male or female dominated	21%	26%

Source: ABS, Census of Population and Housing, 2021.

Note: The Gender Segregation Intensity Scale (GSIS) is introduced by JSA in Paper 1 of the Gender Economic Equality Study. Gender balanced GSIS refers to a workforce proportion between 40% and 60% of one gender, moderately male or female dominated refers to a workforce proportion between 60% and 75%, highly male or female dominated refers to a workforce proportion between 75% and 90%, and almost completely male or female dominated refers to a workforce proportion at 90% or above.

Many workers are concentrated in lower-skilled roles due to external constraints, including:

- Deficit-based assumptions embedded in historical and government approaches to Indigenous employment (Anthony, 2004) (Young, et al., 2024).
- Systemic racism in education systems that limits access to and completion of formal
  qualifications. This includes the accumulation of low-level VET certificates due to limited
  course offerings and the high cost and time required to travel particularly in remote areas
  (Guenther, et al., 2017).
- Workplace environments that lack diversity, cultural safety, adequate supports, and recognition of lived experience and cultural knowledge as expertise (AHRC, 2020) (Young, et al., 2024).

JSA recognises the need for co-designed solutions to address these unique drivers and acknowledges that the First Nations employment narrative has too often been shaped by non-Indigenous voices – perpetuating low expectations, poor conditions, and exclusion from quality work and career development (UTS CIPW, n.d.)

First Nations females face the highest gender pay gap in Australia, regardless of time period used. At a snapshot in time, their pay gap is 35.3%, nearly 10 percentage points higher than the national average of 25.7%. First Nations males also experience significant disadvantage, with a pay gap of 19.3% compared to all other males. Interestingly, the pay gap between First Nations females and males is 19.8%, narrower than the overall workforce gap of 25.7%.

Looking at accumulated earnings over a 10-year period, the disparities remain stark. The 10-year gender pay gap for First Nations females is 38.1%, compared to 30.7% for the total workforce. When benchmarked against non-CALD males, the gap widens further to 40.5%. For First Nations males, the 10-year pay gap is 16.7%, slightly lower than the point-in-time figure but still the highest among male cohorts.

Encouragingly, both gaps have decreased over time. The First Nations female gender pay gap fell from 44.8% in 2010–11 to 35.3% in 2022–23 – an improvement of nearly 10 percentage points. The First Nations male gap also declined, from 25.8% to 19.3% over the same period, mirroring broader trends in male and total workforce pay gaps.

These findings point clearly to the significant and compounding gendered and racial disadvantage faced by First Nations people in the world of work, education, and training. Addressing these inequities requires urgent, tailored policy interventions – co-designed with First Nations communities and grounded in recognition of cultural knowledge, lived experience, and aspirations.

# 2.2 People with disability<sup>3</sup>

People with disability continue to experience poorer labour market outcomes than those without disability, despite some recent improvement. They face lower rates of participation and employment, higher unemployment, and are more likely to work part-time or be underemployed (wanting and available to work more hours).

In 2022, the labour force participation rate for people aged 15–64 with disability (living in households) was 60.5%. This is a significant improvement on the 53.4% recorded in 2018, however, it remains well below the participation rate for those without disability, 84.9% in 2022 (Figure 6).

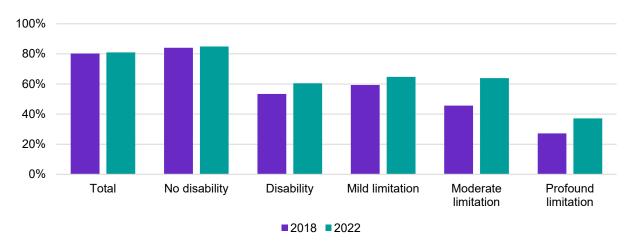


Figure 6: Participation rate by severity of disability, 2018 and 2022

Source: ABS Survey of Disability, Ageing and Carers, 2022.

The proportion of part-time employment and the underemployment rate also differ significantly based on disability status. In 2022, over 40% of working people with disability were employed part-time, compared with 29.7% of those without disability. Similarly, 7.2% of people with disability were underemployed, compared with 4.9% of people without disability.

Labour market disadvantage also increases with the severity of disability. As shown in Figure 7, the unemployment rate for people with a reported disability was 7.5% in 2022, more than double the unemployment rate of those without disability (3.1%). The unemployment rate for people reporting a mild limitation was 6.4%, rising to 10.7% for those with a profound limitation.

<sup>&</sup>lt;sup>3</sup> All figures are sourced from: ABS Survey of Disability, Ageing and Carers, 2022

Likewise, participation in the labour force declined sharply with severity: from 64.8% for those with a mild limitation to just 37.2% for those with a profound limitation.

14% 12% 10% 8% 6% 4% 2% 0% Total No disability Disability Mild limitation Moderate Profound limitation limitation **■**2018 **■**2022

Figure 7: Unemployment rate by severity of disability, 2018 and 2022

Source: ABS Survey of Disability, Ageing and Carers, 2022.

People with disability are also under-represented in higher-skill occupations (such as Professionals and Managers) and over-represented in lower-skill jobs (such as Labourers and Sales Workers). While Professionals make up the largest occupational group for those with disability (23.6%), this is still below the share for those without disability (25.8%). Conversely, Labourers (10.5%) and Sales Workers (8.6%) account for a higher proportion of employment among people with disability than among those without (8.0% and 8.1% respectively) (Figure 8).

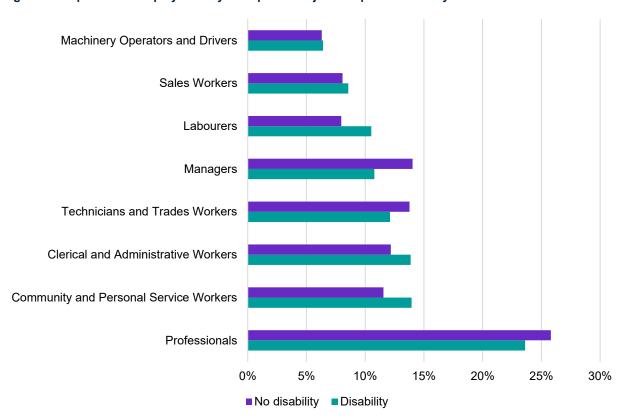


Figure 8: Proportion of employment by Occupation Major Group and Disability status - 2022

Source: ABS Survey of Disability, Ageing and Carers, 2022.

These patterns become more pronounced with increasing severity of disability. For example, Managers account for 10.2% of those with a moderate or mild limitation, but only 7.3% of those with a profound or severe limitation. In contrast, Labourers represent 10.2% of those with a moderate or mild limitation, however, this rises significantly to 16.5% among those with a profound or severe limitation.

A similar pattern emerges when looking at industries of employment (Figure 9). People with disability are over-represented in industries such as Health Care and Social Assistance (18.0% compared with 14.6% for those without disability) and Public Administration and Safety (7.9% compared with 5.6%). In contrast, they are under-represented industries such as Construction (6.8% compared with 9.4%) and Professional, Scientific and Technical Services (8.4% compared with 9.9%).

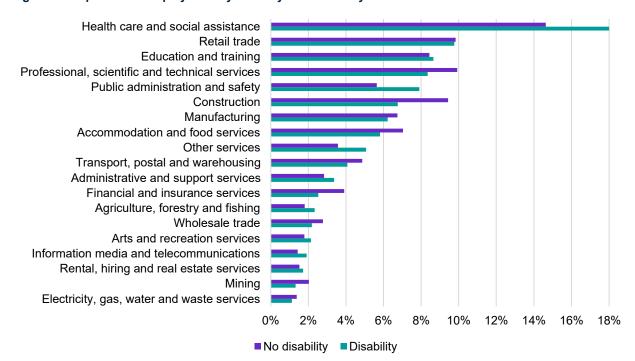


Figure 9: Proportion of employment by Industry and Disability status - 2022

Source: ABS Survey of Disability, Ageing and Carers, 2022.

These findings reveal ongoing systemic barriers to equitable employment for people with disability, including lower employment rates, underemployment, and occupational and industry segregation. Addressing these disparities requires coordinated efforts to create inclusive workplaces, support career progression, and ensure that employment opportunities align with individuals' skills and aspirations. Strengthening pathways to higher-skill roles and inclusive practices is key to unlocking the social and economic benefits of greater participation.

# 2.3 Women's workforce participation

Australia's overall labour force participation rate has risen over the past six decades, driven largely by the increased participation of women and mature aged workers (Commonwealth of Australia, 2023). Over the 15 years from 2006-2021, female employment grew much more than male employment (40% and 27% respectively), and the overall shift to higher skill level occupations was also higher for women compared to men. In line with this, the proportion of women with tertiary education qualifications also grew. The share of women aged 25-39 with

Certificate III qualifications or above grew from 48% to 72% and the share with a bachelor's degree or higher rose from 28% to 46% (Jobs and Skills Australia, 2025).

Despite these gains, the rate of women's labour force participation is still lower than that of men. In addition to the organisational, social, and personal benefits of increasing women's workforce participation, some sources estimate that the economic benefit of achieving gender equality in the workforce could be as much as \$128 billion annually (Deloitte, 2024). As the OECD notes, "the economic and fiscal costs of gender inequalities, such as the gender employment gap, are high" (Nicol & Kim, 2023).

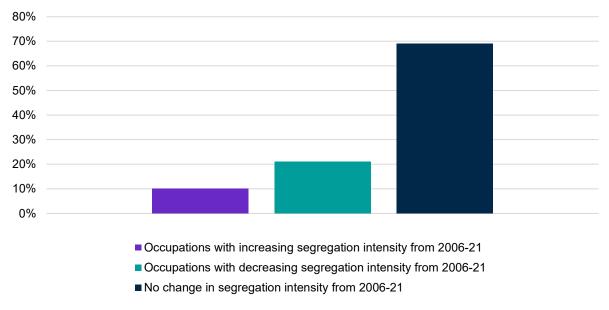
JSA has developed 3 papers as part of our Gender Economic Equality Study, providing new evidence and insights on:

- 1. How gendered Australian jobs, work, and pay are and how balancing these is vital to improving productivity and accelerating progress towards gender economic equality.
- The gendered nature of education and training divides including skills mismatches, and the underutilisation of women's qualifications as well as inequities in post-training outcomes.
- 3. The policy implications of JSA's data findings, and recommendations to speed up progress towards gender economic equality.

#### 2.3.1 Occupational segregation

Gendered occupational segregation is particularly difficult to shift. In 2021, only 21% of the Australian workforce worked in gender balanced occupations, and around 70% of occupation unit groups (4-digit ANZSCO) had the same gender segregation intensity they had in 2006. Of the remaining occupations, around one third saw their gender segregation intensity scale (GSIS) increase, and around two-thirds saw their intensity reduce, around half of which shifted into gender balance (Figure 10).

Figure 10: Proportion of occupation unit groups' (ANZSCO 4-digit) gender segregation intensity shift, from 2006 to 2021



Source: ABS, Census of Population and Housing, 2006 and 2021.

Note: Decreasing gender segregation intensity is aligned with a gender balancing of the occupation from 2006 to 2021, while increasing gender segregation intensity is aligned with an increasing proportion of one gender from 2006 to 2021.

Of the occupations that shifted into gender balance, many of these were managerial and professional occupations. Occupations that shifted from male dominated to gender balanced included Ambulance Officers and Paramedics where female representation climbed from 26% to 44%, Dental Practitioners (31% to 47%), and Barristers (22% to 38%).

Some occupations that saw a change in gender balance tipped into being moderately female dominated. For example, in 2006, 46% of Veterinarians were female, and this increased significantly to 67% in 2021. Likewise, School Principals went from a 50/50 split of males and females, to 65% female in 2021. While this does indicate women's increasing leadership and promotion in this sector, vertical segregation in this workforce remains an issue, with a higher percentage of female teachers than female school principals.

Further to this, recent VET and higher education program enrolments and completions indicate current training pipelines will not significantly improve existing gendered labour market segregation and occupation shortages.

Australia also sees evidence of gender segregation within the education and training system. Of the 5.1 million VET students enrolled in nationally recognised VET in 2023, the gender divide remains very pronounced: females account for just 17% of STEM program enrolments yet they comprise a majority of non-STEM fields with 56% of enrolments. In Engineering and Related Technologies, one of the fastest-growing fields, they comprise only 12% of VET program enrolments (DISR, 2024).

Addressing gender segregation in Australian occupations, including in our education and training systems, is important for fairness and inclusion, but is also critical to address occupation shortages in the labour market. Occupation shortages typically worsen as gender segregation intensifies – particularly in almost completely male dominated occupations. This is discussed in more detail later in this chapter.

#### 2.3.2 Gender pay gaps

Regardless of a worker's education attainment or qualification level, there is significant gendered economic inequality when looking at incomes. For example, for people aged 35-40 years across all levels of education, males are almost twice as likely to earn incomes over \$100,000 than females. This includes workers with a bachelor's degree or higher qualification.

In line with the trends of the most recent Workplace Gender Equality Agency and Australian Bureau of Statistics (ABS) analysis of Australia's gender pay gaps, both total workforce and occupational gender pay gaps have been decreasing over time. Over the 12 years from 2010–11 to 2022–23, almost two-thirds (63%) of occupations saw a decrease in their pay gap. Despite this improvement, males are still outearning females in 98% of the 688 occupations (6-digit ANZSCO) analysed in this element of the study, with the other 2% having a relatively neutral pay gap rather than being tipped in favour of females.

While the 'typical' pay gap is 16.8%, for over 100 occupations it is over 25%, and almost 30 have a gap over 35%. Although there are still large gender pay gaps in some gender balanced occupations, they tend to widen and worsen in occupations that are more segregated – with some of the largest gaps in occupations in the male dominated trades, health, and finance. There are also large gaps in management jobs despite industry or gender segregation intensity – highlighting the enduring problem that women not only earn less than men in some types of occupations and industries (horizontal gender segregation) but also earn less in managerial roles, regardless of industry (vertical gender segregation).

Differences in patterns, hours, and amount of work explain some, but at times very little, of the variation in occupational pay gaps. There are wide-ranging and large gender pay gaps for occupations even when males and females work similar hours. Figure 11 shows the range of median annual pay gaps across the occupations in the study compared with the range of median hours worked gaps.

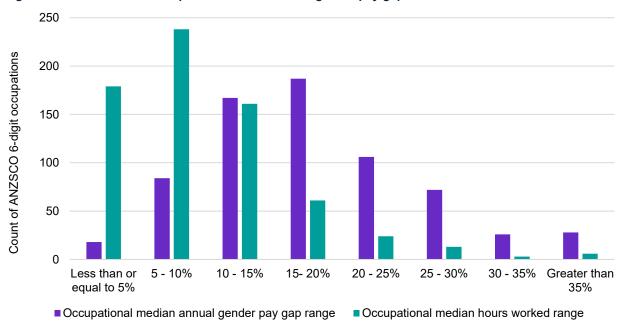


Figure 11: Distribution of occupational median annual gender pay gaps

Source: ABS, PLIDA. Findings based on use of PLIDA data.

Note: Gender pay gap and median hours worked ranges are labelled 5-10% for simplicity, but are calculated as greater than 5% but less than or equal to 10%, and so on.

The new longitudinal perspective – a 10-year accumulated gender pay gap measure – provides an indication of the longer-term and lifetime impacts of gender economic inequality. Applying the longitudinal perspective, in 2020–21, the accumulated 10-year median income gender pay gap was 30.7%, which is greater than the single year point-in-time gender pay gap (25.7% in 2022–23). The 'motherhood penalty' is also evident in the pay gap data, with females aged 25-39 years old having the worst accumulated 10-year pay gaps and economic outcomes.

Australia's workforce remains highly gender segregated, and this segregation is both complex and difficult to shift. These patterns ripple through our education and training systems, and result in large gender pay gaps at the occupational level. Intersectional insights show that nuanced policy actions are required to address significant sources of compounded disadvantage in the world of work.

It should be noted that Australia's Fair Work Commission (FWC) is currently reviewing pay classifications and minimum wage rates on work value grounds to remedy potential gender undervaluation for five priority awards:

- 1. Aboriginal and Torres Strait Islander Health Workers and Practitioners and Aboriginal Community Controlled Health Services Award 2020
- 2. Children's Services Award 2010
- 3. Pharmacy Industry Award 2020
- 4. Health Professionals and Support Services Award 2020
- 5. Social, Community, Home Care and Disability Services Industry Award 2010.

Gender segregation of the labour market is a problem for addressing occupation shortages (discussed later in this chapter) but is also a problem for increasing the level of Australia's productivity overall. Closing gender gaps and tackling structural inequalities not only promotes fairness and inclusion but also delivers measurable economic benefits. These include increased productivity, enhanced competitiveness, and more sustainable growth across sectors and the broader economy.

# 2.4 Youth and mature age employment

Different age groups engage with the labour market in distinct ways, shaped by their qualifications, experience, and life stage. These factors shape participation, skill use, and productivity across industries. Understanding these dynamics helps identify ways to more effectively utilise the workforce and support meaningful contributions from Australians of all ages.

Youth employment patterns highlight both untapped potential and structural vulnerabilities. While the number of young people who are not in employment, education or training has declined over the year, youth disengagement continues to present a significant challenge, and youth unemployment is at more than double the national rate at over 9%<sup>4</sup>. Employment among 15-24 year olds is concentrated in Retail Trade (20%) and Accommodation and Food Services (20%), which together account for over a third of youth employment. In fact, nearly half of all workers (46.3%) employed in the Accommodation and Food Services industry are aged 15-24, highlighting the importance of younger workers in the sector (Figure 12). These sectors offer flexible, entry-level roles but are often lower-skilled and more exposed to economic shocks.

<sup>&</sup>lt;sup>4</sup> ABS, Labour Force Australia, May 2025.

Accommodation and Food Services Retail Trade Arts and Recreation Services Other Services Construction Total Employment Manufacturing Information Media and Telecommunications Administrative and Support Services Rental, Hiring and Real Estate Services Health Care and Social Assistance Wholesale Trade Agriculture, Forestry and Fishing Education and Training Professional, Scientific and Technical Services Transport, Postal and Warehousing Electricity, Gas, Water and Waste Services Public Administration and Safety Financial and Insurance Services 10% 20% 30% 40% 50%

Figure 12: Proportion of industry employment for workers aged 15-24

Source: ABS, Labour Force, Australia, Detailed (EQ06), May 2025, four-quarter averages of original data.

Occupational and gender patterns show young women are gravitating toward Sales Worker and Community and Personal Service Worker roles, while young men are overrepresented in Technicians and Trades Worker and Labourer roles. These trends reflect early engagement with the workforce, but also point to the need for stronger skill development and career progression opportunities to support sustained participation and productivity growth. This includes recognition of the importance of gender inclusivity in addressing skills shortages, which is explored in more detail elsewhere in this chapter.

Mid-career workers form a substantial part of Australia's skilled workforce and play a central role in driving productivity – dominating employment in several of the largest employing industries in the economy. Among 25–54 year olds, employment is concentrated in Health Care and Social Assistance (16.8%), Professional, Scientific and Technical Services (10.3%), and Construction (9.4%) – industries that typically require post-school qualifications and offer stable, well-paid careers. This age group also dominates employment in Finance and Insurance, where nearly 80% of all workers in this sector fall into this age bracket (Figure 13). Occupationally, close to one-third of mid-career workers are Professionals, followed by Managers (13.8%) and Technicians and Trade Workers (13.7%)<sup>5</sup>. Gender patterns hold for this age group – with men dominating employment as Labourers and Technicians and Trades Workers, and women dominating employment in Clerical and Administrative Worker and Community and Personal Service Worker roles.

<sup>&</sup>lt;sup>5</sup> ABS, Labour Force Australia, detailed, May 2025.

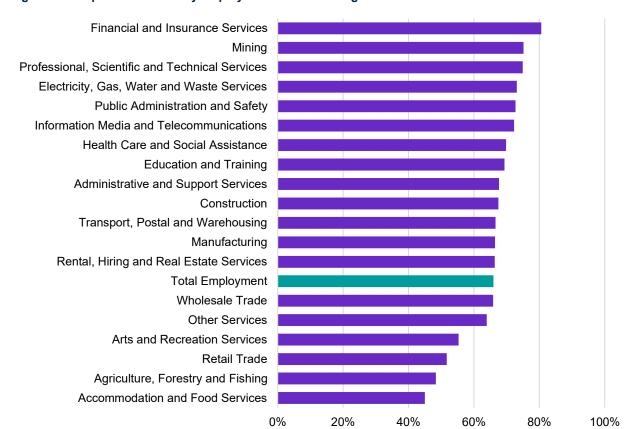


Figure 13: Proportion of industry employment for workers aged 25-54

Source: ABS, Labour Force, Australia, Detailed (EQ06), May 2025, four-quarter averages of original data.

Older workers contribute deep experience and play a vital role in sustaining participation and transferring skills. Workers aged 55 and over are concentrated in Health Care and Social Assistance (16.3%) and Education and Training (9.9%), with Agriculture standing out for its reliance on older Australians. Over 40% of the agricultural workforce is aged over 55 (Figure 14), many of whom work beyond retirement age. Occupational patterns show more older women working in clerical and Administrative (25.3%) and Professional (25.1%) roles, while older men are most likely to work Professional (21.7%) or Managerial (20.4%) roles. As the population ages, supporting older workers to remain engaged in meaningful work will be increasingly important to maintaining participation rates and preserving institutional knowledge across the economy.

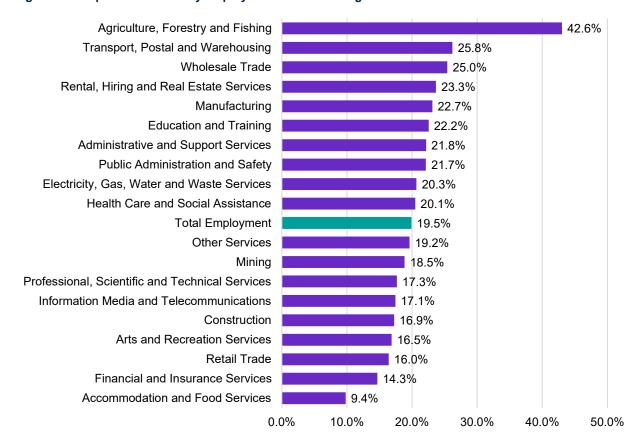


Figure 14: Proportion of industry employment for workers aged 55 and over

Source: ABS, Labour Force, Australia, Detailed (EQ06), May 2025, four-quarter averages of original data.

Together, these patterns reveal how age intersects with participation, productivity, and skills development. Supporting young people to build skills and transition into stable careers is essential to unlocking future productivity, while enabling older Australians to remain engaged in meaningful work helps preserve institutional knowledge and economic momentum. A deeper understanding of age-based employment trends can inform efforts to strengthen workforce resilience, ensure skills remain well connected to workforce needs, and support a dynamic and inclusive economy.

# 2.4.1 Employers' experiences of young job applicants

The transition from education into the workforce is a key stage in a young person's life, and there is a shared responsibility across the national skills system to help make this progression as smooth as possible. Young people often bring energy, creativity and new ideas to the workplace – key precursors to innovation and productivity growth – but employers can face challenges related to gaps in skills, limited work experience, or other job readiness concerns. Research shows this transition can be difficult, with various risk factors affecting outcomes (Marchand & Payne, 2022).

To better understand these challenges, JSA undertook new research through the Recruitment Experiences and Outlook Survey (REOS) survey, asking employers about their experiences of young job applicants aged 15-24. This included collecting data about the factors contributing to successful and unsuccessful job placements, as well as the kinds of programs or interventions employers used to assist successful applicants to transition into the workforce.

The module was undertaken between June and September 2024, and during this time interviewers spoke with over 2,500 employers. Of these, 1,454 reported having young job applicants apply for a job opportunity, and 82% of those who had received applications from young people ended up hiring at least one person. Medium and large businesses were slightly more likely to have a successful young applicant than small businesses, and employers for some occupations were both more likely to be targeted by young job seekers and more likely to hire them. The three most common of these occupations were Sales Workers, Community and Personal Service Workers, and Labourers.

Most employers did not access any program or subsidy when hiring young people. Of the 18% who did, the most commonly accessed support was the Australian Apprenticeships Incentive System, used by 11% of surveyed employers. A smaller number of employers reported using the Youth Bonus Wage Subsidy.

Where a young person was successfully recruited into a role, employers were asked why they were successful. The answers were consistent with previous REOS modules where employers highlighted the importance of employability skills and relevant experience. As shown in Figure 15, the top three most important qualities included having the right attitude, relevant experience, and good communication skills.

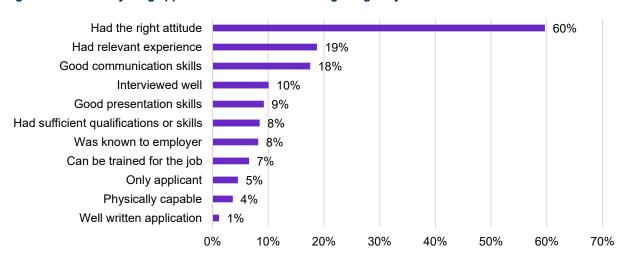


Figure 15: Reasons young applicants were successful in getting the job

Proportion of employers who had successful applicants

Source: JSA, REOS, the Youth module 2024.

Interestingly, while lack of experience was the most common reason for not hiring a young job applicant (mirroring the results for successful applicants), lack of qualifications or skills was the second most common reason for young applicants being unsuccessful (Figure 16). A notable challenge faced by some employers was poor availability of the applicant, which could be supported by the fact that young people are more likely to work casually or part-time due to education commitments or holding multiple jobs.

Lack of experience 35% Lack of qualifications/skills 16% Poor availability 9% 8% Poor fit Lack communication skills 8% Poor presentation at interview 6% Only applied for Centrelink requirements 6% Late/did not turn up 5% Unrealistic expectations 4% 3% Poor application Lack of transport 2% Lacked confidence 2% 5% 10% 15% 20% 25% 30% 35% 40% Proportion of employers who had unsuccessful young applicants

Figure 16: Reasons young applicants were unsuccessful in getting the job

Source: JSA, REOS, the Youth module 2024.

In summary, employability skills – such as a positive attitude, effective communication, and the ability to work collaboratively – are essential for young job seekers to be considered job ready by recruiting employers. Additionally, gaining workplace experience through part-time or casual employment, volunteering, or structured pathways like apprenticeships and traineeships can significantly enhance a young person's prospects and prepares them for long term employment. This highlights the importance of the national skills system in supporting young people to gain such skills and succeed in transitioning into the labour market.

# 2.5 The role of foundation skills

Foundation skills underpin participation in meaningful work, society and community, and include the ability to read, write, engage with mathematical concepts, and utilise technology. The National Foundation Skills Strategy 2025–2035 defines foundation skills as "the core skills or competencies that underpin workforce participation, productivity, and social inclusion" (Commonwealth of Australia, 2024). These are grouped into two categories:

- Language, literacy, numeracy and digital skills listening, speaking, reading, writing, numeracy (the use of mathematical ideas) and digital literacy.
- Employability skills a set of non-technical skills, knowledge and understandings that underpin successful participation in work, such as initiative and innovation, planning and organising, problem solving and teamwork.

Because they underpin successful participation in society, community, education, and work, foundation skills are critical for individuals to achieve their potential and can directly impact economic and social wellbeing. Foundation skills are also becoming more essential for productivity, as they provide a base to develop other skills that are in growing demand in today's labour market (Shomos & Forbes, 2014). For example, the innovation and adaptability that drive productivity growth are reliant on the broad analytical, discovery, and communication skills that depend on a strong foundation of literacy and numeracy (Banks, 2012).

Lack of employability skills may be contributing to occupation shortages and preventing otherwise qualified applicants from being employed in their relevant fields of expertise. As outlined in last year's Jobs and Skills Report, 'suitability gap' was the primary shortage driver for a number of large employing engineer and manager unit group occupations in shortage. This would suggest that for these roles, workers may not be equipped with the right employability skills and experience required for the job. Employers have a role in proactively supporting workers to develop these employability skills through both training and mentorship initiatives.

Recent analysis of data from the 2023 OECD Programme for the International Assessment of Adult Competencies (PIAAC) Survey of Adult Skills has also highlighted the critical role of adult skills (key information processing skills – literacy, numeracy and problem solving in technology rich environments) in shaping productivity. The 2023 data was used to analyse the relationship between productivity and the level and allocation of skills across industries for participating countries, with the results showing that differences in adult skill levels accounted for a quarter of the productivity gap between the OECD average and the productivity level of the three top performing countries. Skill matching was also found to be important, as productivity was also higher in countries where labour market mismatches were lower (Andrews, Egert, & de la Maisonneuve, 2025).

As described in last year's Jobs and Skills Report, the most recent Australian data available on adult foundation skills is from when PIAAC was last conducted in Australia in 2011–12. While Australia has committed to rejoining PIAAC, the next round of data collection will occur from 2025-2029. To help expand the evidence base and complement this forthcoming data, JSA is currently undertaking four major pieces of work to better understand the current foundation skills levels of Australian adults:

- A national survey of adult literacy and numeracy skills, known as Understanding Skills Across Australia.
- The Murtu Yayngiliyn (Walking Together) study a study into how best to collect the literacy, numeracy, and digital literacy skill levels of First Nations people.
- The administrative data project, which analyses Commonwealth administrative and other data to gain insights into the skill levels for priority groups of interest.
- A scoping study to help define what digital literacy is for Australia's purposes.

While work is underway on the other elements, the administrative data project offers valuable insights, especially for programs focused on foundation skills. JSA's focus has been on programs designed to lift people's foundation skills or where foundation skills assessments are done as part of engagement with education and training. Administrative data has some analytical limitations – for example, it may not capture all the variables needed to answer a specific research question, and data quality may vary. However, it covers larger populations than traditional surveys, and provides insights on specific populations not typically captured in traditional surveys.

Key insights from the analysis include:

- Women participating in foundation skills programs tend to demonstrate slightly higher proficiency in literacy and slightly lower proficiency in numeracy as compared to men.
- First Nations participants in foundation skills programs had noticeably better oral communication skills than other foundation skills. The biggest difference was as compared to writing skills, for which a higher proportion of participants had lower levels of proficiency.
- The proportion of people from a CALD background participating in foundation skills
  programs is generally bigger than the representative proportion of CALD people in the
  Australian population. While this doesn't confirm that all barriers to accessing or participating
  in these programs have been removed, it may suggest that the programs are reaching
  CALD communities effectively and meeting a recognised need.
- Recent migrants with a CALD background had lower foundation skills across the board than
  those who were currently active in the labour force. Those from a CALD background also
  had lower numeracy and digital literacy skills than other participants, and this was true
  across most of the included foundation skills programs.
- For individuals undertaking a VET qualification or unit, the subject load pass rate and qualification completion data indicate that people with disability are equally likely to successfully complete foundation skills training as other individuals.

While administrative data cannot fully capture the foundation skills of all Australian adults, it offers valuable insights into the experiences and outcomes of those who participate in targeted programs. These findings highlight the importance of improving data collection – particularly for people with disability – and suggest future reporting could benefit from more granular analysis, including intersectionality across priority groups, geographic remoteness, and educational background.

# 2.6 Inclusivity and shortage pressures

Beyond the ethical case, inclusive participation is an economic imperative. Diverse teams drive innovation and productivity, while inclusive hiring expands access to underrepresented talent. Analysis from the OSL points to the importance of increasing participation, changing workplace culture, and increasing diversity and inclusiveness as a way to alleviate shortage pressures.

Last year's Jobs and Skills Report showed the importance of inclusivity to addressing shortage pressures. It showed that gender-imbalanced occupations were more likely to be in shortage, and that age-inclusive practices could also help address shortages. This year, analysis has shown that occupations with a lower share of First Nations workers, people with disability, older or younger workers were more likely to be in shortage. Additional analysis has also been undertaken that unpacks these findings further – underscoring the link between inclusive workplaces, well-matched skills, and reduced occupation shortages.

# 2.6.1 First Nations people

Occupations with a lower share of First Nations people in their workforce are more likely to be in shortage than those that are more inclusive. First Nations people are underrepresented in high-skill occupations, especially in the Professionals group (Figure 17). In 2025, one-third of

Professional roles had less than 0.5% First Nations workers, while only 9% had 2.5% or more. This is the lowest representation among all major occupation groups.

Managers 10% 78% **Professionals** 33% Technician and Trades Workers 62% Community and Personal Service Workers Clerical and Administrative Workers and Sales 80% Workers Machinery Operators and Drivers and Labourers 28% All occupations 58% 0% 20% 40% 60% 80% 100% ■No more than 0.5% ■ Between 0.5% and 2.5% ■ At least 2.5% First Nations people First Nations people First Nations people

Figure 17: Distribution of First Nations people in the workforce by occupation major group

Source: JSA, OSL, 2025; ABS, 2021 Census of Population and Housing.

Occupations with fewer First Nations workers tend to have higher rates of shortages. Across all occupations, those with less than 0.5% First Nations representation had a 34% shortage rate, compared to 29% for occupations with higher representation (Figure 18). For Professionals, the trend is even clearer, with shortages dropping from 46% to just 14%.

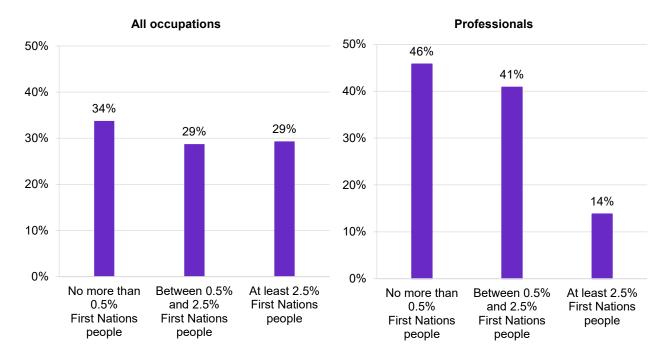


Figure 18: Percentage of occupations in shortage (%), by composition of First Nations people

Source: JSA, OSL, 2025; ABS, 2021 Census of Population and Housing.

Note: Results from previous years exhibit similar trends; for clarity of presentation, only the 2025 OSL results are shown.

This suggests that increasing First Nations participation in skilled roles could help reduce shortages. Encouraging diversity and inclusion in these sectors could make a meaningful difference in addressing workforce gaps.

#### 2.6.2 People with disability

People with disability continue to face major challenges in finding and keeping work. Their employment rates are lower, and they are more likely to be underemployed compared to the general population.

Workplaces with fewer employees identifying as a person with disability are more likely to experience skill shortages. This is especially true in the Professionals group, where 58% of occupations with less than 0.5% disability representation are in shortage.

Further to this, Figure 19 shows that 58% of Professionals occupations and 44% of all occupations with a no greater than 0.5% share of people with disability are in shortage, compared to only 15% of occupations with at least 1% share of people with disability.

**Professionals** All occupations 70% 70% 58% 60% 60% 50% 50% 44% 40% 40% 35% 29% 30% 30% 20% 20% 15% 15% 10% 10% 0% 0% Between 0.5% At least 1% Between 0.5% At least 1% No more than No more than of people with 0.5% and 1% of people with 0.5% and 1% of people with of people with of people with disability of people with disability disability disability disability disability

Figure 19: Percentage of occupations in shortage by composition of persons with disability

Source: JSA, OSL, 2025; ABS, 2021 Census of Population and Housing.

Note: Results from previous years exhibit similar trends.

These findings suggest that more inclusive workplaces, particularly in high-skill professions, may help reduce workforce shortages.

# 2.6.3 Younger and older workers

The average distribution of age groups in the workforce across occupations (in shortage or not) shows that younger workers aged between 15-24 years account for 9% of the workforce across occupations on average, prime age workers aged 25-44 and 45-54 accounted for about 67% together (46% and 21% respectively), while mature age workers aged 55 and above accounted for 23% of the workforce on average.

Occupations with more mature aged workers tend to have fewer shortages. In 2025, only 20% of occupations with at least 30% older workers were in shortage, compared to 39% of occupations with less than 10% older workers (Figure 20). This pattern is also seen in Professional roles, where shortages were lower (36%) in occupations with more older workers, and higher (41%) in those with fewer.

All occupations **Professionals** 45% 45% 41% 41% 39% 40% 40% 36% 35% 35% 32% 30% 30% 25% 25% 20% 20% 20% 15% 15% 10% 10% 5% 5% 0% 0% <= 10% Aged >=30% Aged 10% to 30% <= 10% Aged 10% to 30% >=30% Aged 55+ Aged 55+ 55+ 55+ Aged 55+ 55+

Figure 20: Percentage of occupations in shortage by mature age worker composition

Source: JSA, OSL, 2025; ABS, 2021 Census of Population and Housing.

Note: Results from previous years exhibit similar trends; for clarity of presentation, only the 2025 OSL results are shown here

Professionals contribute most to shortages in roles with low mature age representation. This trend holds even when using different age definitions or adjusting for occupation size and growth.

As Australia's population ages and the economy shifts toward health, education, and other knowledge-based services, attracting more older workers to these growing sectors could help ease labour shortages and support long-term workforce needs.

# 2.6.4 In summary

Workforce inclusivity is both a social and economic priority. New analysis shows that occupations with lower representation of First Nations people, people with disability, and older workers are more likely to be in shortage, particularly in high-skill roles. These findings reinforce the value of inclusive hiring in expanding access to underutilised talent and reducing workforce gaps. As Australia's population ages and demand grows in knowledge-based sectors, attracting and retaining a more diverse workforce will be critical to meeting future skills needs.

# 2.7 Key points from chapter two

Inclusive participation improves both social and economic prospects for workers. Barriers to employment persist for many cohorts, including women, people with disability, First Nations people, and mature age workers. Addressing these barriers requires targeted support, improved access to training, and workplace cultures that value diversity and inclusion. Evidence shows that occupations with more inclusive workforces are less likely to be in shortage, particularly when inclusivity is coupled with well-developed and well-matched skills.

Foundation skills – such as literacy, numeracy, digital literacy, and employability – are essential for successful participation in work and society. These skills underpin the ability to learn, adapt, and contribute effectively in the workplace. Strengthening foundation skills across the population is critical to improving productivity and ensuring that all Australians can reach their potential.

JSA plays a central role in supporting efforts to improve the connection of people with jobs by providing insights into labour market trends, skill requirements, and barriers to participation. Our work informs policy, supports collaboration across the skills system, and helps build a more inclusive and productive workforce.



# Chapter 3 The barriers to productivity and participation in today's labour market

Australia's labour market continues to evolve in response to shifting economic conditions, technological change, and demographic trends. These transformations bring both challenges and opportunities, but they also expose structural weaknesses that limit the ability of individuals, businesses, and regions to fully contribute to and benefit from economic growth.

Persistent barriers to productivity and participation – including occupation shortages, recruitment challenges, and regional disparities – reflect deeper issues in how skills are developed, retained, and connected to job requirements. Better matching between people and jobs is essential to overcoming these frictions and unlocking the full potential of Australia's workforce.

Understanding the nature and impact of these barriers is critical for designing targeted interventions that support more effective skill alignment, lift participation, enhance productivity, and contribute to a more resilient and inclusive labour market. JSA contributes by providing insights that deepen our understanding of the causes of poor matching or inefficiency in the labour market.

This chapter examines these challenges through three complementary lenses: the occupational perspective, highlighting labour market shortages and their underlying drivers; the employer perspective, drawing on recruitment experiences and strategies used to retain staff; and the regional perspective, revealing the uneven distribution of opportunities and constraints across Australia.

Together, these insights provide a foundation for evidence-based policy responses that can better align skills with demand, support employers in building productive workforces, and ensure that all regions are equipped to benefit more fully from opportunities in the national economy.

# 3.1 The occupational perspective – shortage analysis

Understanding shortages within the labour market, and their underlying drivers, offers valuable insight into the structural barriers and frictions that may be impeding productivity growth and labour market participation at the occupation level. Persistent or emerging shortages can signal mismatches between the skills, capabilities, needs, preferences and experience of job seekers and the requirements and realities of available roles, highlighting inefficiencies in how labour is allocated.

These shortages may also reflect a range of underlying dynamics – such as limited access to training, misalignment between qualifications and job-readiness, or challenges in attracting and retaining workers – that constrain the supply of suitable candidates. In some cases, the issue lies not in the number of available applicants, but in their preparedness or willingness to take up or stay in roles, pointing to potential concerns around job quality, accessibility, and the effectiveness of pathways into employment. Additionally, occupation shortages, in some cases, varies across states. Together, these patterns offer a window into how well people are being connected to jobs and where targeted interventions may be needed to support more responsive and inclusive labour market outcomes.

## 3.1.1 Occupation shortage drivers

Last year's Jobs and Skills Report outlined 4 types of shortage drivers JSA uses to classify occupation shortages, based on the most likely cause of the shortage (Table 4). The 4 types were based on data from Survey of Employers who have Recently Advertised (SERA) and categorised based on a typology published by Sue Richardson (Richardson, 2007).

Table 4: JSA occupation shortage driver typology

Classification	Definition
Long training gap	A long training gap shortage is defined by few qualified applicants per vacancy and a long training pathway – corresponding to a Certificate III or above.
Short training gap	A short training gap shortage arises when there are few applicants per vacancy and a qualification less than a Certificate III is required.
Suitability gap	The Suitability gap shortage arises when a unit group has enough qualified applicants, but they are not regarded as suitable. Reasons cited by employers include a lack of employability skills and work experience.  Unconscious bias of employers, including unrealistic expectations of graduates and workers may also be factors. This driver may also be
	impacted by employers underinvesting in training to upskill workers.
Retention gap	A Retention gap shortage is when a unit group has below average rates of retention.  Workers may not remain in the role due to low pay and poor working
	conditions. Poor workplace culture and a lack of access to education, childcare, health services and public transport also affect retention. As such, employers may be required to increase the frequency of recruitment activities to fill the vacant roles.
Uncertain/unknown	There may be cases where the shortage driver of a unit group is uncertain. This occurs when unit groups do not satisfy any of the above definitions.

Table 5 highlights the top 10 largest employing unit groups (4-digit ANZSCO) for each shortage driver in 2025, offering a snapshot of where workforce pressures are most concentrated. These occupations span diverse sectors from health and education to construction and transport; and reflect a range of underlying causes, including long and short training gaps, suitability and retention issues, and more complex or shifting dynamics. The following sections unpack the findings under each shortage driver in turn, drawing out the policy and system-level implications for education and training, employer practices, and workforce planning.

Table 5: Top 10 largest employing occupation unit groups (4-digit ANZSCO) for each shortage driver, 2025

Long training gap	Short training gap	Suitability gap	Retention gap	Uncertain
Secondary School Teachers (151,108)	Bus and Coach Drivers (41,225)	Electricians (186,371)	Aged and Disabled Carers (340,694)	Registered Nurses (338,910)
Metal Fitters and Machinists (120,895)	Aircraft Maintenance Engineers (9,748)	Construction Managers (132,040)	Carpenters and Joiners (145,184)	Truck Drivers (192,538)
Motor Mechanics (105,836)		Civil Engineering Professionals (74,528)	Hairdressers (63,632)	Child Carers (173,330)
Plumbers (103,675)		Electrical Engineers (30,172)	Painters (55,765)	Primary School Teachers (161,186)
Structural Steel and Welding Trades Workers (78,211)		Urban and Regional Planners (21,008)	Cooks (39,110)	Chefs (125,454)
Early Childhood (Pre-primary School) Teachers (70,305)		Mining Engineers (16,085)	Beauty Therapists (38,882)	Solicitors (92,166)
Psychologists (52,741)		Other Engineering Professionals (15,004)	Bakers and Pastrycooks (32,035)	General Practitioners and Resident Medical Officers (86,527)
Physiotherapists (47,330)		Civil Engineering Draftspersons and Technicians (13,296)	Plasterers and Renderers (30,273)	Drillers, Miners, and Shot Firers (63,592)
Pharmacists (42,413)		Geologists, Geophysicists and Hydrogeologists (12,640)	Bricklayers and Stonemasons (25,464)	Earthmoving Plant Operators (49,627)
Cabinet and Furniture Makers (34,914)		Surgeons (10,629)	Wall and Floor Tilers (22,028)	Vocational Education Teachers / Polytechnic Teachers (35,645)

Source: JSA OSL analysis; ABS, Labour Force; ABS, Census of Population and Housing, 2021.

#### Training gaps

Table 5 highlights that long training gaps are more frequent than short training gaps. The long training gap category includes a mix of large-employing unit groups where higher education and VET are the pathways into the labour market. The list includes occupations from the Professionals major group from the health and education sectors, with the remaining from the Technicians and Trades Workers major group.

Additional analysis shows that for some occupations, sharp increases in demand are outpacing the capacity of the education and training system to supply trained workers. Elevated demand and high employment growth impact many occupations in health, education, and those critical to construction and the clean energy transition. However, these occupations remain in shortage with training gaps (long or short) as the leading driver. This suggests that the flow of qualified workers into the labour market may only be partly meeting demand.

#### Suitability gap

Suitability gap shortages were mostly seen in engineering roles from the Professionals major group. Many occupations with a university pathway into the labour market have above average flows of qualified workers and technical know-how, but this type of shortage driver reflects that workers may lack the employability skills and experience that employers seek. On the other hand, it may also reflect unrealistic employer expectations for past experience. For example, many employers for these occupations require applicants to have 5 years of prior experience, on average.

#### Retention gap

Retention gap is the main shortage driver for large employing roles in the care, personal care, construction, and food sectors. Retention-related shortages are often shaped by broader workplace and industry conditions. Factors such as job quality, workplace culture, social expectations, and pay can all influence whether workers remain in an occupation.

#### Uncertain

The uncertain group includes both high and lower skilled groups of occupations. This includes Skill Level 1 occupation unit groups in the health, education, and legal sectors. Occupations in the construction sector and Truck Drivers are also present.

The primary driver of several occupations in this group changed, and the transition was mostly from a known driver in 2024 to an uncertain one in 2025. This suggests there was an intersection of factors that caused shortages for these occupations. For example, previously, there were insufficient registered nurses in the labour market, with training gap identified as the primary shortage driver. Now, the cause of their shortage is uncertain. Two things appear to be happening: the supply pipeline is growing, but the need to replace registered nurses due to them leaving is rising. Retention issues for registered nurses are not new but may be becoming a bigger contributor to their shortage.

Given the size of these unit groups, addressing shortages will have significant labour market impacts, including on productivity growth. Because the uncertain driver may reflect a mix of contributing factors, transitional dynamics, or limitations in current data and classification methods, understanding these occupations requires deeper investigation and ongoing monitoring. They may require adaptive policy responses and flexible workforce planning approaches that can evolve as new evidence emerges.

#### 3.1.2 Persistent labour market shortages

Understanding long term occupation shortages is important as their persistence can point to underlying systemic issues that can hinder economic growth, impact participation, and negatively affect quality of life and other social issues if left unaddressed. JSA defines occupations in persistent shortage as those which have been in shortage for 5 or more years.

The 2025 OSL analysis showed that there were 139 occupations in persistent shortage from 2021 to 2025 (Table 6). Of these, 51% were in the Technicians and Trades Workers major group, particularly those related to construction, engineering and automotive trades. Professionals made up 37%, with various roles in health, early childhood education, and roles in engineering and science.

Table 6: Summary of major groups in persistent shortage in the 2021-2025 OSL

In shortage from 2021 to 2025	Occupations (No.)	Occupations (%)
Managers	2	1%
Professionals	52	37%
Technicians and Trades Workers	71	51%
Community and Personal Service Workers	7	5%
Clerical and Administrative Workers	-	-
Sales Workers	-	-
Machinery Operators and Drivers	7	5%
Labourers	-	-
All occupations	139	100%

Source: JSA. OSL. 2021-2025.

The reasons for persistent shortages are likely to be multifaceted. For example, ageing population, technological advances, and constraints in the supply of qualified and experienced workers, and working conditions and pay. The 2025 Occupation Shortage Drivers Report offers analysis on some the primary causes and structural reasons that lead to demand outpacing supply of workers and weak inflow of workers into occupations due to working conditions and other factors that affect worker retention. Any future solutions to address persistent shortages will, therefore, likely need to be long-term and holistic.

#### 3.1.3 Addressing occupation shortages

The most effective interventions to address occupation shortages will depend on the underlying causes driving them. In cases where shortages stem from training gaps – whether due to long qualification pathways or limited access to training – there is often a shortfall of suitably qualified applicants. For some occupations, formal qualifications are essential due to regulatory or licensing requirements. However, for others, more flexible approaches such as on-the-job training or micro-credentials may offer viable alternatives. In the short term, migration can also play a role in helping to alleviate shortages, particularly where training pipelines are lengthy.

Where shortages are driven by suitability gaps, the issue is not a lack of qualifications but rather a disconnect between what employers need and what applicants offer – such as insufficient experience or job-readiness. Addressing these gaps may involve reviewing the effectiveness of training programs in preparing individuals for real-world roles, and investing in foundation and employability skills development, work placements, and pathways that help bridge the transition from training to work. Greater employer investment in staff training and application of work-integrated learning could also help alleviate this form of shortage, but employer-provided training is on the decline. In some cases, these shortages may also reflect employer expectations that are misaligned with the capabilities of new graduates, or a tendency to recruit for senior roles that require a blend of technical expertise and workplace experience. For example, many employers for these occupations require applicants to have on average 5 years of experience to apply.

Retention-related shortages, on the other hand, are often shaped by broader workplace and industry conditions. Factors such as job quality, workplace culture, social expectations, and pay can all influence whether workers remain in an occupation. Solutions for this type of shortage will largely come from employers. Some industries are already taking practical steps to address these challenges, offering useful examples of how targeted action can improve retention and workforce sustainability. However, governments can also play a key role in improving job quality through policy and regulation (for example, relating to minimum standards and workplace safety) and investing in social infrastructure (such as access to childcare, transport, and housing). This may be particularly relevant where retention-related shortages are concentrated in geographical locations rather than in industries or occupations.

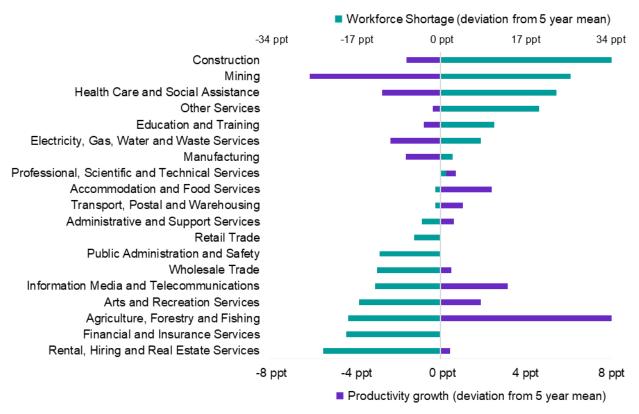
The OSL provides a clear picture of where workforce pressures may be most acute. Combined with analysis of employer experiences and regional labour market conditions, these insights can enable governments, education providers, and industry stakeholders to design interventions that are responsive to real-world needs. This will ensure that training pathways, workforce strategies, and policy settings are better aligned with demand, more effective and sustainable.

#### 3.1.4 Workforce shortage and labour productivity growth

Labour productivity is a vital measure of long-term economic prosperity and has historically been the main driver of economic growth in Australia (Treasury, 2023). The slowing of productivity in recent years has caused concerns and an increasing need to address this national issue.

In general, industries with a higher workforce shortage also have lower productivity growth over the past 5 years. For example, Construction, Mining, and Health Care and Social Assistance – industries with the highest workforce shortage – also had the weakest productivity growth over this period (Figure 21).

Figure 21: Percentage point deviation from the 5 year mean productivity growth and percentage point deviation from the 5 year mean workforce shortage, by industry, 2021 to 2025



Source: JSA, OSL 2021 to 2025; ABS, 2021 Census of Population and Housing; ABS, Australian National Accounts, June 2025; ABS, Labour Account Australia, June 2025.

Note: Average productivity growth was based on a 5 year average from 2020-21 to 2024-25 financial years. Average workforce shortage was based on the 5 year average workforce shortage measure from 2021 to 2025 OSLs.

Construction, and Health Care and Social Assistance are large-employing industries; the latter is also fast growing. Shortage in these industries have implications for economic growth. For example, the outputs of the Construction industry serve as critical inputs into other industries.

Lower productivity industries may experience persistent shortage over time, as they may be more reliant on labour than others to increase output (to meet growing demand). This could be especially true for Construction, and Health Care and Social Assistance, where several occupations have been in shortage since 2021. It is important to note that productivity growth in public sector industries, particularly in sectors like health, is often difficult to quantify due to the nature of services delivered and limitations in measurement frameworks. However, the correlations between shortages and productivity still broadly stand.

#### 3.1.5 In focus - Veterinarians

Veterinarians play a vital role in supporting Australia's agricultural industries, safeguarding biosecurity, and caring for the companion animals that enrich the lives of millions of households. With pet ownership now estimated at around 6.9 million Australian households – representing approximately 28.7 million pets (Animal Medicines Australia, 2022) - and ambitious growth targets in animal agriculture (Secombe, 2023), demand for veterinary services continues to rise. However, workforce challenges are creating barriers to meeting this growing demand.

Recruitment activity for Veterinarians has increased markedly in recent years, as reflected in JSA's IVI. Historically, online job advertisements for Veterinarians were low, partly due to the use of specialised job boards not captured in mainstream data. Since the COVID-19 downturn, however, vacancy numbers have surged, with 190 advertisements recorded in September 2024 – up from an average of just 18 per month in the decade prior (Figure 22). Specialist job boards report even higher levels of recruitment activity and difficulty, with permanent veterinary job postings increasing more than 300% between 2014 and 2023 on a single job board alone. The average time to fill a vacancy has tripled, and half of all roles are now open to graduate applicants.

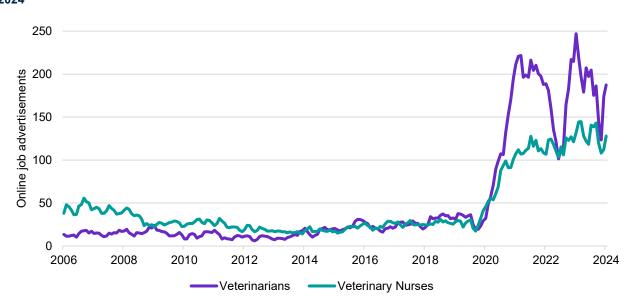


Figure 22: Online job advertisements for Veterinarians and Veterinary Nurses, September 2006 to September 2024

Source: JSA, IVI, September 2024, 3-month averages of original data.

Labour market data shows employment for Veterinarians grew by 32.1% over the five years to November 2024<sup>6</sup> – nearly three times the national average. Qualification attainment has also increased, with the number of Australians holding veterinary science qualifications rising by 61.3% between the 2011 and 2021 censuses. Despite this growth, shortages remain, driven by a complex mix of occupation-specific and systemic factors.

Veterinary work is associated with unique stressors, including emotionally demanding client interactions, unpredictable work patterns, and the ethical challenges of issues such as financial euthanasia. These pressures are compounded by relatively low pay compared to other professions with similarly long and rigorous training requirements. Burnout and mental health concerns are increasingly prevalent (Li, Mooney, McArthur, Hall, & Quain, 2024) (Middleton, 2023) (Morgan, 2023), particularly in regional areas where workloads are heavier and large animal care presents additional risks (Secombe, 2023).

These challenges have prompted government and industry responses, including inquiries, roundtables, and support for improved workforce data collection. Addressing these shortages will require a multifaceted approach. While financial support for students and improved data infrastructure are important steps, broader interventions are needed to improve job quality, support mental health, and enhance workforce sustainability. Emerging technologies – such as

<sup>&</sup>lt;sup>6</sup> JSA, Labour Force Trending, November 2024

telehealth and advanced scheduling systems – offer new opportunities, but collaborative action across government, industry, and the veterinary profession will be key to ensuring the workforce can meet growing demand while maintaining high standards of care and wellbeing.

# 3.2 Spotlight – expanding our understanding of job vacancies

In late 2024, JSA released a new experimental data series – the Total New Vacancies (TNV) series. The TNV offers a broader view of job openings across the country by estimating the total number of new vacancies created each quarter. This new measure builds on existing data sources – such as the IVI and the ABS Job Vacancy Survey – by accounting for vacancies that are not advertised online (Figure 23). It does so by combining online job ad data with insights from employer surveys, which capture a wider range of recruitment methods including word of mouth, signage, and social media.

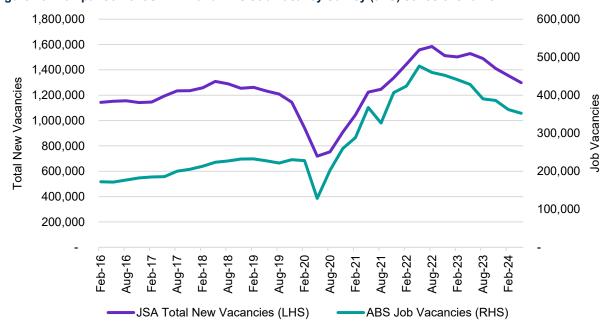


Figure 23: Comparison of JSA TNV and ABS Job Vacancy Survey (JVS) series over time

Source: JSA, TNV, Experimental Series, March 2024; ABS, Job Vacancies, Australia, August 2025, seasonally adjusted.

This approach helps fill gaps in our understanding of labour demand, particularly in industries and occupations where online advertising is less common. For instance, while most professional roles are advertised online, many sales and service roles are filled through informal channels. By adjusting for these differences, the TNV provides a more inclusive estimate of total vacancies, offering a clearer picture of where job creation is occurring.

Importantly, the TNV introduces a "flow" measure – capturing all new vacancies created during a quarter – rather than a snapshot of vacancies open on a single day. This complements the "stock" measures provided by other sources and allows for more detailed analysis of hiring activity over time. Together, these insights support more informed workforce planning and policy development, particularly in identifying areas of emerging demand and potential skills shortages.

# 3.3 The employer perspective – retention issues

Understanding how occupation shortages and retention issues affect employers is essential for developing effective, targeted responses to workforce challenges. When businesses struggle to retain or recruit the skills they need, it can lead to reduced productivity, delayed projects, increased costs, and missed opportunities for growth – particularly in sectors critical to Australia's economic growth and resilience. These impacts are often not felt evenly – they vary by industry, region, and business size, and often require different types of support. This employer perspective is a vital complement to other analysis, helping to ensure that policy responses are grounded in the realities of the labour market.

To gain a better understanding of employers' retention issues, and the resulting impacts, JSA included a module on the topic as part of the REOS. This module was incorporated into the survey twice – once between August and December 2023, and again between February and May 2024. The module sought to understand how often employers had to replace at least one former staff member, the employer's perspectives on the reason for replacement, how the replacement affected their business, and what strategies had been employed to try and retain staff. Across both timeframes together, 3,300 responses were received.

#### 3.3.1 Frequency of staff replacement

Staff turnover is a regular challenge for many employers, with around 24% indicating that they typically replace at least one former staff member at least every six months. For the purposes of this analysis, this was considered a medium to high replacement rate<sup>7</sup>. 41% of employers replace at least one former staff member every 6 months or more, with only just over a third of employers reporting that they do not often replace staff for their occupation, or that retention is not an issue.

There was a lot of industry variation to the results. Industries such as Accommodation and Food Services showed the highest proportion of employers reporting medium to high replacement rates, reflecting the transient nature of many roles in that sector. In contrast, employers in Professional, Scientific and Technical Services, which tend to involve higher-skilled occupations, reported far lower rates of staff replacement. This was reflected from the perspective of occupations. Occupations such as Labourers and Community and Personal Service Workers were more frequently replaced, while Professionals and Managers were less affected by retention issues.

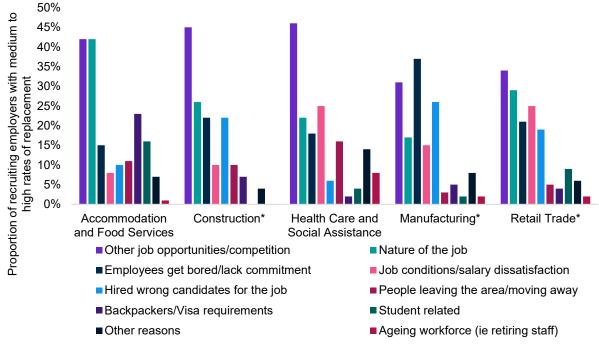
<sup>&</sup>lt;sup>7</sup> JSA categorised replacement at least every three months as 'high', every 3 to 6 months as 'medium', and every 6 months or more as 'low'. There was a fourth category of 'not at all/retention not a problem'. These categories are only defined relative to each other and do not represent an industry standard or objective judgement. This analysis does not capture the number of staff, or the proportion of the total existing workforce, that had to be replaced.

#### 3.3.2 Reasons for staff replacement

Employers most commonly attributed regular staff replacement to employees leaving for other job opportunities (42%). This is in line with ABS data which showed that 27% of all people who left or lost a job in the 12 months to February 2024 did so to obtain a better job or just wanted a change<sup>8</sup>. The second most common reason (27%) was reported as the nature of the job itself, which in some cases may involve physically demanding or repetitive tasks that contribute to higher turnover. A smaller proportion of employers cited dissatisfaction with job conditions or salary (15%) as a key factor.

As with frequency of staff replacement, there was variation in the results across industries and occupations. For example, in Accommodation and Food Services, the nature of the job was just as likely as external job opportunities to drive turnover. This industry was also the most affected by backpacker/visa requirements. In Health Care and Social Assistance and in Retail Trade, dissatisfaction with pay and conditions was more prominent. These trends are set out in Figure 24. Among occupation groups, Labourers were most often replaced due to the nature of the work, whereas Technicians and Trades Workers were affected by strong competition in the labour market, suggesting a broader issue of skills shortages.

Figure 24: Reasons for regularly replacing staff for most recently recruited occupations - by selected industries, August 2023 to May 2024



Source: JSA, REOS, 2025.

Note: Due to small sample size, caution is advised in interpreting results for the Construction, Manufacturing and Retail Trade industries.

<sup>8</sup>ABS, Job mobility, February 2024.

#### 3.3.3 Business impact

The most significant impact of regular staff replacement reported by employers was the cost and time associated with constant recruitment and training (reported by 51% of employers). This was followed by negative effects on existing staff, such as increased workloads or reduced morale, and by decreased productivity or revenue. These impacts were particularly pronounced in industries like Construction, where project continuity depends heavily on workforce stability, and in Retail Trade, where staff turnover can disrupt operations and place pressure on remaining employees (Figure 25).

70% Proportion of recruiting employers with medium to 60% 50% high rates of replacement 40% 30% 20% 10% 0% Construction\* Health Care and Manufacturing\* Retail Trade\* Accommodation and Food Services Social Assistance ■ Constant recruitment/recruitment costs/time lost on training new employees ■ Decreased productivity/effect on revenue ■ Negative impact on existing staff ■ No impact (nature of the role,unaviodable etc)

Figure 25: Impacts on business due to regularly replacing staff for most recently recruited occupations - by selected industries, August 2023 to May 2024

Source: JSA, REOS, 2025.

Note: Due to low sample size, caution is advised in interpreting results for Construction, Manufacturing and Retail Trade.

Some employers, particularly in Accommodation and Food Services, reported that regular staff replacement had little or no impact on their business, viewing it as an unavoidable aspect of the roles they offer. However, for occupations such as Technicians and Trades Workers, the consequences were more severe. Employers regularly replacing former staff in these occupations were more likely to report not only productivity losses but also increased costs and time pressures due to ongoing recruitment and training. These retention challenges closely mirror the impacts associated with recruitment difficulty reported by employers, as reflected in Figure 26.

35% Proportion of recruiting employers 30% 25% 20% 15% 10% 5% 0% Had difficulty and negative impact on negative impact on had to continue or negative impact on had to hire productivity/ existing staff change recruitment business reputation temporary/ contract revenue staff to fill in process Services industries ■ Producing industries

Figure 26: Impacts on business due to regularly replacing staff for most recently recruited occupations - by selected industries, August 2023 to May 2024

Source: JSA, REOS, 2025.

### 3.3.4 Strategies used to retain staff

In response to retention challenges, nearly one-third of employers with medium or high replacement rates reported offering higher wages or other incentives to retain staff. Flexible or secure work arrangements (15%) and upskilling opportunities (13%) were also used, though to a lesser extent. Interestingly, more than a third of employers indicated that they were not using any specific strategies to retain staff. However, follow-up analysis revealed that some of these "nothing" responses could be reclassified under existing strategy categories, suggesting that informal or unrecognised efforts may still be in place.

Employers in Health Care and Social Assistance were the most proactive, using a combination of financial incentives, flexible/secure working arrangements, and improvements to workplace culture. In contrast, employers in Accommodation and Food Services were less likely to offer higher wages, instead favouring staff discounts and flexible scheduling. By occupation, employers replacing Technicians and Trades Workers were most likely to offer financial incentives, while those replacing Community and Personal Service Workers leaned towards flexible arrangements more so than employers replacing other occupations. Employers replacing Labourers were least likely to offer training.

Persistent staff turnover in key industries and occupations presents a barrier to workforce stability and productivity. High replacement rates are often driven by job competition, the nature of the work, and dissatisfaction with conditions. These dynamics impose costs on businesses through repeated recruitment and training and can undermine operational continuity. While some employers respond with targeted retention strategies such as wage increases/financial incentives or flexible arrangements, a significant proportion do not actively address the issue. These findings point to the need for more tailored interventions from across the skill system that support retention in high-turnover sectors and promote sustainable employment practices.

# 3.4 The regional perspective – the picture across Australia

Australia's labour market is shaped by both national economic trends and the distinct characteristics and challenges of its diverse regions. Each Australian region faces a distinct combination of structural, demographic, and economic factors that shape patterns of workforce participation. These regional differences can give rise to specific labour market frictions, that are not always visible in national-level data, such as skills mismatches, limited job availability, or barriers to mobility. However, these current frictions also offer opportunities to significantly improve regional labour market outcomes into the future.

Understanding regional labour market dynamics is crucial for developing effective, inclusive, and sustainable employment interventions. By identifying where and why barriers persist, governments can more effectively target interventions, including through improved access to education and training, addressing infrastructure and housing constraints, or supporting key local industries.

#### 3.4.1 Roadmap for Regional Australia

Regional Australia plays a pivotal role in shaping Australia's economic and social landscape, with around a third of all Australians calling it home. It also takes up two thirds of employment in key sectors such as agriculture, mining, tourism and renewable energy. Recognising its significance, JSA placed a renewed focus on regional opportunities and challenges in our 2024–25 Workplan, leading to the development of the *Jobs and Skills Roadmap for Regional Australia*. This strategic long-term framework outlines a bold and inclusive vision to enhance equity, effectiveness and efficiency across the regional jobs and skills system – now and into the future.

In July this year, JSA released phase 1 of the roadmap, which is designed to empower stakeholders to work collaboratively, be adaptable to the diverse needs of communities, and outline a national framework and vision for a more effective and responsive jobs and skills system. Phase 1 of the roadmap sets out the current state of the jobs and skills system in Regional Australia and identifies common challenges and barriers that hinder workforce participation, skill development and productivity in regional areas.

The framework and vision for Regional Australia is built around five guiding principles:

- Addressing barriers: People with barriers in Regional Australia receive timely high-quality support to move towards participating in education, training and employment.
- Developing skills: Everyone in Regional Australia is supported to efficiently develop skills that enable them to meaningfully contribute to community, economy and culture.
- Quality jobs: Everyone employed in Regional Australia can work in a quality job that is safe, fair, rewarding and satisfying.
- Meeting demand: Regional Australia and its employers can access, attract and develop sufficient suitable labour, including as skills needs change.
- Efficient matching of labour supply and demand: The labour market in Regional Australia efficiently matches labour demand with labour supply.

#### Living and working in Regional Australia

Regional Australia offers a wide range of strengths and attractions, presenting a compelling case for those considering work and life outside of Australia's major cities (Figure 27). Those in Regional Australia can experience opportunities for stronger community ties, better work-life balance, lower job competition, and unique career opportunities in sectors like mining, energy, and agriculture. They also report higher levels of wellbeing – linked to lower stress, cost of living, and a greater sense of community. Job satisfaction remains consistently higher in regional areas than in major cities, likely reflecting the flexibility offered by remote and hybrid work arrangements.

Local ingenuity and innovation Important cultural significance Unique career opportunities Opportunities for stronger - including across mining, community connection agriculture and energy Potentially more affordable Lifestyle and property compared to work-life balance some Major City areas Lower competition for jobs, Natural beauty - across leading to better utilisation of land, water and sea skills and higher job satisfaction Broadening work opportunities due to hybrid and remote work

Figure 27: Strengths and attractions of Regional Australia

Source: JSA, Jobs and Skills Roadmap for Regional Australia – Phase 1.

#### **Emerging trends shaping work and life in Regional Australia**

Several key trends are shaping the future of work and life in Regional Australia, presenting both opportunities and challenges.

#### Population and demographic change

Coastal areas are experiencing significant population growth driven by strong net internal migration. While this may help address labour supply issues, it can exacerbate these issues if people's skills are not well aligned with the requirements of available jobs. It also risks straining infrastructure and services that cannot keep up with the population increase.

Regional Australia also mirrors the national and global trend of an ageing population, with declining fertility rates and a shrinking working-age cohort. The Australian working age population (aged 15-64) as a share of the total population is expected to fall from 65% to 61% over the 40 years from 2023 to 2063, with the share of the population aged 65 and over

predicted to increase from 17% to 23% in the same period (Treasury, 2023). As at March 2025, the proportion of the population aged over 65 was 19% in major cities compared to 28% in regional areas<sup>9</sup>. Although participation among prime-age workers (25-54 years) is improving in regional areas, it is still lower than major cities<sup>10</sup>.

#### Barriers to participation in the jobs and skills system

For many individuals, gaining and sustaining employment is challenging due to the prevalence of barriers that hinder their ability to participate in the jobs and skills system. This is the case for people living in Regional Australia, particularly those from priority equity groups, with around 1 in 6 young people not in any form of employment, education or training. Furthermore, individuals with long-term health conditions, First Nations people, and single parents experience significantly lower workforce participation rates compared to the overall regional participation.

The barriers behind reduced participation in employment, education or training (including non-participation) for those that want to work more can vary and are often interconnected. They may include financial barriers, lack of digital connectivity, lack of access to childcare, transport barriers, lack of affordable housing, low levels of foundation skills, as well as disability or health issues.

In Regional Australia, school non-attendance rates have consistently been higher than the rates recorded in Major Cities and remain well above their pre-COVID levels (Figure 28). This may reflect the incidence of key emerging barriers due to the disruptions to schooling caused by COVID (and other factors in those years, such as natural disasters in certain regions), as well as other factors that may be hindering participation in school.

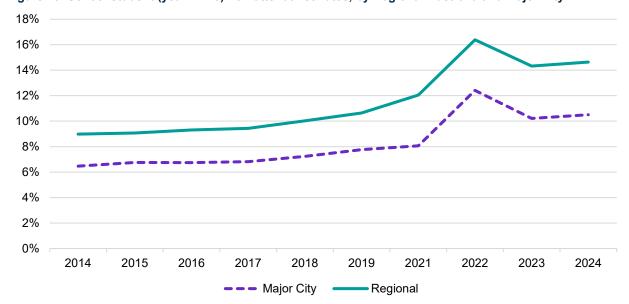


Figure 28: School student (year 1 - 10) non-attendance rates, by Regional Australia and Major City

Source: Australia Curriculum Assessment and Reporting Authority (ACARA), School Attendance, unpublished data.

<sup>&</sup>lt;sup>9</sup> ABS, Labour Force, Detailed, Australia, March 2025, 6-month averages of original estimates.

<sup>&</sup>lt;sup>10</sup> ABS, Census of Population and Housing, 2021; ABS, Labour Force, Detailed, 12-month averages of original estimates.

The prevalence of barriers that hinder participation in the labour market, including the acquisition of skill through the tertiary and higher education system, as well as completion of apprenticeship and traineeships, likely contributes to recruitment difficulty for employers in Regional Australia. Although recruitment difficulty appears to be showing some sign of easing, it continues to remain one of the greatest challenges for regional employers.

This is particularly true for essential services jobs including teachers, child carers, nurses, doctors, pharmacists, and emergency services workers, with almost 1 in 10 essential service jobs remaining vacant in Regional Australia (Figure 29). This persistent shortage affects community wellbeing and access to critical services. Regional stakeholders report long wait times for medical care, limited educational offerings due to a lack of specialist teachers, and long commutes into the city to receive specialist and urgent medical care.

online as a proportion of employed persons), Major City and Regional Australia 12% 10% 8%

Figure 29: Essential services vacancy ratio (job advertisements adjusted for proportion of jobs advertised

6% 4% 2% % Mar-11 Mar-13 Mar-15 Mar-17 Mar-19 Mar-21 Mar-23 Mar-25 -- - Major City Regional

Source: JSA NERO; JSA, IVI, April 2025 (adjusted for proportion of jobs advertised online – JSA, REOS, April 2025). Note: Definitions of essential services vary, but for the purposes of this analysis essential service occupations include Teachers (early childhood, primary and secondary), Child Carers (inc. Managers), Nurses (Managers, Enrolled and Registered), GPs and Resident Medical Officers, Pharmacists, Police, Fire and Emergency and Ambulance and Paramedics

These challenges represent significant life stressors extending beyond an individual's employable skills and capabilities. When interlinked, they pose serious barriers not only to workforce participation but also to productivity, as employees facing these pressures are often unable to fully dedicate themselves to their work, limiting their capacity to contribute effectively to the workplace.

#### Next steps for the roadmap

Phase 1 has developed an overarching regional roadmap at the national level. In phase 2, the roadmap will be refined through consultation and feedback from key stakeholders across Regional Australia. Phase 2 will also see JSA seek to support the development of jurisdictional roadmaps that aim to underpin efforts to enhance the jobs and skills system across Regional Australia.

## 3.5 Summary of chapter three

Australia's labour market continues to face persistent barriers that limit productivity and participation, despite ongoing economic transformation. These barriers are evident in occupation shortages, recruitment challenges, and regional disparities, and they reflect deeper structural issues in how skills are developed, retained, and connected to job requirements. Understanding these dynamics is essential for designing targeted interventions that support a more inclusive and responsive labour market.

From an occupational perspective, shortages often arise due to long training pathways, misalignment between qualifications and job-readiness, or challenges in attracting and retaining workers. These shortages signal inefficiencies in labour allocation and can constrain productivity growth. Persistent shortages, defined as those lasting over 5 years, suggest systemic issues that require sustained attention. Analysis also shows that industries with above-average workforce shortages – such as Construction, Mining, and Health Care and Social Assistance – tend to experience weak productivity growth, indicating that poor skill matching may be compounding economic pressures.

Addressing occupation shortages requires tailored responses. Where training gaps are the primary issue, expanding education and training pipelines is critical. Suitability gaps call for better alignment between training outcomes and employer expectations, while retention challenges often stem from job quality, workplace culture, and industry conditions. Migration, flexible training models, and improved pathways into employment can all play a role in alleviating shortages. Case studies can illustrate the complexity of occupation-specific shortages and highlight the need for multifaceted strategies that combine education reform, workforce support, and regulatory adaptation.

From the employer perspective, staff retention and recruitment difficulty are widespread issues with tangible business impacts. Frequent staff replacement leads to increased recruitment and training costs, reduced productivity, and pressure on existing staff. Employers most commonly cite job competition and the nature of the work as reasons for turnover, with dissatisfaction around pay and conditions also playing a role. While some employers respond with financial incentives, flexible arrangements, or upskilling opportunities, many do not actively address retention, pointing to a need for more targeted support and awareness.

Regionally, labour market barriers are shaped by demographic trends, infrastructure limitations, and socioeconomic constraints. Distinct challenges include recruitment difficulty and limited access to training. Breaking down these barriers will require responses tailored to individual regions. *The Jobs and Skills Roadmap for Regional Australia* outlines a strategic framework to address these issues, focusing on improving access to quality jobs, supporting skill development, and enhancing labour market efficiency.

Together, these insights reveal the multifaceted nature of labour market frictions and the importance of coordinated, evidence-based responses. To support workforce resilience and productivity across Australia, smarter job design, improved training pathways, and better information on employer demand must be coupled with policy flexibility that allows regions to adapt to their specific workforce and skills needs. Regional voices must be meaningfully included in consultation processes to ensure that decisions reflect local realities.

# Chapter 4 The future labour market

As Australia navigates technological change, demographic shifts, and evolving industry needs, anticipating how jobs and skills will change is critical to ensuring individuals and businesses are ready to adapt. This forward-looking perspective is essential not only for equipping people with the right skills, but also for enabling productivity, participation, and inclusive growth in a dynamic economy.

JSA's employment projections help identify which occupations are likely to be in demand, where new opportunities may arise, and what risks need to be managed. We are also seeking to better understand how rapidly evolving technologies are reshaping skill requirements across industries. Transformative technologies such as AI are already reshaping tasks and occupations, and while their full impact is still unfolding, they also offer powerful opportunities to drive innovation. Long-term productivity growth depends on finding better ways to do things – whether through process innovations that improve efficiency or product innovations that open up new markets and reduce waste.

Improved alignment between skills and the requirements of jobs is central to this process. Unlocking this potential requires a workforce equipped with the skills, knowledge, and creativity to generate ideas, deploy new technologies, and adapt to change. It requires individuals to reskill throughout their working lives, supported by employers and an education and training system that keeps pace with how innovation and technology are being applied across industries.

JSA contributes to this foresight by analysing emerging trends and modelling future scenarios, as well as undertaking targeted studies that dive deep into the implications of impending change. Our work helps identify which capabilities are likely to be in demand, where new opportunities may arise, and what risks need to be managed. Through our data, analysis, and deep engagement, JSA supports more strategic planning across government, education, and industry – helping to ensure that Australia's skills system is not just reactive, but prepared and proactive.

# 4.1 Australia's changing labour market

Australia's labour market has changed markedly over recent decades. The makeup of our workforce is different, with more women and mature-aged workers participating in paid work. The types of jobs people are doing have shifted, with strong growth in service-oriented industries such as Health Care and Social Assistance, Professional, Scientific and Research Services, and Education and Training. These sectors now account for a significant share of total employment, reflecting broader structural changes in the economy such as globalisation and technology innovation. At the same time, employment in producing industries, such as Manufacturing and Agriculture, Forestry and Fishing have declined. People's experiences in their jobs have also transformed, with workplaces becoming more inclusive and flexible, and a growing share of employment concentrated in higher-skilled occupations. These shifts underscore the importance of preparing for future workforce needs and ensuring that policy and training systems support Australians to thrive.

JSA's data and analysis illuminate these trends, helping government and stakeholders understand where growth is occurring, where structural shifts are underway, and what this means for workforce planning. By tracking changes across industries, occupations and skill levels, we support the design of effective interventions and contribute insights that activate informed dialogue across the skills ecosystem. Our work enables practical responses to evolving workforce demands and helps ensure that Australians are equipped for the jobs of today and tomorrow.

## 4.1.1 Industry employment growth<sup>11</sup>

Health Care and Social Assistance had the largest employment growth over the 10 years to May 2025 (up by 886,700, to stand at more than 2.3 million), followed by Professional, Scientific and Technical Services (up by 359,700, to around 1.3 million), Education and Training (up by 337,800, to almost 1.3 million) and Construction (up by 307,900, to more than 1.3 million) (Figure 30).

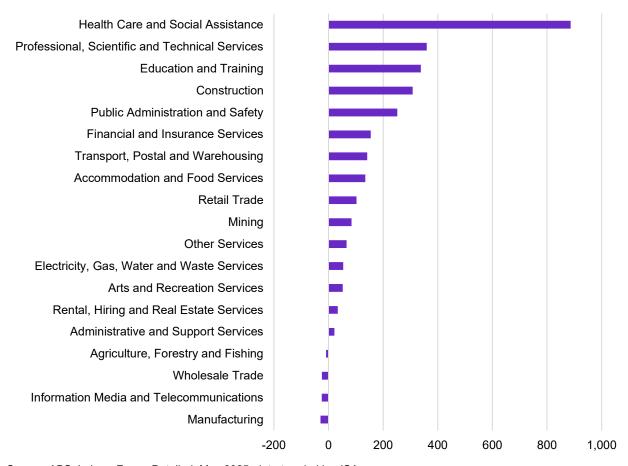
Employment fell over the past decade in Manufacturing (down by 29,300, to 870,700 in May 2025), Information Media and Telecommunications (down by 25,200, to 184,000), Wholesale Trade (down by 24,400, to 358,000) and Agriculture, Forestry and Fishing (down by 9,000, to 304,200).

68 | Chapter 4: The future labour market

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<sup>&</sup>lt;sup>11</sup> This section refers to 'Service Industries' and 'Producing Industries'. 'Producing Industries' includes Agriculture, Forestry and Fishing; Mining; Manufacturing; and Construction. 'Service Industries' includes the remaining Industry Divisions defined in the Australian and New Zealand Standard Industrial Classification (ANZSIC).

Figure 30: Industry employment change by headcount, 10 years to May 2025 ('000)

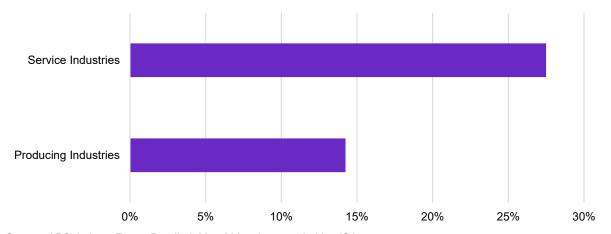


Source: ABS, Labour Force, Detailed, May 2025, data trended by JSA.

Employment in service industries had strong growth over the 10 years to May 2025 (up by 27%), compared with employment in producing industries (up by 14%) (Figure 31). This is the continuation of a trend in recent decades that has seen service-based industries become increasingly important for Australian employment.

Service industries account for a significant share of Australian employment in 2025 (around 80%). Notably, almost 90% of employment growth over the past 10 years has been in service industries.

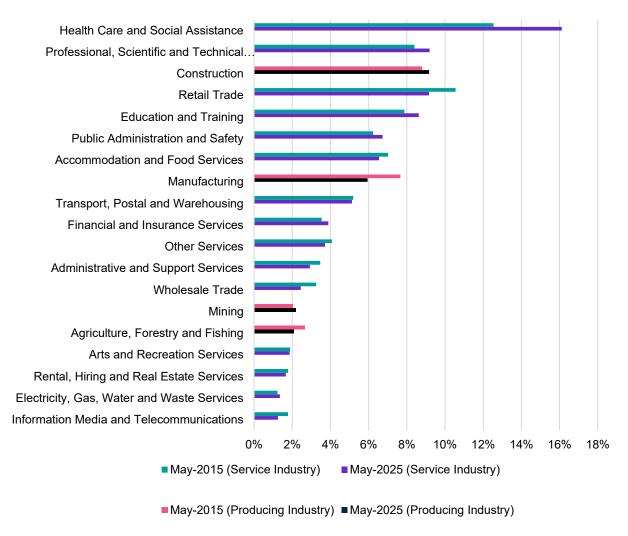
Figure 31: Industry employment change 10 years to May 2025, 'Service Industries' and 'Producing Industries'



Source: ABS, Labour Force, Detailed, May 2025, data trended by JSA.

As Figure 32 shows, Health Care and Social Assistance now accounts for 16% of total Australian employment, up from 13% a decade ago. Over the same period the Manufacturing share of employment fell from 8% to 6%.

Figure 32: Industry share of total employment 2015 and 2025, grouped by 'Service Industries' and 'Producing Industries' (%)



Source: ABS, Labour Force, Detailed, May 2025, data trended by JSA.

## 4.1.2 Employment growth by occupation

Looking at employment in occupation major groups (Figure 33), Professionals had the largest growth over the 10 years to May 2025 (up by 1,253,700, to stand at more than 3.9 million), followed by Community and Personal Service Workers (up by 525,500, to around 1.7 million), Managers (up by 344,400, to more than 1.8 million) and Technicians and Trades Workers (up by 271,400, to almost 2 million).

Employment growth was relatively low over the past decade for Sales Workers (up by just 42,800, to around 1.1 million) and Labourers (up by 103,400, to around 1.2 million).

Managers
Professionals
Technicians and Trades Workers
Community and Personal Service Workers
Sales Workers
Machinery Operators and Drivers
Labourers

0 200 400 600 800 1,000 1,200 1,400

Figure 33: Occupation major group employment change by headcount, 10 years to May 2025 ('000)

Source: ABS, Labour Force, Detailed, May 2025, data trended by JSA.

Figure 34 shows the 10 occupation unit groups that had the largest employment growth over the past decade. Reflecting strong growth in the Health Care and Social Assistance industry, Aged and Disabled Carers had the largest rise in employment over the 10 years to May 2025 (up by 225,900), followed by Registered Nurses (up by 107,600).

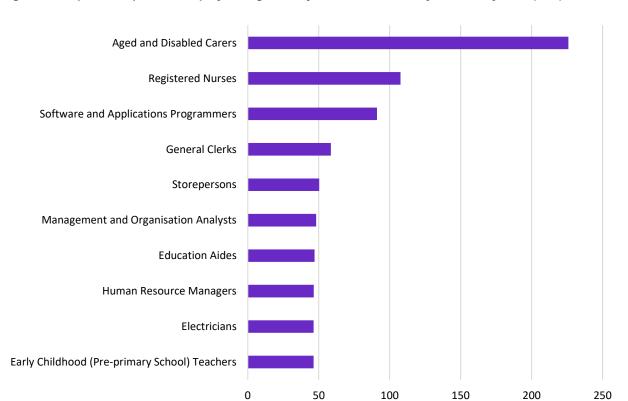


Figure 34: Top 10 occupations, employment growth by headcount over 10 years to May 2025 ('000)

Source: ABS, Labour Force, Detailed, May 2025, data trended by JSA.

## 4.1.3 Employment growth by skill level<sup>12</sup>

There was significant employment growth in higher-skilled occupations (particularly at the highest skill level) over the past 10 years, while employment growth in lower-skilled occupations has been relatively low. This is a continuation of a long-term trend that has seen a shift towards higher-skilled occupations. Over the 10 years to May 2025:

- Employment in Skill Level 1 occupations (the highest skill level, commensurate with a bachelor's degree or higher) increased by 1,501,900 (or 41.2%).
- Skill Level 2-4 occupations (which typically have a VET pathway to employment) increased by 1,327,700 (or 21.5%).
- Employment in Skill Level 5 occupations (the lowest skill level, commensurate with Certificate I or secondary education) rose by just 79,500 (or 4.2%).

Figure 35 shows Skill Level 1 occupations accounted for 35% of Australian employment in May 2025, (up from 31% in 2015), while Skill Level 5 occupations account for 14% (down from 16% in 2015).

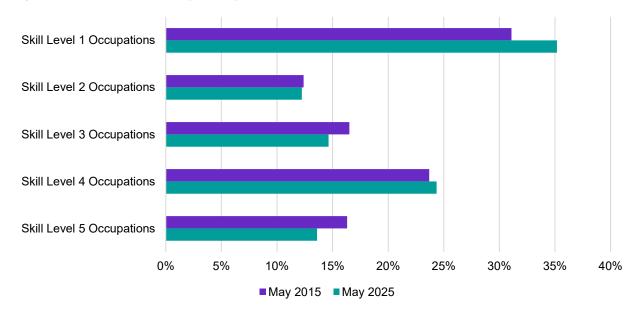


Figure 35: Share of total employment by skill level, 2015 and 2025

Source: ABS, Labour Force, Detailed, May 2025, data trended by JSA.

Employment growth patterns reflect ongoing structural shifts in Australia's labour market, driven by demographic, economic, and technological change. The rise of service industries, increased demand for care and professional roles, and the concentration of jobs in higher-skilled occupations signal an evolving workforce. Understanding these trends is key to anticipating future needs. Employment projections offer a forward-looking view of job growth, informing planning, investment, and policy across the skills ecosystem.

<sup>&</sup>lt;sup>12</sup> Skill Level 1 is commensurate with a bachelor's 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.

## 4.2 Employment projections – 2025

JSA's employment projections are useful for understanding the impact of the current economic and labour market outlook on Australia's future workforce needs. The projections give insights into trends and growth areas in the labour market and are used by industry and governments to inform policy decisions and workforce planning activities.

This year, JSA has worked with Victoria University (VU) to produce employment projections to 2035, using the VU Employment Forecasting Model (VUEF) which is underpinned by a computable general equilibrium (CGE) model.

The VUEF model brings together a large body of demographic data, employment data, and macroeconomic data, as well as forecasts from government and industry bodies, into a single set of detailed employment forecasts for Australia.

The employment projections outlined in this chapter have been calibrated to the macroeconomic and labour market outlook provided by the Australian Treasury. It offers a 5-year outlook to highlight the shorter-term employment trends, and a 10-year horizon, to show the impact of longer-term or structural trends.

It is important to note however, that like any model these projections are based on assumptions and contain a degree of inherent uncertainty. They should be used as indicative of the future trends based on our current knowledge, rather than a precise prediction of the future.

## 4.2.1 Overall employment growth<sup>13</sup>

Over the 5 years from May 2025 to May 2030, total employment in Australia is projected to increase by 6.5%, or around 961,000 people, rising to 15.7 million employed persons.

Over the 10 years from May 2025 to May 2035, total employment is projected to increase by 13.3%, or nearly 2.0 million people, reaching over 16.6 million employed persons.

Projected growth rates across the forecast period are slightly weaker than those included in JSA's 2024 Jobs and Skills Report *Better Together*. However, because of the strength of the labour market across the last financial year, overall employment levels are consistently above those projected a year ago.

## 4.2.2 Industry employment outlook

The long-term structural shift in employment towards services-related industries is projected to continue over the next decade, with the 3 largest service industries (i.e. Health Care and Social Assistance, Professional, Scientific and Technical Services and Education and Training) contributing close to half (49%) of the projected employment growth in Australia over this period (Figure 36).

<sup>13</sup> The 2025 employment projections are based off a starting point of employment estimated at May 2025 using the JSA trended series of the ABS' Detailed Labour Force Survey data, which may not align with estimates of employment from other data sources

Agriculture, Forestry and Fishing Mining Manufacturing Electricity, Gas, Water and Waste Services Construction Wholesale Trade Retail trade Accommodation and Food Services Transport, Postal and Warehousing Information Media and Telecommunications Financial and Insurance Services Rental, Hiring and Real Estate Services Professional, Scientific and Technical Services Administrative and Support Services Public Administration and Safety **Education and Training** Health Care and Social Assistance Arts and Recreation Services Other Services n 1,000,000 2,000,000 3,000,000 4,000,000

Figure 36: 5 and 10-year employment outlook, by industry, persons, Australia

■ Employment (May 2025) ■ Projected Employment (May 2030) ■ Projected Employment (May 2035)

Source: 2025-2035 Employment Projections, produced by VU for JSA.

The overall industry structure of the Australian labour market is projected to remain largely unchanged over the next decade, with most industries maintaining their relative shares of total employment. The most noticeable increase (by share of employment) is projected to occur in Health Care and Social Assistance (up by 1.4 percentage points). While Retail Trade is projected to have the largest decrease in its share of total employment (down by 0.5 points), it will remain one of the largest employers.

The top 5 largest employing industries in terms of share of total employment in Australia are the same over both the 5- and 10-year projections:

- The Health Care and Social Assistance industry's share of total employment is projected to increase from 16.1% in 2025 to 17.5% in 2035, with employment projected to grow by 290,300 persons (or 12.3%) to 2030 and by 541,900 persons (or 22.9%) to 2035.
- The Professional, Scientific and Technical Services industry's share of total employment is projected to increase from 9.2% in 2025 to 9.6% in 2035, with employment projected to grow by 136,600 persons (or 10.1%) to 2030 and by 250,100 persons (18.5%) to 2035.
- The Construction industry's share of total employment is projected to decline slightly from 9.2% in 2025 to 9.1% in 2035. Despite this, employment is projected to grow by 93,500 persons (or 6.9%) to 2030 and by 160,900 persons (or 11.9%) to 2035.

- The Retail Trade industry's share of total employment is projected to decline from 9.2% in 2025 to 8.6% in 2035. Despite this, employment is projected to grow by 34,500 persons (or 2.5%) to 2030 and 93,100 persons (6.9%) to 2035.
- The Education and Training industry's share of total employment is projected to remain broadly unchanged between 2025 and 2035 at around 8.6%. Employment is projected to grow by 72,000 persons (5.7%) to 2030 and 157,700 persons (12.4%) to 2035.

Detailed projections for each Australian and New Zealand Standard Industrial Classification (ANZSIC) division can be found in Appendix D

#### 4.2.3 **Employment outlook by occupation**

All occupation major groups are projected to increase in employment over the next decade (Figure 37) with the largest growth among Professionals.

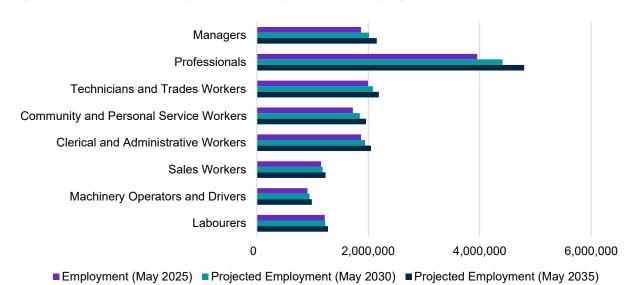


Figure 37: 5 and 10-year employment outlook, by occupation major group, persons, Australia

Source: 2025-2035 Employment Projections, produced by VU for JSA.

The occupation major groups projected to experience the highest employment growth over the next 5 and 10 years include:

- **Professionals** are projected to grow by 456,900 persons (11.6%) to 2030, and by 845,300 persons (21.4%) to 2035. The top 3 occupations in this group, by share of employment in May 2035, are Registered Nurses (9.6%), Accountants (5.1%) and Software and Application Programmers (4.9%). The occupations that are projected to have the strongest employment growth over the decade are mostly those in the health therapy area. For example, Physiotherapists are projected to increase by 35.1% over the next 10 years.
- Managers are projected to grow by 143,400 persons (7.7%) to 2030 and by 279,600 people (14.9%) to 2035. The top 3 occupations in this group, by share of employment in May 2035, are Retail Managers (12.4%), Advertising, Public Relations and Sales Managers (9.0%) and Construction Managers (7.3%). The occupations that are projected to have the strongest employment growth over the decade are Health and Welfare Services Managers (27.1%), ICT Managers (25.5%) and Research and Development Managers (22.8%).

• Community and Personal Service Workers are projected to grow by 122,000 persons (7.1%) to 2030 and by 236,100 people (13.7%) to 2035. The top 3 occupations by share of employment in this group in May 2035 are Aged and Disabled Carers (22.3%), Child Carers (9.2%) and Education Aides (7.5%). The occupations that are projected to have the strongest employment growth over the decade are mostly those in health and care fields, with top 3 being Dental Assistants (26.8%), Nursing Support and Personal Care Workers (24.7%) and Ambulance Officers and Paramedics (22.6%).

It is expected that the shift towards employment in occupation groups such as Professionals and Managers will continue over the next decade. Currently, these two occupation groups constitute 39.6% of total employment in Australia and this employment share is projected to increase to 41.7% by May 2035. Growth in care and support occupations is also expected to continue with the employment share of Community and Personal Services Workers projected to increase slightly from 11.7% in May 2025 to 11.8% by May 2035.

While Technicians and Trades Workers, the second largest occupation major group, is projected to increase by 195,800 (9.8%) in the next decade, they would represent a slightly reduced share of the workforce (from 13.6% in May 2025 to 13.1% in May 2035), showing a similar trend to the Construction industry.

Detailed projections for each occupation major group can be found in Appendix D.

## 4.2.4 Employment outlook for states and territories

Employment is projected to increase in all states and territories over the 10 years to May 2035 (Figure 38). The largest increase in employment by persons is projected for Victoria (579,500 persons or an increase of 15.3%), closely followed by NSW (576,800 persons or 12.7%), Queensland (401,700 or 13.3%), and WA (227,400 or 13.6%).

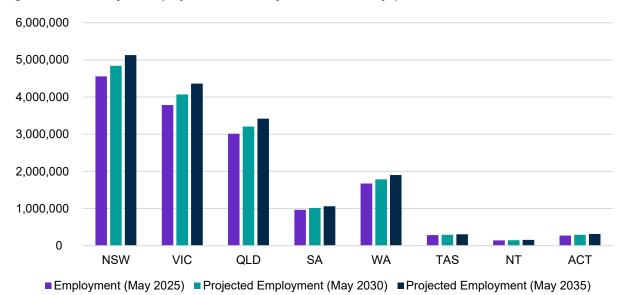


Figure 38: 5 and 10-year employment outlook, by state and territory, persons

Source: 2025-2035 Employment Projections, produced by VU for JSA.

Common themes are found when analysing trends in industry employment across the states and territories over the 10 years to May 2035.

- Health Care and Social Assistance is the largest employing industry by share of
  employment in 2035 in all states and territories, except for the Australian Capital Territory
  where Public Administration and Safety is the largest. Over the next decade, Health Care
  and Social Assistance is projected to be the highest contributing industry to employment
  growth across all states and territories except for Tasmania and South Australia.
- Professional, Scientific and Technical Services is projected to be the second largest employing industry in New South Wales and Victoria, representing over 10.0% of employment in these jurisdictions. Over the next decade, this industry is projected to be the second highest contributor to employment growth in all states and territories except Tasmania and South Australia, where it is the highest contributor, and Western Australia, where Education and Training is projected to be the second highest contributor.
- **Construction** is projected to be the third largest employing industry in New South Wales, Victoria and Tasmania and the second largest in Queensland, South Australia and Western Australia. It is projected to be an important contributor to employment growth across all states and territories.

Detailed projections for each state and territory can be found in Appendix D.

### 4.2.5 Employment outlook by skill level

Recent years have seen the vast majority of employment growth occur in jobs that typically require post-secondary qualifications. The 2025 projections suggest that this trend will continue, with more than 90% of the employment growth over the next 10 years occurring in these occupations (covering skill levels 1 to 4). Over half (54.3%) occurs in occupations related to a bachelor's degree or higher as the primary education pathway (Skill Level 1), and a further 40.1% in occupations with VET as the primary pathway (Skill Levels 2 to 4) (Figure 39). While the overall trend is consistent with last year's projections, the proportion of higher education qualified roles is higher, and the proportion with VET pathways is lower than in last year's Jobs and Skills Report. The lower growth is mainly among Skill Level 4 occupations, with the outlook for Skill Level 3 slightly more positive than last year. However, it is important to note that a key factor in the modelling framework is that the current and forecast educational attainment profile of the population is considered when forecasting employment by occupation and industry (and therefore by skill level), which is discussed further below.

7,000,000
6,000,000
4,000,000
2,000,000
1,000,000
0
Skill Level 1
Skill Level 2
Skill Level 3
Skill Level 4
Skill Level 5

Employment (May 2025)
Projected Employment (May 2030)
Projected Employment (May 2035)

Figure 39: 5 and 10-year employment outlook, by skill level of occupation, persons, Australia

Source: 2025-2035 Employment Projections, produced by VU for JSA.

Note: Skill Level 1 relates to bachelor's degree or higher qualification; Skill Level 2 relates to advanced diploma or diploma; Skill Level 3 relates to Certificate IV or III (including at least 2 years' on-the-job training); Skill Level 4 relates to Certificate II or III; Skill Level 5 relates to Certificate I or secondary education.

The stronger growth in higher skill level occupations results in an increase in the proportion of people employed in jobs at skill levels 1 to 4 across this period – the share rising from 86.3% in May 2025 to 87.3% in May 2035. On the other hand, employment in low skill jobs (Skill Level 5, where a formal post school qualification is not required) is projected to decline from 13.7% in 2025 to 12.7% in 2035

Detailed projections by skill level can be found in Appendix D.

## 4.2.6 The impacts of education on the employment outlook

A key factor in the VUEF modelling framework is the skills<sup>14</sup> supply constraint, which ensures that the current and forecast educational attainment profile of the population is considered when forecasting employment by occupation and industry. The model effectively projects 'equilibrium' employment – that is, there is a deliberate consideration of the impacts of both demand for and supply of labour for each occupation, with the impact of constraints through the availability of labour limiting the overall size of the workforce in each area.

For example, as there is a relatively limited supply of people with qualifications at the Certificate III and IV levels in the Engineering field of study, there are constraints on the supply of qualified tradespeople, and therefore limits on the possible rate of expansion in employment in the construction sector.

The projected composition of skills in the Australian labour market is based on observed trends in educational attainment by age, gender and level and field of qualification. There are specific trends seen in the educational attainment of younger people in recent years; a strong increase in higher education qualifications (bachelor's degree and above), a stagnation in the number of people with VET qualifications, and a reduction in the number of people who do not undertake post-secondary qualifications. As young people have a far greater propensity to undertake higher education than the retiring cohorts that they replace in the labour market, there is a very strong underlying trajectory in the supply of bachelor-educated workers.

<sup>&</sup>lt;sup>14</sup> The term "skill" is used here as shorthand for educational attainment.

This results in a workforce able to supply workers to high skill occupations (Skill Level 1) that grow at a faster rate than other occupations. However, growth in supply is somewhat faster than the growth in the demand for high-skilled occupations themselves - resulting in the risk of an over-supply of qualified graduates. Conversely, the growth in graduates across the Certificate level is insufficient to satisfy employment demands at skill levels 3 and 4. The impact of these shortfalls can already be seen in the JSA's OSL, with many key trades such as Electricians, Carpenters, Painters and Plumbers currently experiencing national shortages.

## Analysing how a more responsive educational system could reduce occupation shortages

To help understand the extent of these issues, but also how changes in education could alleviate them in the future, JSA and VU have analysed an alternative scenario where skill supply constraints are lessened through an increased response of educational attainment to economic demand. This results in increasing supply of people with Certificate III and IV level qualification, reflected in occupations at skill levels 3 and 4, where the demand is both unmet and persistently strong.<sup>15</sup>

Overall, the same number of people decide to undertake post-secondary education as in the baseline, but their choice of level and field of study is dictated by the projected demand for labour assumed by the models' estimates of economic output by industry.

The resulting outlook would expect significantly more VET qualified people across all fields, particularly in the fields of health and society and culture. While relatively less in percentage terms, the increases in Certificate III and IV qualifications in Engineering and Architecture and Building would allow strong increases in employment in these areas.

#### Key results by occupation skill level

In general, compared to the baseline, the switch in educational attainment from bachelor level degrees to Certificate level, and the resultant change in the type of supply to the labour market, means there is a shift away from professional and managerial occupations towards other occupations groups under this unconstrained skill supply scenario.

It is important to note that employment for Professionals and Managers grows in both the baseline and the unconstrained supply scenarios, and both still actually outpace overall employment growth. This means both still increase their share of overall employment across the forecast period, however, in the unconstrained supply scenario employment growth is far more balanced between the occupational groups.

In this scenario, 93.8% of the employment growth over the next 10 years is estimated to be in occupations commensurate with post-secondary qualifications (skill levels 1 to 4) - compared with 94.4% in the baseline case. However, the proportion of the projected growth in Skill Level 1 occupations (those related to a bachelor's degree or higher as the primary education pathway) declines from 54.3% to 48.9%, while this increases from 40.1% to 44.9% for Skill Level 2 to 4 occupations (those with VET as the primary pathway). 16 These results are very similar to the equivalent analysis presented in last year's Jobs and Skills Report, where the proportion of

<sup>&</sup>lt;sup>15</sup> Note that aggregate employment does not change. Labour market clearing by skill group implies movements in skill-specific wages, with an upward movement in the wage relative to the economy-wide average implying excess demand and a downward movement implying excess supply.

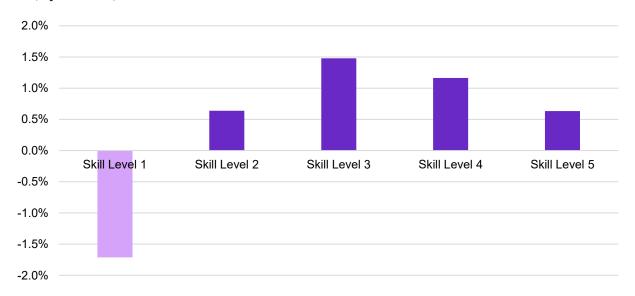
<sup>&</sup>lt;sup>16</sup> When compared to the baseline employment projections by skill levels.

projected growth in Skill Level 1 occupations was 48.5% and the proportion of projected growth in Skill Level 2 to 4 occupations was 45.0%.

Compared to the baseline 10-year employment projections, employment in the unconstrained scenario is projected to see an additional 46,100 workers at Skill Level 4 (up 1.2% on the baseline expectation) and 34,600 more (up 1.5%) at Skill Level 3. This is offset by lower growth in projected employment for Skill Level 1 occupations, with 106,900 fewer persons lowering employment by around 1.7% (Figure 40).

A more detailed breakdown of this data can be found in Appendix D.

Figure 40: 'Unconstrained skill supply' scenario – deviation from baseline employment projections for May 2035, by skill level, Australia



Source: 2025-2035 Employment projections (unrestricted skills supply scenario), produced by VU for JSA.

Note: In the unconstrained scenario, educational and training attainment is fully responsive to labour market demand, whereas in the baseline scenario it is based on recently observed trends in educational attainment by age, gender, and level and field of education.

#### Implications for key occupations in shortage

Of more importance may be the impact on occupations that are currently in shortage. This is most pronounced at Skill Level 3, where over 80% of the additional projected employment growth would be in occupations that are on JSA's OSL. The scenario analysed here would suggest that increases in the supply of suitably qualified labour would allow around an additional 28,100 jobs in Skill Level 3 occupations that are currently on the OSL, above the projected growth in the baseline.

Looking just at occupations in shortage at Skill Level 3, the scenario would project an increase in employment of Technicians and Trades workers, crucial for the construction sector, including Electricians (around 4,300 additional people employed), Carpenters and Joiners (2,500 more) and Plumbers (1,500 more). Beyond construction trades there would also likely be increases in Metal Fitters and Machinists (3,300 more), Chefs (2,000 more) and Hairdressers (1,800 more).

At Skill Level 4 we would expect stronger employment for Aged and Disabled Carers (an additional 10,600 employed) and Nursing Support and Personal Care Workers (3,500 more).

These increases may not fully address the issue of shortage in all of these occupations, but they would suggest some easing in many of the supply pressures that limit the ability of employers to find the workers they need.

# 4.3 Emerging technology

Innovation, including the adoption of emerging technologies, is a key driver of long-term productivity growth. As Australia seeks to lift productivity, the ability to deploy and utilise new technologies will depend not only on access to innovation but on the skills and capabilities of the workforce. Connecting workers to evolving roles and supporting skills acquisition will be central to translating technological potential into economic gains.

At the same time, the pace and nature of technological change bring risks. Without deliberate planning, innovation may deepen existing labour market frictions, displace workers, or entrench inequalities – particularly for groups facing structural barriers to upskilling or transition. Ensuring that all Australians can participate in a changing economy requires inclusive approaches to training, support and workforce development.

This year, JSA has explored how Gen AI is reshaping skills needs across the labour market. Our Gen AI Capacity Study is the first national, whole-of-labour-market study focused on the potential opportunities and challenges of Gen AI for Australia's workforce, providing critical insights to guide policy, planning and investment.

### 4.3.1 Artificial intelligence – insights from the Gen Al capacity study

Australia is at a pivotal point in its transition to a Gen Al-enabled economy, with early opportunities to boost productivity, reshape work, and strengthen national capabilities. However, this shift also presents challenges, including workforce displacement, inequality, and skills mismatches. As an early mover in digital and Al transformation, Australia has the chance to shape its path, provided there is strategic focus, urgency, and shared commitment.

Australia is at an early stage of Al adoption. Some of the earliest and fastest adopters are concentrated in the technology sector, where Al tools are being integrated into software development, data analysis and administrative workflows. Many larger companies are investing in Al and developing Al capabilities, with 57% of ASX200 companies in 2024 mentioning Al-related investments in their annual reports.

#### The impact of Gen AI on the labour market

Gen Al has the capacity to be used across a wide range of tasks and occupations, with the potential to significantly reshape workplace dynamics and the labour market. Gen Al's impact on the labour market can be understood through three key mechanisms: automation, augmentation and adaptation.

The extent of Gen Al's impact will vary depending on how much automation and augmentation occurs within each occupation, and how different sectors respond to productivity gains. Exposure analysis indicates 31% of Australia's workforce are currently in highly augmentable occupations, compared to 4% in highly automatable occupations. These changes may increase overall output, which in turn could boost demand for labour. If managed well, this demand could help absorb displaced workers and lead to higher overall employment and workforce participation — although the types of jobs and industries may shift.

Realising these benefits will depend on how adaptable employers and workers are, and how responsive the labour market is to change. A dynamic and flexible system will be essential to reallocate labour effectively and minimise risks such as unemployment or inequality.

#### Shadow use and its influence on exposure/adoption

A significant trend in the adoption of Gen AI is worker-led shadow use, where employees independently adopt and experiment with AI tools outside formal employer involvement or awareness. Around 27% of workers use Gen AI secretly at work (Deloitte Access Economics, 2024). Gen AI use also varies according to age, with white-collar workers in the 27-42 year old age bracket most likely to adopt AI tools at work (Fusion Digital Agency, 2024). This indicates a grassroots enthusiasm for Gen AI use, and a strong appetite for innovation and productivity gains as individuals source their own tools and training to recoup time or be rewarded for improved output quality.

While this bottom-up approach may foster rapid learning and expertise development for worker adoption, it also introduces governance risks. When AI tools are used without employer oversight, responsibilities related to data security, ethical use and compliance may shift onto individual employees, who may not be equipped to navigate these risks. While shadow-use could yield positive and efficient outcomes, it may lack the uniformity that an organisation-level adoption could provide. This would enable deeper implementation of AI tools and governance frameworks and data.

#### Potential opportunities

Early evidence at the workplace level suggests that Gen AI is already contributing to productivity gains (although the impact varies across organisations, tasks and sectors). In many cases, Gen AI enables workers to complete tasks more quickly or improve the quality of their outputs. For example, office workers using Gen AI report time savings and enhanced output quality.

When Gen Al is used to automate or augment tasks, it can save time — and how that time is reallocated will vary depending on the context. Saved time might be:

- redeployed to other tasks within the same role
- shifted to new or higher-value tasks
- recouped as leisure time or reduced working hours.

As Gen AI automates routine tasks, it may create opportunities for job adaptation and occupational transformation, particularly in higher-skilled roles. This shift could lead to more efficient, productive and specialised occupations, as workers focus on tasks requiring human judgement, creativity and oversight.

Gen Al driven adaptation can be observed through several emerging patterns:

- Job hybridisation: Roles that were previously distinct may merge as Al automates overlapping tasks.
- **Job specialisation:** New roles may emerge that combine niche Al-related tasks from different domains.
- **Emerging trends:** Novel applications of AI are giving rise to entirely new occupations.

#### Labour market disruption and displacement

Although international reports highlight job losses due to Gen AI, current evidence suggests that large-scale displacement is not currently occurring in Australia. The Gen AI Capacity Study modelled three adoption scenarios to explore how the pace and depth of AI integration may affect employment across industries and occupations, examining different trajectories for augmentation and adoption and different rates of take up across market and non-market sectors.

Occupations projected to experience the greatest declines by 2050, relative to JSA's employment projections, are General Clerks, Receptionists, Accounting Clerks and Bookkeepers, Sales, Marketing and Public Relations Professionals, and Business and Systems Analysts and Programmers. To Corresponding industry impacts are expected in Retail Trade, Public Administration and Safety, Financial and Insurance Services, Professional, Scientific and Technical Services, and Rental, Hiring, and Real Estate Services. At the same time, relative growth is projected in occupations such as Cleaners, Midwifery and Nursing Professionals, Business Administration Managers, Construction and Mining Labourers, and Hospitality Workers – with gains expected in Construction, Accommodation and Food Services, Manufacturing, Education and Training, and Agriculture, Forestry and Fishing.

#### **Uneven effects across cohorts**

The effects of Gen AI on employment and productivity are not evenly distributed. For example, based on the current composition of occupations women face greater exposure to both automation and augmentation. Meanwhile, in regional and remote areas, the occupational makeup is less prone to automation or augmentation than in urban centres. While lower exposure suggests less scope for disruption, it may also suggest less scope for labour-augmenting uses of Gen AI and its productivity-improving effects.

Digital exclusion also contributes to uneven effects across cohorts. Nearly one in four Australians lack the connectivity or skills needed to engage with Gen Al tools, with exclusion highest among First Nations people, those with disability, older adults, and individuals with lower education or income.

While Gen AI offers potential for inclusion, such as through assistive technologies, its benefits will only be realised if access to training and tools is equitable. Without targeted support, Gen AI risks deepening existing inequalities and leaving vulnerable cohorts further behind.

#### Stewardship and managing varying effects of Gen Al

Stewardship and managing the uneven impacts of Gen AI will be essential to a successful national transition. Government should take a leading role in convening labour market actors and responding with urgency to both the opportunities and risks presented by Gen AI. Australian governments should also work towards being exemplars for principles-based implementation of digital and AI technologies in government and human services over the medium-term.

<sup>&</sup>lt;sup>17</sup> From Computable General Equilibrium (CGE) modelling from JSA's Gen Al Capacity Study 'Our Gen Al Transition', (2025).

#### Training and educational support for a Gen Al enabled workforce

As Gen AI reshapes jobs and accelerates occupational change, lifelong learning will become essential to maintaining employment and productivity. Workers will need ongoing opportunities to upskill and reskill, supported by flexible and responsive education and training systems.

To meet these needs, training packages and delivery models across both VET and higher education must be updated in a timely and agile manner. Embedding digital and Al-related skills into qualifications will help ensure learners are equipped for a fast-changing labour market.

These efforts must also be inclusive and, where needed, targeted to address digital access gaps and occupational vulnerabilities – particularly among cohort groups such as women and First Nations people. As noted by the Future Skills Organisation, VET must adapt to meeting growing AI skills demands to remain industry-relevant (Future Skills Organisation, 2025). Support for flexible program design, educators to develop their own digital and AI related skills, and a mix of formal and informal learning pathways will help build a well-functioning learning ecosystem.

Collaboration between industry and education providers will be critical to ensure training remains relevant and aligned with emerging workforce needs, enabling a more adaptive and resilient skills system.

#### Supporting labour mobility and organisational adaptability

As Gen AI continues to reshape work processes and skill requirements, the ability of workers and employers to adapt will determine how effectively Australia can respond to change. Labour mobility plays a central role in this transition. Workers will need support to move within and across occupations as tasks evolve. Some roles face repeated exposure to automation with limited pathways for progression, making targeted upskilling and transition support essential to prevent displacement and enable advancement into higher-skilled roles.

At the same time, organisational adaptability will shape how employers respond to productivity gains and redesign work processes. This capacity varies by business size, sector and readiness, and must be supported through policy, capability building, and access to tools and guidance.

## 4.4 Key points from chapter four

Australia's labour market is undergoing structural transformation, with strong growth in service industries and higher-skilled occupations. In contrast, traditional producing industries like Manufacturing and Agriculture have experienced employment declines. These changes reflect broader demographic and economic trends, including increased workforce participation by women and older Australians, as well as a growing emphasis on inclusive and flexible work environments.

Occupational growth has been strongest in roles requiring higher qualifications, particularly those aligned with Skill Level 1 (bachelor's degree or higher), which now represent a growing proportion of the workforce. Meanwhile, employment in lower-skilled roles has stagnated. This trend underscores the need for education and training systems to be responsive to evolving labour market demands. To ensure Australians are equipped for the jobs of the future, tertiary education attainment minimum targets should be aligned with these workforce shifts.

A balanced approach between VET and higher education is essential – one that reflects both medium and long term skill requirements across the economy.

#### **Recommendation 1**

The tertiary education attainment minimum targets should be aligned with labour market demand. The minimum targets in the VET and higher education systems should consider the skills required by the labour market both in the medium and long term.

The rapid emergence of Gen AI is reshaping Australia's labour market, with early signs of productivity gains and job transformation across market and non-market sectors. However, the effects of Gen AI are not evenly distributed. For example, women are on average more exposed to both automation and augmentation than men, with potentially greater scope for disruption but also for productivity improvements from labour-augmenting uses of Gen AI.

To ensure an inclusive and future-ready workforce, Australian governments should commit to a system-wide uplift in digital and AI capabilities, targeting both learners and industry. This includes embedding contemporary digital and AI skills into the design and delivery of VET and higher education qualifications. Education and training systems must become more agile and responsive to the fast-evolving demands of the digital economy. Lifelong learning, flexible delivery models, and strong collaboration between industry and education providers will be essential.

Australian governments should also work towards being exemplars for principles-based implementation of digital and AI technologies in the non-market sector. This implementation should have regard to principles of equity, proportionality, productivity and technology-neutrality.

#### **Recommendation 2**

Australian governments should commit to digital and Al capability uplift across the skills system as a priority. Whole-of-system efforts should target uplift across the population, in line with the spectrum of needs and aspirations of learners and industry (Our Gen Al Transition – recommendation 5).

#### **Recommendation 3**

Australian governments should prioritise efforts to embed contemporary data, digital and Al skills in the design and delivery of higher education and VET qualifications. This should include consideration of mechanisms to enable qualification design and delivery to respond to fast-evolving digital and Al skill requirements for different study and career pathways (Our Gen Al Transition – recommendation 7).



# Chapter 5 Improved matching and the skills system

Improved matching in the labour market relies on a national skills system that is connected, coordinated, and responsive. As the nature of work continues to shift, so do the skills that workers need, with growing demand for capabilities that are adaptable, applied, and contextualised to the workplace.

These shifts have wide-reaching implications for productivity and participation, and they demand a system that can adapt quickly and effectively. Achieving this requires stronger alignment across education and training, government, and industry, with a shared focus on equipping individuals with the skills and capabilities needed to thrive in a changing economy.

# 5.1 Outcomes in the current system

Australia's tertiary education system is largely separated into two distinct sectors – higher education and VET. Higher education offers academic and professional qualifications through universities and other institutions, while VET is typically focused on providing workplace skills, technical knowledge and qualifications for rewarding jobs and careers, delivered through a range of providers. The sectors differ in structure, culture, and educational approaches – yet both are equally important in delivering high-quality education and training that meets diverse student needs and the evolving requirements of industry. Skilled migration complements the domestic skills system by enabling a responsive and flexible approach to addressing labour market needs that cannot be met quickly or sufficiently through local supply, and contributing to the long-term human capital of our nation.

Understanding the outcomes delivered by each sector is essential for assessing how well the tertiary education system is meeting its objectives. A key priority for JSA is providing independent advice on the effectiveness of these systems to meet Australia's future skills and workforce needs. Examining current performance provides insight into how effectively students are being supported, how responsive training is to industry needs, and where opportunities exist to strengthen alignment across the skills system.

## **5.1.1 Understanding VET outcomes**

Last year's Jobs and Skills Report outlined findings from JSA's VNDA project, which brings together a range of government administrative data assets to track the employment, economic and further study outcomes of VET students. This helps us uncover insights into how well the system is delivering the skills students need to succeed post-training, as well as other social or structural factors that may be influencing student outcomes and require strategic intervention.

Post-training outcomes are shaped by a complex interplay of individual circumstances, labour market conditions, and structural factors. To help expand our understanding of some of the dynamics at play for individuals post-training, the upcoming VNDA report will explore the nature of employment after training (part-time compared to full-time employment), and insights on outcomes for students who partially complete a VET qualification (for example completion of only some units or courses).

This year's VNDA results highlight the benefits of completing a VET qualification, with student outcomes in 2020–21 improving from 2019–20. In 2020–21 VET graduates had a median income of \$51,100, representing an uplift of \$14,100 when compared to pre-training median income. Additionally, 88% of VET graduates were employed, compared to 72% prior to commencing training. Among VET graduates who received income support prior to study, 48% were no longer on income support a year after completion (income support exit rate). For further VET study, 29% of VET graduates enrolled in another VET qualification after completion, which included 17% of VET graduates who pursued a higher-level VET qualification.

Understanding patterns is critical for designing responsive and inclusive training systems. Analysing partial completions helps move beyond binary measures of success and supports more flexible models that recognise diverse learner needs. Comparing employment reveals where additional support may be needed – whether to help graduates transition to full-time work, sustain self-employment, or overcome structural barriers. Together, these insights inform targeted interventions, improve retention and outcomes, and ensure training programs are aligned with the realities of post-training experiences across regions, sectors, and learner cohorts.

#### Part-time and full-time employment after training

Comparing part-time and full-time employment outcomes helps assess how effectively the VET system is supporting graduates into secure and sustainable work. For some, part-time roles may serve as a stepping stone – particularly in sectors with high levels of casualisation – offering a way to gain experience and build networks. Part-time roles are also a normal feature of some occupations or industry sectors. For other individuals, part-time work may reflect constraints, such as limited availability of full-time roles or personal circumstances that restrict full-time participation.

Differences in employment type intersect with gender, regional labour markets, and sectoral norms, influencing access to benefits and long-term financial security and training return on investment. This can inform workplace planning, identify underemployment and guide policy interventions in job creation, income support reform and skills-matching. These insights can assist VET alignment with labour market needs and support diverse, inclusive and meaningful pathways into the workforce.

New VNDA insights on part and full-time employment are reported across several cohorts in the labour market (Figure 41). Across all cohorts, after training VET graduates were more likely to be working full time than prior to enrolment. For females and for First Nations graduates, the increase in full-time employment post-training was 16 percentage points, compared to 15 percentage points for all VET graduates. The increase for people with disability was lower at 12 percentage points, which may reflect persistent structural barriers for this cohort.



Figure 41: Employment outcomes prior to and post training across priority groups

Source: ABS, PLIDA, 2002 - 2023, VNDA, ABS DataLab. Findings based on use of PLIDA data.

Post training

#### Partial completion

Prior to training

■Part-time ■Full-time

%

People may only complete part of a VET qualification for a range of reasons, many of which reflect broader labour market dynamics and individual circumstances. Some learners exit early after gaining employment, particularly when specific units meet job requirements without needing the full qualification. Others face barriers such as financial pressures or caring responsibilities that interrupt their studies. In some cases, course design or delivery may not align with learner expectations or needs, leading to disengagement. Structural factors also play a role, including the availability of skill sets and micro credentials, or transitions to other education pathways.

Prior to training

■ Part-time ■ Full-time

Post training

For policy makers and education providers, understanding these varied motivations and underlying VET outcomes is critical. It enables more nuanced measures of success beyond completion rates, supports the design of flexible and responsive training models, and informs targeted interventions to improve retention and outcomes – especially for learners at risk of disengagement or in regions with limited access to training.

Students partially completing a course still achieved improved economic outcomes, albeit not the full extent of the employment and income uplift as reported by completers of full VET qualifications. When examining the student outcome results in Figure 42, it is important to note that students partially completing a course were studying for typically half the time (148 days) than graduates of a full qualification (296 days).

Nationally, partial completers had a post-training median income uplift of \$7,000 and earned a median employee income post-training of \$44,400, compared to median income uplift of \$14,100 and median income \$51,100 for full VET qualification graduates. Further, 74% of VET partial completers were employed after their study, representing a 9-percentage point increase from prior to enrolment. This is compared to a post-training employment rate of 88% and 16 percentage point increase for graduates of a full VET qualification. The income support exit rate was lower for VET partial completers, compared to full VET qualification graduates. Among VET partial completers who received income support prior to study, 28% were no longer on income support after training.

Income support exit rate Median income uplift 60% \$15,000 50% 40% \$10,000 30% 20% \$5.000 10% % \$0 National Female Disability National First Female Disability CALD First **Nations Nations** ■ Partial completer ● Graduate ■ Partial completer ● Graduate

Figure 42: Students outcomes for partial completers and graduates across priority groups

Source: ABS, PLIDA, 2002 – 2023, VNDA, ABS DataLab. Findings based on use of PLIDA data.

## 5.1.2 Lifting the hood on apprenticeships and traineeships

Apprenticeships and traineeships (collectively referred to as Australian Apprenticeships) play an essential role in parts of the labour market. They connect formal training with real-world industry experience, allowing students to earn while they learn and benefit from both institutional and workplace skilling. While all Australian Apprenticeships share common features, there can be major differences between qualifications, industries and jurisdictions.

#### **Growth and composition**

0

The performance of the Australian Apprenticeships system is often judged by the overall growth in commencements and completions, which in recent years has softened. However, the composition of commencements reveals significant shifts (Figure 43). For example, while the overall number of apprentices in training has declined since 2022, this has mostly occurred in non-priority occupations (based on the 2025 Australian Apprenticeships Priority List). Since 2019 there are now 11,500 fewer apprentices in non-priority occupations and 53,200 more in priority occupations.



2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

Non-priority

Figure 43: Apprentices and trainees in-training by headcount, occupation status on the 2025 Australian Apprenticeships Priority List

Source: NCVER Apprentices and Trainees, 2025, VOCSTATS, extracted on 25/9/2025.

Note: This analysis is indicative only and makes assumptions about which occupation apprentices are working in.

Priority

Of the 100 largest apprenticeship occupations, 68 have grown since 2019, while 32 have declined (Figure 44). The biggest declines have been in non-trade occupations like Travel Consultant, Sales Assistant and Storepersons. Growth has been most significant in key trade occupations like Electricians, Carpenters and Motor Mechanics, but also care economy occupations like Child Care Worker and Aged and Disabled Carer. These 5 occupations now account for 36% of all commencements, up from just 26% in 2019.

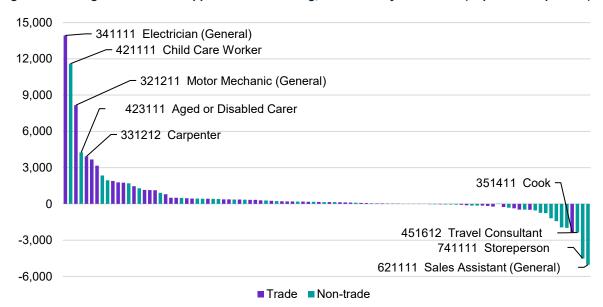


Figure 44: Change in Australian Apprentices in-training, 2019-2024 by headcount (Top 100 occupations)

Source: NCVER Apprentices and Trainees, 2025, VOCSTATS, extracted on 25/9/2025.

Note: This analysis makes assumptions about which occupation apprentices are working in.

It is also important to note that for some apprentice-reliant occupations, the key driver of workforce shortages is not a lack of commencements. Poor completion rates, occupation retention and registered training organisation (RTO) capacity can be major constraints in growing the workforce. For example, Chefs, Child Care Workers and Metal Fabricators have below average rates of retention according to JSA's occupation shortage research. Increasing the throughput of apprentices in these areas is unlikely to resolve shortages without meaningful progress to address the underlying drivers.

There may also be a finite number of students both willing and able to engage with the apprenticeships system. As identified by National Centre for Vocational Education Research (NCVER) in 2024, the profile of young people choosing apprenticeships over university study has remained largely unchanged since 2007 (Waugh, Forrest, & Dowling, 2024). Notably, migrants and first-generation Australians have become less likely to pursue apprenticeships, while approximately 60% of young people now enter university by age 22. Without efforts to broaden the appeal, awareness, and accessibility of the apprenticeship model, growing the overall pipeline of commencements may become increasingly difficult.

Another challenge lies in expanding the capacity of RTOs and employers to take on additional apprentices. For example, Powering Skills Organisation (PSO) recently released their Workforce Plan for 2025 which highlighted that demand for electrotechnology apprenticeships significantly exceeds the number of available vacancies and training places (Powering Skills Organisation Ltd, 2025). These training bottlenecks likely vary across industries and regions, and their relative importance may shift over time as labour market conditions evolve. This highlights the need for more granular analysis of the demand and supply factors behind apprenticeship use.

#### Varying degrees of reliance

The role of apprenticeships in supplying skilled labour varies across occupations (Table 7). For Electricians and Plumbers, an apprenticeship is often a specified requirement for state-based occupational licensing. In other regulated occupations – particularly trades – an apprenticeship might not be explicitly required, but it is the primary pathway to obtaining the relevant

qualification. In these areas, the performance of the Australian Apprenticeships system is strongly linked to labour supply.

There are also many "mixed pathways" where apprenticeship and non-apprenticeship options are used to attain the same qualification. These include trades such as Motor Mechanics and Painting Trades Workers, as well as non-trades like Hospitality, Public Administration and Civil Construction. Given the flexibility in how these qualifications are delivered, apprenticeship uptake is typically driven by student and employer preferences – which, in turn, can be influenced by incentives and other interventions.

Table 7: Illustrative example of Australian Apprenticeship use in key occupations

Predominantly apprenticeship based	Mixed use	Predominantly institutional based	Formal training is less common
<ul> <li>Plumbers</li> </ul>	<ul> <li>Motor Mechanics</li> </ul>	<ul> <li>Chefs</li> </ul>	<ul> <li>Sales Assistants</li> </ul>
<ul> <li>Electricians</li> </ul>	Painting Trades	<ul> <li>Child Carers</li> </ul>	<ul> <li>Scaffolders</li> </ul>
<ul> <li>Carpenters and Joiners</li> <li>Hairdressers</li> <li>Butchers and Smallgoods Makers</li> </ul>	<ul> <li>Workers</li> <li>Wall and Floor Tilers</li> <li>Structural Steel and Welding Trades Workers</li> </ul>	<ul> <li>Aged and Disabled Carers</li> <li>Crane, Hoist and Lift Operators</li> </ul>	<ul><li>Concreters</li><li>Hospitality Workers</li></ul>

Source: NCVER Total VET Activity 2024, ABS, Census of Population and Housing, 2021, internal JSA analysis.

Across all Certificate III qualifications in 2024, Australian Apprenticeships represented 37% of trade completions and 16% of non-trade completions (Figure 45). They were most common in Electrotechnology Electrician, Plumbing, and Driving Operations, and less common in the care economy and Personal Services. There are also significant differences across states and territories for some pathways. For example, Civil Construction apprenticeships are common in Tasmania and the ACT (87% and 81% of enrolments respectively), however in all other jurisdictions they represent less than a third of enrolments.

90% 80% 70% 60% 50% 40% 30% 20% 10% Early Childhood Education and Care Moderate Mechanical Technology Brickering and Blockering 0% Individual Support Diving Operations Roof Purnting Hairdressing Carpentry Horiculture Trade Non-trade All trades All non-trades

Figure 45: Apprentices and Trainees as a share of Certificate III completions, 2024

Source: NCVER Total VET Activity, 2025, VOCSTATS, extracted on 25/9/2025.

Note: Certificate III completions grouped by program.

There are also occupations where an Australian Apprenticeship pathway is available, but many workers are unqualified. These include Truck Drivers, Earthmoving Plant Operators, and Meat Boners and Slicers and Slaughterers, where less than half of workers have a post-school qualification. In these occupations, the apprenticeship system might not be a prerequisite to entry, but it may play an important role in workforce attraction and skilling. For example, the Heavy Vehicle Apprenticeship was introduced in Queensland to help professionalise the road freight industry and offer an attractive training pathway for school leavers (Industry Skills Australia Limited, 2025). A similar proposal is being explored in the agricultural sector as an alternative to existing traineeship and institutional-based options.

#### Outcomes and value proposition

Apprenticeships can achieve strong completion outcomes. This is particularly evident in key fields such as Engineering and Related Technologies, where apprentices consistently outperform non-apprentices (Figure 46). While the differences in completion rates are less pronounced in areas like Education, Management and Commerce, and Food, Hospitality and Personal Services, they still result in around or above the overall average completion rates. However, some individual qualifications, including certificates in Retail, Hospitality, Travel, Supply Chain Operations, and Community Pharmacy, have apprenticeship-level completion rates as low as 30%. This reinforces the need to assess the performance and value of apprenticeships at an individual level, rather than in aggregate.

Engineering and related technologies Architecture and building Agriculture, environmental and related studies Creative arts Mixed field programmes Society and culture Health Information technology Management and commerce Food, hospitality and personal services Natural and physical sciences Education 0% 10% 20% 30% 40% 50% 60% 70%

Figure 46: Apprentices and trainees, and VET completion rates by field of education, students commencing in 2019

Source: NCVER 2024, VET qualification completion rates; NCVER 2024, Completion and attrition rates for apprentices and trainees.

▲ All VET student completion rate

Note: Apprentice and trainee completion rates are at the apprenticeship-level, meaning they do not include changes of employers if the qualification remains the same.

#### Women in trades – good progress but from a low base

■ Apprentice and trainee completion rate

As noted by JSA's Gender Economic Equality Study, trades are some of the most gender segregated occupations in the labour market. Around 99% of Bricklayers and Stonemasons, Plumbers, and Carpenters and Joiners were men in 2021 (Jobs and Skills Australia, 2025).

In aggregate, there has been little progress in the share of women undertaking a trade-based apprenticeship (Figure 47). By Q1 2025 females comprised 11.5% of all trade apprentices in training, slightly up from 11.1% a decade prior. At that time, most female apprenticeships were in Hairdressing and Food Trade. However, since then, there has been positive progress at the occupation level for several large trade apprenticeships. For example, in 2025 there was around 4 times as many female Electrician apprentices than in 2015, with significant growth also observed for Carpenters and Joiners, Motor Mechanics, Plumbers and Sheetmetal Workers. Combined, there were more female apprentices in these male-dominant trades than there were undertaking a hairdressing apprenticeship in 2025.

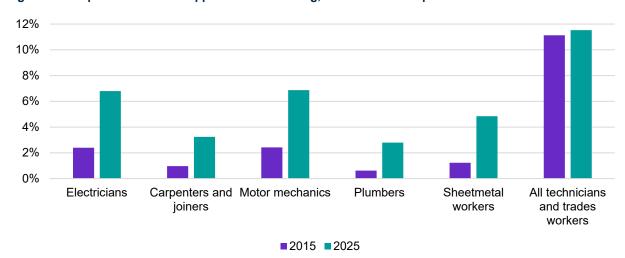


Figure 47: Proportion of female apprentices in-training, select trade occupations 2015-2025

Source: NCVER Apprentices and Trainees, 2025, VOCSTATS, extracted on 25/9/2025 for the January-March quarter.

Given many critical trade occupations are in shortage, it is vital that these apprenticeship pathways continue to broaden their appeal and access. As noted by JSA's clean energy capacity study:

"For there to be genuine transformational change, women's participation needs to be front of mind in every aspect of education and training programs and supports. It also requires a critical mass of women and girls in classrooms, on worksites, as teachers and trainers, and as employers and supervisors" (Jobs and Skills Australia, 2023).

## 5.1.3 Understanding higher education outcomes

There is more work to be done to understand post-study outcomes for students undertaking higher education qualifications in the same way we understand VET outcomes. Currently, the Australian Government runs a Graduate Outcomes Survey (GOS), and a Graduate Outcomes Survey – Longitudinal (GOS-L) annually, administered by the Social Research Centre.

The GOS surveys graduates 4 months after graduation about their employment outcomes and further study activities. This includes information about earnings, the occupation they are employed in, and how their skills are being utilised. At August 2025, over 116,000 graduates had responded (QILT, n.d.). This is supplemented by the GOS-L, which measures medium-term employment outcomes and further study by surveying cohorts from the GOS around 3 years after graduation, with over 40,000 graduates responding at August 2025 (QILT, n.d.).

The 2023 GOS found that the proportion of domestic graduates employed full-time 4-6 months after graduation had risen slightly over the last year, following a sharper increase in 2022. The full-time employment rates were higher for those completing postgraduate than undergraduate study, though this may partly reflect that some undergraduates (18%) went on to further study (Social Research Centre, 2024). This was also reflected in results from the 2023 GOS-L, which showed a similar improvement in medium-term outcomes in 2022 and 2023. However, results from the GOS-L reveal it can take some time for graduates to establish themselves in the workforce. The proportion of graduates in full-time employment increases significantly between the GOS and GOS-L – generally by around 20 percentage points (Social Research Centre, 2024).

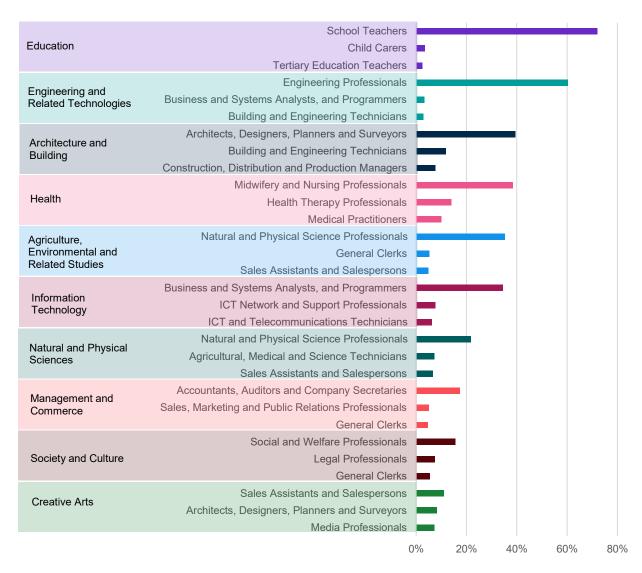
Skills utilisation is an important factor to consider in relation to both productivity and return on investment for training. Results from the 2023 GOS-L showed that skills utilisation tended to improve for this cohort as they established themselves in the labour market (that is, between the 2020 GOS and the 2023 GOS-L – noting the potential impact of COVID-19 on this cohort). This was true for all degree types, though it was more pronounced for those with undergraduate degrees and when all employment types were considered (Social Research Centre, 2024).

This work also provides data on underemployment, outcomes for different cohorts and demographic groups, insights by study area and institution, further study, and employment characteristics like salary.

Work is being done to explore how administrative data could be used to build on the rich findings of more traditional surveys like the GOS and GOS-L, and strengthen the overall evidence base. As outlined in chapter two, administrative data can offer broader population coverage and help illuminate outcomes for groups that are often underrepresented in surveys. While it has some limitations – including gaps in key variables and variability in data quality – this project aims to complement survey-based approaches by leveraging the unique strengths of administrative data to deepen and extend existing insights.

Figure 48 provides an indication of the range of occupations entered by graduates one year after their studies by showing the percentage of graduates working in the three most common occupational groups for each Broad Field of Study. The highest concentration was amongst Education graduates, 72% of whom became School Teachers, with no other occupational group accounting for more than 4%. Engineering and Related Technologies had the second highest concentration of graduates in an occupational group behind Education, with 60% of graduates working as Engineering Professionals.

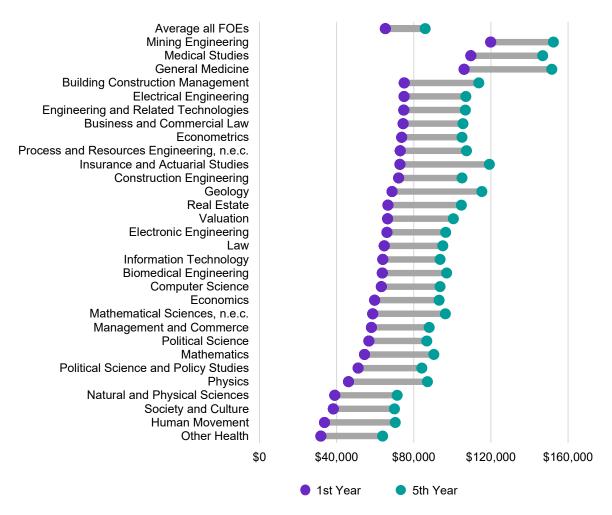
Figure 48: Percentage of graduates employed in the top three most common occupational groups for each field of study one year after graduation



Source: ABS PLIDA, 2025.

Graduate income from employment increased over time, rising by 34% over the first five years after graduation. Income levels differed significantly across different fields of education (Figure 49). Mining Engineering, Medical Studies, and General Medicine leading in both starting pay and growth. Graduates in fields like Geology and Actuarial Studies saw substantial growth from lower starting incomes.

Figure 49: Top 30 fields of education with highest median annual income growth between 1-5 years post completion



Source: ABS, PLIDA, 2025.

There was a substantial difference in employment earnings between undergraduates and postgraduates, but this varied significantly between fields of study. Figure 50 shows the top 30 fields of education with the largest difference in employment earnings between people with undergraduate and postgraduate degrees. These included a range of business management fields, education, engineering and science related fields.

Mathematics Nursina Information Technology, n.e.c. Architecture and Urban Environment, n.e.c. Visual Arts and Crafts Mathematical Sciences Electrical and Electronic Engineering and Technology Information Systems Marketing Medical Science Health Promotion **Human Resource Management** Banking, Finance and Related Fields Biological Sciences, n.e.c. **Human Biology Biological Sciences** Banking and Finance Health, n.e.c. Chemical Sciences Biochemistry and Cell Biology Computer Science, n.e.c. Education, n.e.c. Public Health Earth Sciences, n.e.c. Engineering and Related Technologies, n.e.c. Legal Studies **Business and Management Education Studies** Business and Management, n.e.c. **Business Management** 

Figure 50: Top 30 fields of education with the largest difference in median annual income between undergraduates and postgraduates after five years

Source: ABS, PLIDA, 2025.

Our findings show that completing a higher education qualification leads to improved labour market outcomes. Students can use our findings together with existing data to better understand the potential links between fields of education and occupation and income, which could inform their choices in higher education. Universities can draw on this material to strengthen industry linkages. Industry and policy makers can apply the findings in workforce planning.

\$60,000

\$80,000

■Postgraduate Earnings

\$100,000

\$120,000

\$140,000

\$40,000

Undergraduate Earnings

This research is the first in an ongoing stream of work on higher education. In collaboration with the Australian Centre for Student Equity and Success, future phases of research will focus on cohort analysis, in particular students who are historically underrepresented in higher education, their transition into the labour market and their progression.

#### 5.1.4 Pathways between VET and higher education

Students do not exclusively undertake VET or higher education qualifications. Learners move between these systems as their goals, circumstances, and career interests evolve. Understanding the pathways between VET and higher education – in both directions – is essential to building a more flexible, inclusive, and responsive tertiary education system. By mapping these transitions, policymakers and providers can more effectively support diverse learning journeys, recognise prior learning, and facilitate lifelong education.

From a workforce perspective, understanding how individuals move between VET and higher education is critical to supporting upskilling and reskilling in response to changing job demands. As explored in the Gen AI capacity study, many roles are increasingly requiring hybrid skillsets – combining technical expertise from VET with analytical or managerial capabilities developed through higher education. Insights into these transitions can help support efforts to improve labour mobility and ensure that education remains aligned with industry needs.

Equity is another key consideration. Some cohorts – including First Nations people, women, and people from low socio-economic backgrounds – may be more likely to begin in VET and later transition into higher education (Department of Education, 2023), or face barriers accessing higher education. Data on pathways can inform targeted interventions that improve access, outcomes, and recognition of skills for underrepresented groups.

Finally, understanding these pathways supports better policy and funding decisions. It enables the design of evidence-based instruments that follow the learner across systems, evaluate return on investment, and guide reforms that are grounded in real-world experiences. As JSA continues to build integrated data assets, these insights will be vital to shaping a tertiary system that is inclusive, efficient, and fit for the future.

## Exploring VET-higher education pathways through longitudinal administrative data

JSA is developing a longitudinal data asset to better understand how Australians navigate post-school education and transition into the workforce. This project focuses on the pathways between VET and higher education, and how these transitions shape labour market outcomes over time. By linking administrative data from multiple sources – including Person Level Integrated Data Asset (PLIDA), Total VET Activity<sup>18</sup>, and higher education records – this work aims to build a comprehensive, enduring dataset that supports a wide range of policy and research uses.

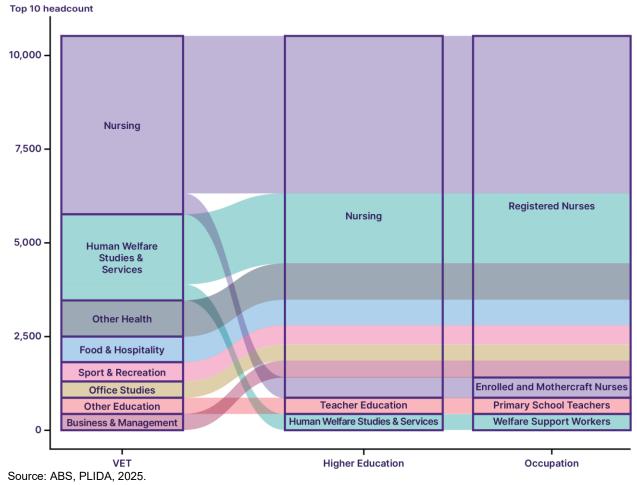
The proof-of-concept phase for this project has demonstrated the potential of administrative data to track individuals across education sectors and into employment. It highlights how people combine VET and higher education qualifications, the timing and sequencing of their study, and the occupations they enter. For example, the data reveal common pathways into occupations like nursing, where individuals often complete a VET qualification before progressing to higher education in order to become a Registered Nurse. For some, this VET qualification is in Nursing, but the next two most common pathways into higher education are from a VET qualification in Human Welfare Studies and Services, or in Other Health.

Figure 51 shows the top ten largest VET pathways by headcount, the flow from those VET fields of education to higher education field of education, and onward into occupations. It demonstrates how this data can illuminate different sources of labour supply. These insights can inform more flexible and responsive education pathways that are more aligned with workforce needs.

Connecting for impact | 101

<sup>&</sup>lt;sup>18</sup> All Registered training organisations (RTOs) must collect a range of data from their students and report all their delivery activity (known as Total VET activity) to the National Centre for Vocational Education Research (NCVER), at least annually (ASQA, n.d.).

Figure 51: VET to higher education by field of education and occupation



The transition from VET to higher education can be an enabling pathway for cohorts of Australians historically facing barriers to participation. The inverse pathway is actually more common, however. The majority of people who completed both VET and higher education between 2014 and 2022 actually enrolled in higher education first (52%). While VET to higher education often seems to be a direct path, students often take a few years after completing higher education to enrol in VET. Figure 52 shows that, while the majority of students who completed a VET program and went on to enrol in higher education did so within one year, those who completed higher education first were almost as likely to enrol in VET four years later as within the first year – perhaps underscoring a need to reskill or refresh skills over the life course.

1 year or less 2 years 3 years 4 years of more 21,250 13.595 9,100 14.340 36% 23% 16% 25% 39.170 17,570 8,315 12% Higher ed first **VET first** 

Figure 52: Number of years between completing study in one sector and enrolling in the other for student who studied in both VET and higher education between 2014 and 2022

Source: ABS, PLIDA, 2025.

The project also sheds light on the scale and diversity of VET engagement. While VET touches more individuals than often assumed, many enrolments are in single subjects rather than full programs – suggesting a strong role for micro-skilling and targeted upskilling. This is particularly evident among individuals who complete a higher education qualification and later return to VET for short courses in areas like first aid or occupational health and safety.

By analysing enrolment and completion patterns, the project identifies how different cohorts engage with tertiary education. For instance, younger people are more likely to complete higher education courses, while older learners often use VET. The data also reveal gender and First Nations differences in completion rates, highlighting areas where targeted support may be needed.

Importantly, the project explores not just education pathways but also labour market outcomes. Using linked tax and occupation data, it examines how qualifications translate into employment, earnings, and occupational mobility. This enables a deeper understanding of the return on investment in education and the role of tertiary education in meeting Australia's evolving skills needs.

The next phase will expand the dataset by incorporating additional years of data, new sources (such as health and family data), and more detailed variables. This will enhance the ability of data users to analyse transitions over time, identify barriers to completion, and explore how education and employment intersect across life stages.

Ultimately, this work will support more informed policy decisions by providing a clearer picture of how Australians move through the education system and into work. It will help identify where pathways are working well, where they could be strengthened, and how education and training can better support individuals and the economy.

## 5.2 Supporting the system to work better together

Australia's tertiary education system has long been fragmented, with structural, cultural, and regulatory barriers limiting learners' ability to move between education pathways, access relevant training, and adapt to changing labour market demands. This constrains the system's responsiveness to workforce needs and restricts learners seeking flexible, targeted skill development, especially in emerging and transforming jobs. These challenges are even more acute for cohorts facing systemic disadvantage, who often encounter additional barriers to accessing and navigating the system. Addressing emerging skills challenges such as the net zero transition, digital transformation, and demographic shifts will require more modern, adaptable qualification and training approaches.

## 5.2.1 Tertiary harmonisation

Last year's Jobs and Skills Report introduced JSA's work on tertiary harmonisation, framing it as a critical response to these issues. Harmonisation refers to the strategic alignment of the higher education and VET sectors. It involves the effective coordination and cooperation of key system actors, to enable learners to obtain the combination of knowledge, skills and their application needed to be successful in a changing labour market.

In February 2025, JSA released the report *Opportunity and Productivity: Towards a Tertiary Harmonisation Roadmap*. The report emphasised the rationale for a harmonised system that is rooted in connectivity, enables learning mobility, and presents clearer pathways between education and employment. It proposed that realising the benefits of a harmonised tertiary education system requires coordinated action from key stakeholders, referred to as 'system actors', supported by a fit-for-purpose system architecture that enables collaboration and alignment across sectors

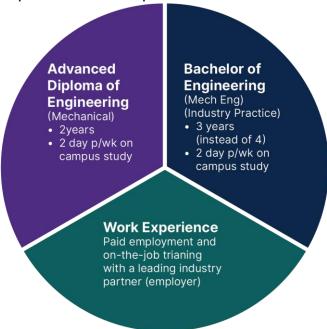
Early priorities include creating a national credit transfer system, launching an innovation fund to support collaborative qualifications, and encouraging providers to participate in a VET-higher education Collaboration Agenda. The report also calls for reforms to funding models to ensure parity between sectors, and for the development of a NST and a reformed Australian Qualifications Framework (AQF) to support a shared language and flexible qualification design. Medium-term actions include building a Tertiary Education National Data Asset, developing digital tools to help students and employers navigate the system, and establishing nationally agreed funding principles. These steps aim to create a more connected, efficient, and inclusive tertiary system that better supports learners, employers, and national priorities.

### Tertiary harmonisation and skills matching

Tertiary harmonisation also promotes qualification reform, including the development of nested and hybrid models that allow for more flexible and targeted training. These models reflect real-world job requirements, and allow for increased transparency and recognition of the knowledge, skills and capabilities that learners possess and that employers require. Industry collaboration is central to this effort, with employers increasingly co-investing in training and contributing to the design of programs that blend practical and academic content.

In response to a growing national shortage of systems engineers, the Al Group Centre for Education and Training partnered with the Royal Melbourne Institute of Technology (RMIT) University and industry stakeholders to co-design a dual qualification pathway including an apprenticeship. This program enables students to complete an Advanced Diploma of Engineering followed by a Bachelor of Engineering (Mechanical Engineering) (Industry Practice) (Honours), while maintaining paid employment with an industry partner throughout their studies and gain important work-relevant skills and experience (Figure 53).

Figure 53: Engineering dual qualification - Al Group and RMIT



Source: JSA, Opportunity and Productivity: Towards a Tertiary Harmonisation Roadmap.

This initiative exemplifies how harmonisation can directly improve skills matching between education and employment. By embedding industry needs into qualification design and delivery, the program ensures that graduates possess both the theoretical knowledge and practical competencies required in the workplace. Employers benefit from a reliable pipeline of job-ready talent with precisely the skills needed to meet current and emerging demands. For students, the model offers financial support, accelerated progression, and good employability prospects, demonstrating how harmonised education can efficiently align skills supply with labour market needs.

#### Tertiary harmonisation and productivity

Tertiary harmonisation is also a strategic investment in human capital, with the potential to boost national productivity by increasing the volume and relevance of tertiary-educated workers. The report puts forward a framework for measuring the impact and benefits of tertiary harmonisation (Figure 54).

Figure 54: Linking productivity and tertiary harmonisation: impacts and benefits

#### Impacts of tertiary harmonisation Everyone is Greater recognition The human capital Workers are more Both workers and supported to and transparency of workers is more optimally matched employers can maximise their in knowledge, skills aligned with needs pivot to new to employers human capital and capabilities of employers opportunities faster and at lower cost Subsequent benefits for workers and employers Benefits for workers **Shared benefits** Benefits for employers Higher Higher rates Lower risk of Higher job More Reduced Higher productivity wages of labour long-term satisfaction efficient shortages market structural and lower investment of workers and vacancy participation unemployment job turnover in education durations **Economy-wide impacts** Lower non-accelerating Higher levels of output Nationally significant Multiplier (indirect) (GDP) - including real inflation rate of opportunities and spillovers into other challenges are unemployment (NAIRU) GDP per capita parts of the economy appropriately addressed

The central economic argument for a harmonised tertiary education system is that by making both VET and higher education simultaneously accessible to individuals, school leavers and workers will be able to more readily obtain the skills they need from either part of the system. Industry will be better positioned to obtain the workforce skills they need. A more harmonised system will provide greater transparency of the knowledge, skills and capabilities that workers possess, and that employers need from VET and higher education.

A NST mapped onto both VET and higher education credentials would more effectively connect people with jobs. This would lead to fewer skills shortages and higher productivity, in turn leading to higher wages. It is through this that a more connected and holistic tertiary education system would lower the Non-Accelerating Inflation Rate of Unemployment (NAIRU) - that is, a lower level of unemployment consistent with stable inflation.

With higher labour productivity, the benefits of tertiary harmonisation should also lead to higher levels of output (GDP) – both in aggregate, and on a per capita basis – with the benefits of higher productivity also spilling over into the rest of the economy via multiplier effects, including those that arise from higher real wages.

## Supporting the system to work better together

To enable sustained progress, the Australian Government has announced the establishment of a new Tertiary System Advisory Council, led by ATEC, to help drive tertiary harmonisation. This governance structure will include representatives from the Australian Government, state and territory governments, the VET sector, higher education, unions and employers.

## 5.2.2 National Skills Taxonomy

Over the past year, JSA has progressed work on the NST, a key enabler of reform and a foundational element in advancing tertiary system harmonisation. The NST is intended to provide a shared, evidence-based framework for defining and applying skills – a 'common language' that supports more cohesive collaboration across education, training, industry, and employment. Its implementation creates opportunities to improve mobility across sectors, helping simplify educational pathways for learners at all stages by reducing system complexity and supporting more flexible, responsive learning options.

The NST is being developed through a convergence of data-driven techniques and extensive consultation with industry, education, JSCs, and government stakeholders. Central to this work is a skills-first approach, which prioritises the value of skills over how they were acquired, reflecting a shift towards more flexible and responsive workforce development.

A shared understanding of skills and their application enables more consistent workforce analysis, improving labour market insights and informing targeted policy. Defining skills in practical contexts strengthens links between learning and employment, supports career mobility through transferable skills, and promotes productivity, inclusion, and lifelong learning.

#### **Consultation outcomes**

From late June to early August 2024, JSA undertook a public consultation process to inform the development of the NST. In addition, JSA held virtual and in-person workshops and interviews to gather feedback from stakeholders. The consultation process drew strong and diverse engagement across stakeholder groups (engaging 443 stakeholders across sectors), highlighting widespread interest in developing a more coherent and usable national framework for skills. Key stakeholder groups included Australian and state and territory government agencies, JSCs, universities, VET providers, unions, employers and industry peak bodies. The consultation also drew on the expertise of skills advisors, researchers, consultants, and technical experts.

Feedback underscored both the potential value of the NST and the complexity of its implementation. Major themes that emerged focused on the NST's purpose, design, governance, and its role in supporting broader education, workforce, and policy objectives:

- Stakeholders are open to the development of an NST. There was broad agreement among stakeholders on the need for a common language of skills, and to address issues relating to fragmentation, outdated content, and usability in existing taxonomies.
- Greater clarity on the direction for the NST is needed. The draft vision for the NST was
  broadly supported but seen as needing refinement with stakeholders calling for a clearer
  articulation of the NST's purpose and objectives. Key principles such as being dynamic,
  interoperable, and accessible were widely endorsed, and stakeholders also emphasised the
  importance of equity, lifelong learning, and broader societal outcomes in the vision.

- Value from identified use cases cannot be delivered by an NST alone. Stakeholders identified a wide range of potential applications for the NST, including career planning, course development, credit recognition and recognition of prior learning, workforce planning, skills-first hiring, labour market analysis, skilled migration, migrant skills recognition, and industrial relations and skills policy. However, they stressed that the NST alone cannot deliver these outcomes. Complementary reforms, updates to tertiary education frameworks, and institutional process changes are required to realise the full value of these use cases.
- Design considerations will influence potential adoption and use. Effective design of the NST was seen as essential. Feedback noted that the NST should be designed for flexibility and integration, enabling alignment with existing frameworks and employer systems.
- Successful implementation requires a staged and iterative approach. Stakeholders
  strongly advised against a rushed rollout. They recommended a phased implementation that
  begins with a clear, shared definition of "skill" and builds iteratively through stakeholder
  engagement and user testing. The NST should be developed in alignment with ongoing
  reforms (e.g. AQF, ANZSCO, VET reform) to manage dependencies and avoid reform
  fatigue. Governance should be inclusive and tripartite. A flexible update cycle combining
  formal reviews and demand-led changes was also recommended.

## 5.3 The skilled migration system

Australia's skilled migration system plays a role in complementing the domestic skills system by addressing immediate skill shortages and supporting long-term prosperity. While the domestic education and training system builds foundational capabilities, skilled migration provides a flexible mechanism to fill gaps that cannot be met quickly or sufficiently through local supply. It also supports the ongoing development of Australia's human capital and innovation through the permanent skilled migration program.

Following the Migration Review, the Australian Government's *Migration Strategy* established a formal role for JSA in defining skills needs using evidence and tripartite advice. JSA also has a role in helping to ensure local workers' skills and job opportunities are prioritised, and that the migration system complements the domestic skills and training system and is guided to areas of best use.

Australia's CSOL is a single, consolidated list of occupations that are currently eligible for temporary skilled migration to Australia under the Core Skills Stream of the Skills in Demand visa, and the Direct Entry Stream of the permanent Employer Nomination Scheme visa. The Minister for Immigration and Citizenship is the legislated decision maker on the CSOL, however, JSA is responsible for labour market analysis and stakeholder engagement that informs the Government's final decision.

A Migration Labour Market Indicator Model (JSA Migration Model) is used to support this process. The model:

• Starts with JSA's OSL, which is developed through a robust, evidence-based process involving extensive consultation with Australian Government agencies, state and territory governments, as well as other tripartite partners.

- Assesses whether migration is an appropriate response to identified shortages, drawing on data such as migrant labour market outcomes, the relative reliance on sponsored visa holders, vacancy rates, expected domestic supply, and market wages.
- Incorporates structured stakeholder engagement, both in occupations experiencing shortages and those that are not, to gather diverse perspectives on the suitability of migration pathways for certain occupations.
- Includes occupations required under international trade agreements, ensuring Australia meets its obligations.

Consultations to inform JSA's advice to Government on the 2025 CSOL opened on 25 August 2025, and JSA is also committed to the ongoing refinement of the JSA Migration Model to ensure it continues to effectively support the implementation of the *Migration Strategy*. This includes integrating new and emerging labour market data, as well as drawing on insights from other JSA modelling projects.

JSA is exploring the use of further datasets from the ABS and other relevant administrative sources. These efforts will enhance the evidence base underpinning migration policy and ensure that recommendations are grounded in the most up-to-date and robust data available.

## 5.3.1 International students study

Strong post-study employment outcomes for international students are essential to meeting Australia's skills needs over the medium to long term. This means fully utilising the right skills of the right students, in the right locations at the right time, which in turn may require closer alignment of patterns of study choices, post-study work rights and enabling visas. To support this, on 25 September 2025, JSA released our *International Students and Outcomes Pathways Study Report* which included 11 recommendations for the Australian Government to consider.

Australia is one of the top study destinations for international students, with its tertiary institutions enrolling the second highest share of international students among the OECD and partner countries (OECD, 2023). Australia's strong reputation for the quality of its education is highly valued at home and internationally, including by the source countries of the students.

#### System-wide objectives and measures of success

Over the past 30 years, Australia has been welcoming increasing numbers of international students to study, and often, to come here to stay. Australia is one of the most highly sought destinations for international students worldwide. The decisions of international students to come here have been informed by Australia's reputation for high-quality education offerings as well as the enabling visa policy settings.

The characteristics of Australia's international student cohort are changing. There is a growing proportion of students pursuing work and migration aspirations, alongside greater engagement in VET pathways. Changing enrolment patterns indicate this trend will strengthen as the weight of enrolment numbers moves from China to South Asian and other countries. These trends also influence patterns of course selection, based on post-study visa settings.

The higher education system would benefit from the development of a shared set of objectives for the for future of the Australian international education sector. This should include its contribution to Australia's total economic activity and its contribution to building Australia's skilled workforce over the medium to long term.

### Supporting policy infrastructure

Better access to integrated and linked datasets is progressively allowing more detailed analysis and insights into different international student cohorts over time. Building on this, the sector would benefit from active monitoring of the impact of international student pathways and integrity measures implemented from 2024 onwards, as well as further qualitative research with international students and graduates about their motivations and decision making in relation to labour market participation and fields of study.

#### Successful transitions from study into the skilled workforce

The changing characteristics of Australia's international student cohort and frequent transitions to other visas after graduation have meant that a significant proportion of students remain in Australia after completing their studies. However, international graduates remaining in Australia after their study are less likely to secure employment in their field and at their qualification level, and they earn less than their domestic counterparts. These effects are more exaggerated for higher education graduates than VET graduates and for more generic, less vocationally oriented fields of education.

Successful transition from education to employment for international students in the Australian labour market is supported by underlying skills development such as improved English language proficiency and work integrated learning. Further, opportunities exist to grow employer appetite for international graduates by making resources available to support greater understanding of the value of international graduates over the medium and long term to the Australian workforce.

## 5.4 Key points from chapter five

Better matching in the labour market depends on a national skills system that is connected, coordinated, and responsive. As the nature of work evolves, so too must the system that equips individuals with the skills and capabilities to succeed. A more joined-up approach across VET, higher education, migration, and workforce planning is essential to support inclusive participation, improve productivity, and ensure Australia's skills system can meet future challenges.

Understanding outcomes in the current system is critical to identifying where alignment is working well and where it can be strengthened. JSA's VNDA project continues to provide valuable insights into VET outcomes, including new analysis of part-time versus full-time employment, and the experiences of students who partially complete qualifications. These findings reveal the diverse ways learners engage with training and transition into work, and highlight the importance of flexible, inclusive models that reflect real-world pathways.

Apprenticeships and traineeships play a vital role in connecting skills with workforce needs. Early analysis shows a shift toward priority occupations, but also highlights challenges such as low completion rates, retention issues, and limited uptake in some sectors. The system's value proposition also varies across occupations and industries. JSA's work is helping to clarify where apprenticeships are most effective, where uptake is constrained, and how enrolment patterns are changing over time. This includes analysis of gender participation, regional variation, and the impact of incentives – all of which inform efforts to broaden access and improve system performance.

Higher education outcomes are currently tracked through survey data, but JSA is developing a new administrative data project to build a more comprehensive and inclusive evidence base. The project will complement existing surveys and provide deeper insights into how higher education contributes to workforce development. The first phase of this program of work found that higher education leads to strong labour market outcomes across a diverse range of careers. Future phases will focus on cohort analysis, particularly for students historically underrepresented in higher education.

Transitions between VET and higher education – in both directions – are increasingly common and essential to a flexible, lifelong learning system. JSA's longitudinal data work is illuminating how learners move between sectors, the occupations they enter, and how these transitions shape long-term outcomes. Early findings show that the VET system trains a broad segment of the Australian community. Most importantly, the majority of people who hold both VET and higher education qualifications enrolled in higher education first. These insights support more coherent qualification design, better recognition of prior learning, and improved access for underrepresented groups.

Tertiary harmonisation is a key reform priority. JSA's work in this area has highlighted the potential of a more collaborative tertiary system to reduce duplication, improve credit recognition, and more effectively align education with workforce needs. Harmonisation also supports lifelong learning and can help address occupation shortages by enabling more flexible and targeted training pathways.

#### **Recommendation 4**

System actors should work towards a national credit transfer system (in line with recommendation 9 of the report Opportunity and Productivity: Towards a Tertiary Harmonisation Roadmap).

The NST is under development and aims to become a foundational reform to support improved matching. Providing a shared language, the NST will use evidence-based language for describing skills across education and employment contexts, the NST will enable more coherent qualification design, support skills-first hiring, and improve the quality of labour market insights. JSA is leading this work through extensive consultation and data-driven methods, ensuring the taxonomy is usable, inclusive, and aligned with broader system reforms.

#### **Recommendation 5**

System actors, governments and stakeholders should work closely with JSA to accelerate the development of a National Skills Taxonomy (in line with recommendation 16 of the report Opportunity and Productivity: Towards a Tertiary Harmonisation Roadmap).

Skilled migration continues to play a vital role in complementing the domestic skills system. JSA has a formalised role under the *Migration Strategy* in defining skills needs using evidence and tripartite advice. To help support evidence-based decision-making, JSA has developed a Migration Labour Market Indicator Model to help identify skills needs and assess whether migration is an appropriate response. This includes analysis of labour market data, stakeholder engagement, and alignment with international obligations. JSA's advice on the CSOL helps ensure that migration policy supports both employer needs and positive outcomes for workers, while maintaining a strong focus on domestic workforce development.

International students contribute to Australia's economy and skills base, but face barriers transitioning into skilled employment. JSA's study into international student outcomes has deepening understanding of these challenges. Insights from administrative data and stakeholder consultations are helping to identify where support is needed to improve employment outcomes and better align education and migration pathways.

# Chapter 6 Activating an informed dialogue

Australia's productivity, participation and skills challenges are complex and evolving – and they demand a shared response. JSA plays a central role in activating an informed, evidence-based dialogue across the national skills system. But we don't just exchange ideas – we enable productive collaboration. By bringing together government, industry, unions, education providers and the broader community, we help shape a shared understanding of workforce needs and opportunities, and identify practical pathways for action, grounded in data and real-world experience.

The improved connection of skills with job needs depends on better information. Education and training providers need clearer insights into employer demand to shape offerings that align with current and future workforce needs. Students and job seekers need access to high-quality careers advice and transparent information on training outcomes to support informed choices. Employers need information on the major structural changes affecting the economy and labour market to help them plan more effectively for their future workforce.

This chapter highlights how JSA's engagement, publications and communications are supporting better decision making across the economy. Through deep collaboration and clear, accessible insights, we aim to empower others to act – ensuring our evidence is not only shared, but used. In doing so, we contribute to a more responsive and resilient skills system, better equipped to lift participation, improve skills matching, and support long-term productivity growth.

## 6.1 Our reach and engagement

Publishing insights is more than a reporting function – it's a way to enable action, build transparency, and extend the reach of evidence across the skills system. JSA is committed to making our analysis accessible, timely and useful, so it can inform decisions at every level – from national policy to individual career choices. We continue to invest in improving how we communicate and expanding our presence across digital and social media platforms.

Our reach reflects growing interest in JSA's work, both nationally and internationally. By sharing our insights widely and engaging across borders, we contribute to a global conversation about workforce change and skills development – while ensuring our advice is grounded in best practice and informed by diverse perspectives.

Our insights are shaped not only by data, but by dialogue. We engage widely across the skills system through roundtables, surveys, consultation processes, and codesign approaches with stakeholders. These activities help ensure our advice reflects lived experience, diverse perspectives, and practical realities. By embedding tripartite engagement into our work, we strengthen the relevance and impact of our insights, and support collaborative action across government, industry, education and the community.

We also track engagement metrics – such as website visits, social media reach, consultation numbers and downloads of our publications – as one way to assess our short-term impact. These indicators help us understand how our work is being accessed and used, and guide ongoing improvements to how we present and share our insights.

By making our insights widely available and accessible, we help inform the frameworks, policy guidance and decisions that shape Australia's skills system and workforce outcomes.

## 6.1.1 Sharing our insights

Our publications are guided by strategy and driven by impact. We aim to create and share high-quality insights that maximise JSA's reach, influence, and effectiveness. Over the past year, we have delivered a steady stream of labour market and skills insights at a regular cadence, alongside deeper research that supports long-term planning and reform.

Since last year's Jobs and Skills Report we have also released the final report for our major capacity study on the food supply chain workforce, identifying critical vulnerabilities and opportunities for strengthening this essential sector. Phase 1 of the *Jobs and Skills Roadmap for Regional Australia* explores the unique challenges and opportunities facing communities outside major metropolitan areas, including demographic change, digital transformation, the net zero transition, and persistent barriers to participation. We have published work from our *Gender Economic Equality Study*, which shed new light on how deeply gendered Australia's jobs, work and pay remain – and why addressing these imbalances is essential to lifting productivity and achieving genuine equality. We set out a roadmap for tertiary harmonisation in our report in early 2025. Finally, our landmark report on generative AI provides early insights into how this transformative technology is reshaping work, skills, and the broader labour market, while improving productivity across the Australian economy.

More people than ever are turning to JSA for trusted insights. Figure 55 shows that between July 2024 and June 2025, our website attracted over 7.7 million views – up 77% from the year before – and more than 1.68 million unique users, an 88% increase on the previous year. Visitors downloaded over 200,000 files, with PDFs and spreadsheets among the most accessed formats. These numbers reflect the growing appetite for clear, practical information on jobs, skills and the labour market. Referrals to the JSA website from ChatGPT grew over 518 times – highlighting the growing role of AI-driven tools and the increasing visibility of our content through conversational AI platforms.

Figure 55: JSA website performance and engagement



7,717,326 views

+77% increase from same period last year



1,681,491 unique users

+88% increase from same period last year



## File downloads

DOCX: 18,651 PDF: 108,338 XLSX: 61,957 CSV: 10,804

ZIP: 897

To support this growing engagement, we have made targeted improvements to how users access and interact with our content. We have enhanced all of our dashboards using a modern, interactive web framework and introduced improved metadata tracking. These upgrades allow us to unlock detailed analytics on user behaviour, giving us the ability to refine content design and usability based on real-time engagement patterns.

JSA's social media presence continues to expand, reflecting increased interest in our work and a growing community of professionals engaging with our insights. Over the past year, our LinkedIn following grew by more than 4,227 profiles – an increase of 43% from the last year. Engagement also rose sharply, with 207 comments (up 109%), 861 shares (up 37%) and 5,402 likes (up 28%). Our content made over 281,785 impressions, marking a 23% increase and highlighting the value of our posts in sparking dialogue and sharing knowledge across the sector (Figure 56). These gains in social media engagement complement the strong growth in website traffic, reinforcing JSA's role as a trusted source of labour market insights and a key contributor to national and global workforce conversations.

Figure 56: JSA social media reach and engagement



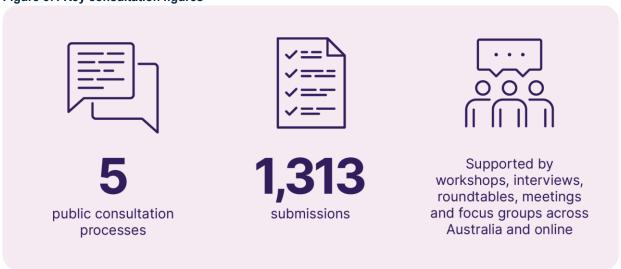
Source: LinkedIn Analytics.

In addition to a strong presence on social media, JSA has continued to look for ways to activate an informed dialogue, utilising traditional media to reach as many people as possible. Over the past twelve months (September 2024 to September 2025), JSA has received more than 1,000 mentions in news coverage items including print, digital, radio and TV. In the same span of time, Commissioner Barney Glover received 242 mentions.

## 6.1.2 Working with you

JSA continues to prioritise meaningful engagement with stakeholders across the country. In 2024–25 financial year, we undertook 5 public consultation processes, receiving 1313 formal submissions. These consultations were supported by a broad mix of engagement activities – including workshops, interviews, roundtables, meetings and focus groups – held both in person and online (Figure 57).

Figure 57: Key consultation figures



Beyond structured consultations, JSA actively participates in ongoing engagement mechanisms such as government committees, steering and working groups, and stakeholder-led forums. We also undertake proactive, reactive and strategic consultation outside formal channels, and maintain a continuous feedback loop with employers through our survey mechanisms. These efforts help ensure our work is grounded in the lived experiences of those shaping and navigating Australia's labour market.

## 6.1.3 Spotlight: National roadshow and place-based engagement

In late 2024, JSA undertook a national roadshow to connect directly with stakeholders across the country. Starting at Parliament House in Canberra on 18 November and visiting every capital city, the roadshow provided a fresh opportunity to share the 2024 Jobs and Skills Report, showcase key products, and discuss future directions. More than 1,000 attendees engaged with tools and insights including the Jobs and Skills Atlas, the OSL, Employment Projections, Occupation and Industry Profiles, and NERO.

Each city event was shaped around a distinct theme, reflecting our Commissioner's Outcomes and local priorities – from regional participation to the clean economy. These sessions created a valuable platform for informed dialogue, enabling deeper understanding of national skills priorities and fostering collaboration across sectors and regions.

#### 6.1.4 Jobs and Skills Council collaboration

Last year's report outlined the evolving architecture of Australia's workforce and skills system, highlighting the complementary roles of JSA and the 10 industry-led JSCs. JSA's remit spans the national landscape, providing economy-wide data, analysis and advice on labour market dynamics, skills needs, and skills system performance. JSCs operate within specific industries, bringing together employers, unions, and governments to identify and address sectoral workforce challenges.

This structure enables a coordinated approach to workforce development, with JSA and JSCs working in partnership to align national insights with industry expertise. JSA supports JSCs by sharing data and providing technical guidance, while JSCs contribute on-the-ground intelligence that strengthens the national evidence base. Last year, key contributions from JSCs informed our two major capacity studies – focused on early childhood education and care, and the food supply chain – and they also provided critical input into a number of our other key products and analysis. JSCs continued to support capacity and cohort studies through 2025, contributing to major publications on Gen AI and gender economic equity.

Workforce planning is a central strategic function of JSCs, with last year's published plans revealing common challenges and opportunities across sectors. JSC workforce plans for 2025 are shaped by several cross-cutting themes, including widespread workforce and skills shortages, and ongoing challenges in attracting and retaining talent. Diversity and inclusion remain key concerns, with many sectors facing ageing workforces, significant gender imbalances in critical roles, and persistent barriers to participation for First Nations people and people with disability. Technological change and the growing demand for digital skills are evident across all plans. There are clear opportunities to improve career awareness and more clearly articulate pathways and progression within industries. All JSCs also highlight broader issues within the national training system, including the need for training products to align more closely with evolving industry needs and challenges related to the VET workforce. JSA contributed to this work by providing cohort-specific data and undertaking targeted studies to support inclusive planning.

## 6.1.5 International connections

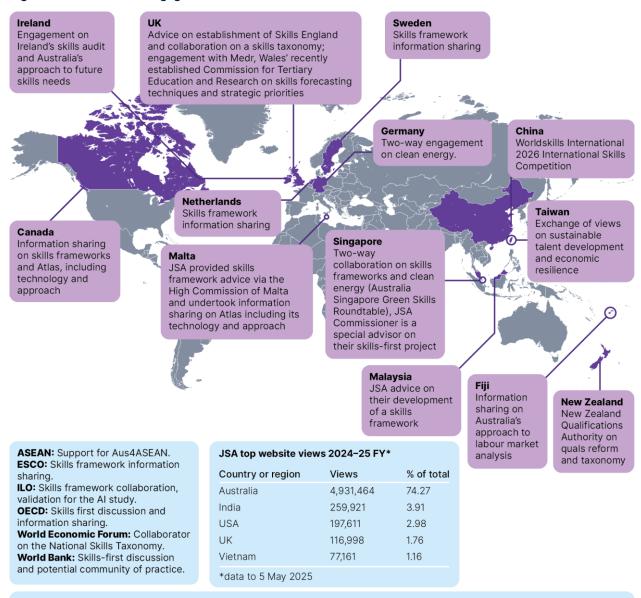
JSA contributes to a range of international forums focused on workforce development and skills reform. Over the past year, we have supported Aus4ASEAN, collaborated with the International Labour Organization on skills frameworks and validation for our AI study, and shared insights with the OECD and World Bank on skills-first approaches and potential communities of practice. We also worked with the World Economic Forum on the development of Australia's NST, helping to shape global thinking on skills classification and application.

We have deepened bilateral relationships across Europe, Asia, North America and the Pacific, sharing Australia's approach to labour market analysis, skills forecasting and qualifications reform. Our work has ranged from technical advice on skills frameworks and taxonomies to joint discussions on clean energy transitions, sustainable talent development, and future skills needs. In Singapore, the Commissioner also serves as a special advisor on their skills-first initiative.

JSA also provides insights, analysis, and advice to support Australian Government stakeholders ahead of international engagements and negotiations. We work closely with the Department of Foreign Affairs and Trade and the Department of Home Affairs to ensure our advice is consistent with treaty status and international obligations, and to support Australia's strategic interests in labour mobility and workforce development.

Our growing international profile is also reflected in website engagement. Between July 2024 and June 2025, Australian viewers accounted for nearly 5 million views, but this was followed by individuals in India, the United States, the United Kingdom and Vietnam. Figure 58 highlights the breadth of our global engagement and the increasing demand for JSA's insights across borders.

Figure 58: International engagement



JSA also provides insights, analysis, and advice to support briefings for Australian Government stakeholders ahead of international engagements and negotiations, and to ensure advice is consistent with treaty status and international obligations. JSA also undertakes joint engagement with DFAT and HA as the respective lead agencies for international relations and labour mobility.

## 6.2 Our impact

JSA's work is increasingly shaping decisions across government, industry and the broader skills system. Over our first two years, we have seen short-term impacts emerge, with our analysis and advice referenced in budget submissions and incorporated into stakeholder workplans. This year, we began to observe medium-term impacts, with our recommendations informing not only policy development but also implementation. While JSA does not directly control system levers, our influence is reflected in the decisions of others. Measuring our benefit to the Australian economy formally for the first time this year, we have focused on how we have contributed to major government initiatives and policy, and how we have had broader influence across the skills ecosystem.

## 6.2.1 Supporting policy and other initiatives

JSA plays a key role in shaping the frameworks and policy settings that underpin a more responsive, resilient and equitable skills system. Our guidance is designed to be practical and actionable – supporting governments, education providers, and industry to make better informed decisions that align with workforce and regional needs. In other words, our work helps translate evidence into coordinated action. Our contributions are grounded in deep engagement and a commitment to practical impact, and in doing so, we help ensure that policy responses are not only informed by data but shaped by the lived experience of those across the skills system.

Over the past year, JSA has actively collaborated with Australian and state and territory governments, contributing to a range of major initiatives and shaping the design and delivery of programs and tools that address critical workforce and skills needs. Our evidence-based advice has supported cross-portfolio policy development across education, employment, and industry, reinforcing our legislative mandate and positioning us as a trusted source of labour market intelligence.

JSA is recognised as a credible, impartial source of labour market intelligence. Our insights have been cited in ministerial briefings, budget papers, and intergovernmental forums, and are increasingly embedded in government tools and frameworks. While our capacity studies often inform policy in its early stages and may not always be publicly referenced, acknowledgment of JSA's contribution is growing, and our influence is increasingly visible across the skills ecosystem.

- Migration System Reform: JSA's labour market analysis contributed to the redesign of skilled migration settings, aligning visa categories with workforce shortages. Our advice forms the basis of the CSOL – a central element of the *Migration Strategy*, and we deliver advice to support the Skills in Demand visa program. Our cohort study on international student employment outcomes continues to inform discussions across government.
- Clean Energy Workforce Capacity Study: Our analysis shaped planning for the net zero transition and informed policy development across the Department of Employment and Workplace Relations (DEWR), the Department of Climate Change, Energy the Environment and Water, and the Net Zero Economy Authority. Recommendations have been implemented, including the National Careers Institute's release of clean energy career awareness products, expansion of the New Energy Apprenticeships Program and Powering Skills Organisation's prioritisation of post-trade upskilling in its 2025 Workforce Plan.
- Early Childhood Education and Care Workforce Study: JSA's September 2024 report
  recommended long-term wage growth for Early Childhood Education and Care workers,
  supporting evidence for the Government's 15% pay rise announced in the 2024–25
  Mid-Year Economic and Fiscal Outlook. Our advice also prompted the HumanAbility JSC to
  review entry requirements for the Diploma of Early Childhood Education and Care, with a
  project now underway to improve accessibility and support workforce retention.
- Food Supply Chain Workforce Study: JSA recommended the development of a national food strategy, which is being progressed through a new National Food Council. Additionally, the Australian Livestock and Rural Transporters Association partnered with Industry Skills Australia to develop a nationally recognised skill set for livestock transport.

- National Skills Agreement: JSA worked closely with DEWR to support the development of
  the National Skills Agreement Outcomes Framework, published in December 2024. This
  first-of-its-kind framework enhances governments' ability to monitor and respond to VET
  system performance. JSA's unique data assets, including VNDA, underpin several indicators
  and measures. We will lead ongoing monitoring and reporting by integrating and analysing
  national data from multiple sources.
- Australian Apprenticeships Priority List (AAPL): JSA's OSL findings were a key input to the April 2025 update to the AAPL, which determines eligibility for government incentives. Our methodology continues to support the development of future updates.
- Employment services: JSA's RLMI supports the Workforce Australia program through the
  delivery of RLMI ratings, which influence job seeker activity requirements based on local
  labour market conditions. We also produce in-depth profiles and dashboards for all 51
  Employment Regions, supporting DEWR's Local Jobs Program and informing the work of
  Employment Facilitators.
- **Tertiary System Harmonisation:** JSA's work has shaped the Government's direction on tertiary reform. JSA's report, *Opportunity and Productivity: Towards a Tertiary Harmonisation Roadmap*, informs ATEC's work on a joined-up tertiary system. The JSA Commissioner has a formal role in working with the ATEC Interim Commissioners to ensure that both VET and higher education perspectives are considered.
- VET workforce: JSA is delivering the VET Blueprint National Actions Project to support the VET Workforce Blueprint, which was developed in collaboration with states and territories and released in October 2024. These include comprehensive occupational mapping to strengthen workforce pathways, a data strategy to improve workforce data availability and collection, and an ongoing research program to build a robust evidence base. While the research program is being developed, JSA is undertaking targeted research into the drivers and impacts of VET workforce casualisation an immediate area of need identified through blueprint consultations.

JSA's guidance and research continue to inform the strategic direction of industry partners and stakeholders, fostering innovative approaches to workforce development. Our role in shaping both policy and implementation ensures that Australia's skills system remains responsive, evidence-based and future-focused.

## 6.2.2 Broader influence across the skills system

JSA's work continues to influence the broader skills system to support better matching, improved alignment between labour market needs and workforce skills, and promoting accessible pathways and positive outcomes for participants across Australia. Our influence is increasingly visible through citations, expert quotations, replication of findings, and the use of our products to inform decision-making across government, industry, academia and peak bodies.

To better understand how our work is being used, JSA commissioned Horiz-in (Health-Innovate Pty Ltd) to scan the public domain using its Knowledge Harvesting Tool – an Al-based bot that identifies where JSA's work is mentioned or used to create impact. The tool categorised stakeholders citing our work, analysed sentiment, and assessed alignment with the Commissioner's strategic outcomes.

In 2024–25, Horiz-in identified 123 instances of stakeholders citing the use of JSA's work to support decision-making, with 61 unique instances of utilisation. While not a comprehensive record, these findings provide a strong indication of how our work is being used to shape thinking and action across the system.

- Sentiment and Purpose: 92% of citations were categorised as neutral or supportive. Most stakeholders used our work in public discussion or appeal products – such as opinion pieces on occupations in shortage – directly supporting the Commissioner's outcome of activating an informed dialogue. Around 21% of citations were linked to policy development, including stakeholder submissions to consultation processes.
- **Stakeholder Reach:** Citations came from a diverse mix of stakeholder groups, including government agencies, industry, peak bodies and academia. Our work was used to support industry endeavours, inform policy development, and contribute to public discourse.
- Most Cited Products: JSA's data products were the most commonly referenced, with Opportunity and Productivity: Towards a Tertiary Harmonisation Roadmap and Better Together: The Jobs and Skills Report 2024 identified as our most frequently cited strategic publications.
- Strategic Alignment: Most stakeholder citations aligned with our second Commissioner's outcome – understanding today's workforce – with good coverage across all strategic outcomes. This reflects the breadth of JSA's impact and the relevance of our work to a wide range of policy contexts.

JSA's influence across the skills ecosystem is not only reflected in formal policy adoption but also in the way our work informs dialogue, shapes stakeholder positions, and supports evidence-based decision-making. As our tenure progresses, we continue to build trust and credibility, enabling deeper engagement and more effective collaboration across the system.

## 6.3 Key points from chapter six

Australia's productivity, participation and skills challenges are complex and evolving. JSA plays a central role in activating informed, evidence-based dialogue across the national skills system – bringing together government, industry, unions, education providers and the broader community to shape a shared understanding of workforce needs and identify practical pathways for action.

Improved alignment of skills with jobs depends on better information. JSA's publications and data products are designed to support decision-making across the economy, from national policy to individual career choices. Over the past year, JSA has released major studies on Gen AI, gender economic equality, the food supply chain, and the regional workforce – each contributing to long-term reform and improved alignment between workforce needs and training offerings.

JSA continues to invest in expanding our reach and improving accessibility. Website traffic and social media engagement have grown significantly, supported by enhancements to dashboards, metadata tracking, and personalisation features. These improvements help ensure our insights are accessible, timely and useful – empowering individuals and institutions to act.

Engagement remains central to JSA's approach. Through roundtables, consultations, codesign processes and a national roadshow, we have embedded dialogue into our work, ensuring advice reflects lived experience and diverse perspectives. Collaboration with JSCs continues to strengthen the national evidence base, and international partnerships and contributions to global forums have further extended the reach and relevance of JSA's insights.

JSA's strategic contributions are shaping policy and implementation across government. Our analysis has informed reforms in skilled migration, clean energy, care and support sectors, early childhood education, and tertiary harmonisation. We are also supporting national actions on the VET workforce and contributing to place-based policy design in Regional Australia – ensuring system settings reflect real-world needs and support inclusive growth.

Across the broader skills ecosystem, our work is increasingly being used to inform policy, shape stakeholder positions, and support evidence-based action. Independent analysis shows strong alignment with strategic outcomes and growing influence across government, industry, academia and peak bodies.

## Appendix A References

- ACTU. (2012). Lives on hold: unlocking the potential of Australia's workforce. The report of the independent inquiry into insecure work in Australia. ACTU. Retrieved from https://www.actu.org.au/wp-content/uploads/2023/06/media609158lives-on-hold-final.pdf
- AHRC. (2020). Wiyi Yani U Thangani (women's voices): securing our rights, securing our futures. Australian Human Rights Commission.
- AIHW. (2024). *People with disability in Australia 2024.* catalogue number DIS 72. Australian Institute of Health and Welfare, Australian Government.
- Andrews, D., Egert, B., & de la Maisonneuve, C. (2025, July 15). *Adult skills and productivity: New evidence from PIAAC 2023*. Retrieved August 2025, from CEPR VoxEU: https://cepr.org/voxeu/columns/adult-skills-and-productivity-new-evidence-piaac-2023
- Animal Medicines Australia. (2022). Pets in Australia: A national survey of pets and people. Animal Medicines Australia. Retrieved from https://animalmedicinesaustralia.org.au/resources/pets-in-australia-a-national-survey-of-pets-and-people/
- Anthony, T. (2004). Labour relations on northern cattle stations: feudal exploitation and accommodation. Australian Review of Public Affairs, 4(3), 117-136.
- ASQA. (n.d.). *Total VET activity*. Retrieved August 2025, from https://www.asqa.gov.au/rtos/requirements-and-responsibilities/data-collection-and-provision/total-vet-activity
- Banks, G. (2012). Productivity policies: the 'to do' list. Melbourne: presented at the Economic and Social Outlook Conference, 'Securing the Future', 1 November 2012.
- Brinckley, M., Jones, R., Batterham, P., Calear, A., & Lovett, R. (2022). The development and validation of a family functioning measure for Aboriginal and Torres Strait Islander adults. *BMC Public Health*, 22(1976).
- Bruno, A., Dunphy, J., & Georgiakakis, F. (2023, September). Recent Trends in Australian Productivity. *Bulletin*. Retrieved from https://www.rba.gov.au/publications/bulletin/2023/sep/recent-trends-in-australian-productivity.html
- Butterworth, P., Leach, L., Strazdins, L., Oleson, S., Rodgers, B., & Broom, D. (2011). The psychosocial quality of work determines whether employment has benefits for mental health: results from a longitudinal national household panel survey. *Occupational and environmental medicine*, 806-812.
- Chalmers, J. (2025, June 18). Address to the National Press Club, Canberra: Economic reform in our second term. Retrieved from https://ministers.treasury.gov.au/ministers/jim-chalmers-2022/speeches/address-national-press-club-canberra-5
- Commonwealth of Australia. (2022). The Senate Select Committee on Job Security The job insecurity report. Canberra: Senate Printing Unit. Retrieved from

- https://parlinfo.aph.gov.au/parlInfo/download/committees/reportsen/024780/toc\_pdf/Thejobin securityreport.pdf;fileType=application%2Fpdf
- Commonwealth of Australia. (2023). Working Future: the Australian Government's White Paper on Jobs and Opportunities. Canberra: Commonwealth of Australia. Retrieved from https://treasury.gov.au/sites/default/files/2023-10/p2023-447996-working-future.pdf
- Commonwealth of Australia. (2024). A new way of working together: Closing the Gap. Canberra: Department of the Prime Minister and Cabinet. Retrieved from https://www.closingthegap.gov.au/
- Commonwealth of Australia. (2024). National Foundation Skills Strategy 2025-2035: A Strong and Sustainable Australian Adult Foundation Skills Sector. Australian Government.
- De Witte, H. (1999). Job insecurity and psychological well-being: review of the literature and exploration of some unresolved issues. European Journal of Work and Organizational Psychology, 155-177.
- Deloitte. (2024). Remaking the norm. Retrieved from https://www.deloitte.com/au/en/services/economics/perspectives/remaking-the-norm.html
- Deloitte Access Economics. (2024). Generative Al: Australia Update. Deloitte Al Institute. Retrieved from https://www.deloitte.com/content/dam/assets-zone1/au/en/docs/services/economics/deloitteau-generative-ai-australia-update-160524.pdf
- Department of Education. (2023). Australian Universities Accord Panel Discussion Paper. Canberra: Australian Government. Retrieved from https://www.education.gov.au/australian-universitiesaccord/resources/australian-universities-accord-panel-discussion-paper
- DISR. (2024). Vocational education and training enrolment and completion in STEM and other fields. Department of Industry, Science and Resources.
- Fusion Digital Agency. (2024). The Impact of AI on the Australian White Collar Workforce. Retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjUl\_OpiL SLAxVJcPUHHdGsK6oQFnoECBIQAQ&url=https%3A%2F%2Ffusiondigital.agency%2Fblog-digitalpr%2Fai-australian-white-collarworkforce%2F&usg=AOvVaw2MZZ89PC7i8Oz7Jiuf35ov&opi=89978449
- Future Skills Organisation. (2025). Building an Al-enabled workforce:.
- Guenther, J., Bat, M., Stephens, A., Skewes, J., Boughton, B., Williamson, F., & Wooltorton, S. (2017). Enhancing training advantage for remote Aboriginal and Torres Strait Islander learners. NCVER.
- Industry Skills Australia Limited. (2025). Transport and Logistics Industry, 2025 Workforce Plan.
- Jobs and Skills Australia. (2023). First Nations People Workforce Analysis. Canberra: Australian Government.
- Jobs and Skills Australia. (2023). The Clean Energy Generation: Workforce needs for a net zero economy. Canberra: Australian Government.
- Jobs and Skills Australia. (2025). Education and training divides Gendered skills, pathways and outcomes. Canberra.
- Jobs and Skills Australia. (2025, July 3). Jobs and Skills Roadmap for Regional Australia: Phase 1. Canberra.

- Jobs and Skills Australia. (2025). *New perspectives on old problems: Gendered Jobs Work and Pay.*Canberra.
- Lake, P., Shamiri, S., Sharma, K., & Bialowas, A. (2024). How efficient is the Australian labour market?

  Analysing job matching efficiency for regions, occupations and industries. *The Australian Journal of Labour Economics*, *27*(1), 101-117. Retrieved August 2025, from https://ajle.org/index.php/ajle\_home/article/view/217
- Li, K., Mooney, E., McArthur, M., Hall, E., & Quain, A. (2024). A comparison between veterinary small animal general practitioners and emergency practitioners in Australia. Part 2: client-related, work-related, and personal burnout. *Frontiers in Veterinary Science, 104*. doi:https://doi.org/10.3389/fvets.2024.1355511
- Marchand, S., & Payne, A. (2022). Youth transitions after high school. In P. P. Dawkins (Ed.), *Melbourne Institute compendium 2022: economic and social policy: towards evidence-based policy solutions.*Melbourne: Melbourne Institute Applied Economic and Social Research. Retrieved August 2025, from https://melbourneinstitute.unimelb.edu.au/\_\_data/assets/pdf\_file/0006/4367733/Melbourne-Institute-Compendium-2022-Chapter-7.pdf
- Middleton, E. (2023, July 22). Long hours and overworked: regional Australia is facing a vet shortage. The Guardian. Retrieved from https://www.theguardian.com/australia-news/2023/jul/22/regional-australia-veterinary-vet-shortage-australian-veterinary-association-why-hours-overworked
- Morgan, K. (2023, October 11). The acute suicide crisis among veterinarians: 'You're always going to be failing somebody'. BBC News. Retrieved from https://www.bbc.com/worklife/article/20231010-the-acute-suicide-crisis-among-veterinarians-youre-always-going-to-be-failing-somebody
- Nicol, S., & Kim, J. (2023). Gender budgeting and intersectionality. *OECD Journal on Budgeting, 23*(2). doi:10.1787/ffdf0ba7-en
- OECD. (2017). Connecting People with Jobs: Key Issues for Raising Labour Market Participation in Australia. Paris: OECD Publishing. doi:https://doi.org/10.1787/9789264269637-en
- OECD. (2023). Regional productivity, local labour markets, and migration in Australia. *OECD Regional Development Papers*, 39. doi:https://doi.org/10.1787/3cc8f669-en
- Powering Skills Organisation Ltd. (2025). *High Load, Short Supply: Bridging the Gap to 2030 (2025 Workforce Plan)*.
- Productivity Commission. (2025). Closing the Gap Annual Data Compilation Report July 2025. Canberra.
- Productivity Commission. (2025). *Growth mindset: how to boost Australia's productivity, 5 productivity inquiries.* Canberra.
- Productivity Commission. (2025). Productivity before and after COVID-19. Canberra: Research paper.
- QILT. (n.d.). *Graduate Outcomes Survey*. Retrieved August 2025, from https://www.qilt.edu.au/surveys/graduate-outcomes-survey-(gos)
- QILT. (n.d.). *Graduate Outcomes Survey Longitudinal*. Retrieved August 2025, from https://www.qilt.edu.au/surveys/graduate-outcomes-survey---longitudinal-(gos-l)

- Richardson, S. (2007). What is a skill shortage? National Institute of Labour Studies Flinders University NCVER. Retrieved from https://www.ncver.edu.au/\_\_data/assets/file/0019/7282/what-is-skill-shortage-4022.pdf
- Secombe, C. (2023). Declining engagement of veterinary services in Australian animal production systems: why has this occurred and what are the risks? *Australian Veterinary Journal*, 102(1-2), 30-34. doi:10.1111/avj.13302.
- Shomos, A., & Forbes, M. (2014). *Literacy and Numeracy Skills and Labour Market*. Canberra: Productivity Commission Staff Working Paper.
- SNAICC. (2008). Foster their culture: Caring for Aboriginal and Torres Strait Islander children in out-of-home care.
- Social Research Centre. (2024). 2023 GOS National Key Findings. Social Research Centre. Retrieved August 2025, from https://www.qilt.edu.au/surveys/graduate-outcomes-survey-(gos)
- Social Research Centre. (2024). 2023 Graduate Outcomes Survey Longitudinal: National Report. Social Research Centre. Retrieved August 2025, from https://www.qilt.edu.au/surveys/graduate-outcomes-survey---longitudinal-(gos-l)
- Treasury. (2023). 2023 Intergenerational Report.
- UTS CIPW. (n.d.). Reclaiming the narrative of the First Nations workforce. Retrieved September 2025, from Centre for Indigenous People and Work:

  https://www.uts.edu.au/about/faculties/business/research/centre-for-indigenous-people-and-work-cipw
- Waugh, J., Forrest, C., & Dowling, K. (2024). *The impact of increasing university participation on the characteristics of apprentices.* NCVER.
- Young, N., Sherwood, S., Anthony, C., Gilbert, J., Gray, K., & McEwen, C. (2024). A hidden history of Aboriginal women's work in the community controlled health sector [literature review].

  Jumbunna Institute for Indigenous Education and Research, UTS Business School.

## **Appendix B Glossary**

AAPL Australian Apprenticeships Priority List

ABS Australian Bureau of Statistics

Al Artificial Intelligence

ANZSCO Australian and New Zealand Standard Classification of Occupations

ANZSIC Australian and New Zealand Standard Industrial Classification
ASX200 Australian Securities Exchange (200 largest listed companies)

ATEC Australian Tertiary Education Commission

AQF Australian Qualifications Framework
CALD Culturally and Linguistically Diverse
CGE Computable General Equilibrium

COVID-19 Coronavirus disease 2019

CSOL Core Skills Occupation List

DEWR Department of Employment and Workplace Relations

GDP Gross Domestic Product

Gen Al Generative Al

GOS Graduate Outcome Survey

GOS-L Graduate Outcome Survey - Longitudinal

GSIS Gender Segregation Intensity Scale

IVI Internet Vacancy IndexJSA Jobs and Skills AustraliaJSC Jobs and Skills Council

MUVER Matching, unemployment, vacancies, efficiency, residual

NCVER National Centre for Vocational Education Research

NERO Nowcast of Employment by Region and Occupation

NST National Skills Taxonomy

OECD Organisation for Economic Co-operation and Development

OSL Occupation Shortage List

PSO Powering Skills Organisation

QILT Quality Indicators for Learning and Teaching

PIAAC Programme for the International Assessment of Adult Competencies

PLIDA Personal Level Integrated Data Asset

REOS Recruitment Experiences and Outlook Survey

RLMI Regional Labour market indicator

RMIT Royal Melbourne Institute of Technology

RTO Registered training organisation

SERA Survey of Employers who have Recently Advertised

TNV Total New Vacancies

VET Vocational Education and Training

VNDA VET National Data Asset

VU Victoria University

VUEF Victoria University Employment Forecasting Model

## **Appendix C Figures**

Figure 1: GDP per hour worked in OECD countries with data available, 2023 (US dollars)	15
Figure 2: Labour force participation rate across OECD countries	17
Figure 3: Beveridge curve for Regional Australia and Major City areas of Australia, 2019 to 2025	21
Figure 4: Regional matching efficiency and employment services caseload numbers	22
Figure 5: JSA's role in improved matching efforts	24
Figure 6: Participation rate by severity of disability, 2018 and 2022	30
Figure 7: Unemployment rate by severity of disability, 2018 and 2022	31
Figure 8: Proportion of employment by Occupation Major Group and Disability status - 2022	31
Figure 9: Proportion of employment by Industry and Disability status - 2022	32
Figure 10: Proportion of occupation unit groups' (ANZSCO 4-digit) gender segregation intensity shift, from 2006 to 2021	33
Figure 11: Distribution of occupational median annual gender pay gaps	35
Figure 12: Proportion of industry employment for workers aged 15-24	37
Figure 13: Proportion of industry employment for workers aged 25-54	38
Figure 14: Proportion of industry employment for workers aged 55 and over	39
Figure 15: Reasons young applicants were successful in getting the job	40
Figure 16: Reasons young applicants were unsuccessful in getting the job	41
Figure 17: Distribution of First Nations people in the workforce by occupation major group	44
Figure 18: Percentage of occupations in shortage (%), by composition of First Nations	44
Figure 19: Percentage of occupations in shortage by composition of persons with disability	45
Figure 20: Percentage of occupations in shortage by mature age worker composition	46
Figure 21: Percentage point deviation from the 5 year mean productivity growth and percentage point deviation from the 5 year mean workforce shortage, by industry, 2021 to 2025	55
Figure 22: Online job advertisements for Veterinarians and Veterinary Nurses, September 2006 to September 2024	
Figure 23: Comparison of JSA TNV and ABS Job Vacancy Survey (JVS) series over time	57

Figure 24: Reasons for regularly replacing staff for most recently recruited occupations - by selected industries, August 2023 to May 2024	59
Figure 25: Impacts on business due to regularly replacing staff for most recently recruited occupations - by selected industries, August 2023 to May 2024	60
Figure 26: Impacts on business due to regularly replacing staff for most recently recruited occupations - by selected industries, August 2023 to May 2024	61
Figure 27: Strengths and attractions of Regional Australia	63
Figure 28: School student (year 1 - 10) non-attendance rates, by Regional Australia and Major City	64
Figure 29: Essential services vacancy ratio (job advertisements adjusted for proportion of jobs advertised online as a proportion of employed persons), Major City and Regional Australia	65
Figure 30: Industry employment change by headcount, 10 years to May 2025 ('000)	69
Figure 31: Industry employment change 10 years to May 2025, 'Service Industries' and 'Producing Industries'	69
Figure 32: Industry share of total employment 2015 and 2025, grouped by 'Service Industries' and 'Producing Industries' (%)	
Figure 33: Occupation major group employment change by headcount, 10 years to May 2025 ('000)	71
Figure 34: Top 10 occupations, employment growth by headcount over 10 years to May 2025 ('000)	71
Figure 35: Share of total employment by skill level, 2015 and 2025	72
Figure 36: 5 and 10-year employment outlook, by industry, persons, Australia	74
Figure 37: 5 and 10-year employment outlook, by occupation major group, persons,  Australia	75
Figure 38: 5 and 10-year employment outlook, by state and territory, persons	
Figure 39: 5 and 10-year employment outlook, by skill level of occupation, persons,	
Australia	78
Figure 40: 'Unconstrained skill supply' scenario – deviation from baseline employment projections for May 2035, by skill level, Australia	80
Figure 41: Employment outcomes prior to and post training across priority groups	89
Figure 42: Students outcomes for partial completers and graduates across priority groups	90
Figure 43: Apprentices and trainees in-training by headcount, occupation status on the 2025 Australian Apprenticeships Priority List	91
Figure 44: Change in Australian Apprentices in-training, 2019-2024 by headcount (Top 100 occupations)	92
Figure 45: Apprentices and Trainees as a share of Certificate III completions, 2024	94
Figure 46: Apprentices and trainees, and VET completion rates by field of education, students commencing in 2019	95

Figure 47: Proportion of female apprentices in-training, select trade occupations 2015–2025	96
Figure 48: Percentage of graduates employed in the top three most common occupational groups for each field of study one year after graduation	98
Figure 49: Top 30 fields of education with highest median annual income growth between 1-5 years post completion	99
Figure 50: Top 30 fields of education with the largest difference in median annual income between undergraduates and postgraduates after five years	100
Figure 51: VET to higher education by field of education and occupation	102
Figure 52: Number of years between completing study in one sector and enrolling in the other for student who studied in both VET and higher education between 2014 and 2022	103
Figure 53: Engineering dual qualification – Al Group and RMIT	105
Figure 54: Linking productivity and tertiary harmonisation: impacts and benefits	106
Figure 55: JSA website performance and engagement	115
Figure 56: JSA social media reach and engagement	116
Figure 57: Key consultation figures	116
Figure 58: International engagement	119

## **Appendix D Employment Projections** 2025

Table 8: Projected employment growth over the next 5 and 10 years, by industry, Australia

Table 8: Projected emp	Baseline	Wallot	5-year outlo		io years,	Бу ше	10-year outlook			
					Change				Change	
Industry (1-Digit ANZSIC)	Emp't ('000) May 2025	Share of total emp't (%)	Emp't ('000) May 2030	Share of total emp't (%)	level ('000)	%	Emp't ('000) May 2035	Share of total emp't (%)	level ('000)	%
Agriculture, Forestry and Fishing	305.4	2.1	303.8	-0.5	-1.6	-0.5	320.2	1.9	14.8	4.8
Mining	322.6	2.2	340.7	5.6	18.1	5.6	350.4	2.1	27.8	8.6
Manufacturing	874.3	5.9	917.2	4.9	43.0	4.9	976.3	5.9	102.0	11.7
Electricity, Gas, Water and Waste Services	198.6	1.4	210.4	6.0	11.8	6.0	222.6	1.3	24.0	12.1
Construction	1,348.0	9.2	1,441.5	6.9	93.5	6.9	1,508.9	9.1	160.9	11.9
Wholesale Trade	359.5	2.4	381.3	6.1	21.8	6.1	406.6	2.4	47.1	13.1
Retail trade	1,347.0	9.2	1,381.3	2.5	34.3	2.5	1,440.1	8.6	93.1	6.9
Accommodation and Food Services	962.1	6.5	995.5	3.5	33.4	3.5	1,054.5	6.3	92.4	9.6
Transport, Postal and Warehousing	754.1	5.1	780.2	3.5	26.1	3.5	821.0	4.9	66.9	8.9
Information Media and Telecommunications	184.7	1.3	193.3	4.6	8.6	4.6	208.4	1.3	23.7	12.8
Financial and Insurance Services	572.1	3.9	608.6	6.4	36.5	6.4	650.5	3.9	78.4	13.7
Rental, Hiring and Real Estate Services	244.5	1.7	262.0	7.1	17.5	7.1	278.4	1.7	33.9	13.8
Professional, Scientific and Technical Services	1,351.6	9.2	1,488.3	10.1	136.6	10.1	1,601.7	9.6	250.1	18.5
Administrative and Support Services	429.8	2.9	445.2	3.6	15.4	3.6	469.6	2.8	39.9	9.3
Public Administration and Safety	989.0	6.7	1,062.1	7.4	73.2	7.4	1,111.8	6.7	122.8	12.4
Education and Training	1,267.6	8.6	1,339.7	5.7	72.1	5.7	1,425.3	8.6	157.7	12.4
Health Care and Social Assistance	2,369.3	16.1	2,659.6	12.3	290.3	12.3	2,911.2	17.5	541.9	22.9
Arts and Recreation Services	274.1	1.9	288.5	5.2	14.3	5.2	305.0	1.8	30.9	11.3

	Baseline		5-year outlook				10-year outlook			
Industry (1-Digit ANZSIC)		_		_	Change			_	Change	
	Emp't ('000) May 2025	Share of total emp't (%)	Emp't ('000) May 2030	Share of total emp't (%)	level ('000')	%	Emp't ('000) May 2035	Share of total emp't (%)	level ('000)	%
Other Services	546.7	3.7	562.7	2.9	16.0	2.9	593.1	3.6	46.4	8.5
Total	14,701.0	n/a	15,662.0	6.5	961.0	6.5	16,655.5	n/a	1,954.5	13.3

Source: 2025-2035 Employment Projections, produced by VU for JSA.

Note: Emp't Is the abbreviation for 'Employment'.

Table 9: Projected employment growth over the next 5 and 10 years, by occupation major group, Australia

_	5-year outlo	ok			10-year outlook					
Occupation	(0	otal	(0	otal	Change		(0	otal	Change	
(1-Digit ANZSCO)	Emp't ('000) May 2025	Share of total emp't (%)	Emp't ('000) May 2030	Share of total emp't (%)	level ('000)	%	Emp't ('000) May 2035	Share of total emp't (%)	level ('000)	%
Managers	1,872.7	12.7	2,016.1	12.9	143.4	7.7	2,152.3	12.9	279.6	14.9
Professionals	3,953.3	26.9	4,410.2	28.2	456.9	11.6	4,798.6	28.8	845.3	21.4
Technicians and Trades Workers	1,994.1	13.6	2,085.2	13.3	91.1	4.6	2,189.9	13.1	195.9	9.8
Community and Personal Service Workers	1,725.4	11.7	1,847.4	11.8	122.0	7.1	1,961.5	11.8	236.1	13.7
Clerical and Administrative Workers	1,870.8	12.7	1,943.1	12.4	72.2	3.9	2,048.8	12.3	178.0	9.5
Sales Workers	1,154.7	7.9	1,183.6	7.6	28.9	2.5	1,236.1	7.4	81.4	7.1
Machinery Operators and Drivers	909.7	6.2	946.7	6.0	37.1	4.1	989.4	5.9	79.7	8.8
Labourers	1,220.4	8.3	1,229.6	7.9	9.3	0.8	1,278.8	7.7	58.4	4.8
Total	14,701.0	n/a	15,662.0	n/a	961.0	6.5	16,655.5	n/a	1,954.5	13.3

Source: 2025-2035 Employment Projections, produced by VU for JSA.

Note: Emp't Is the abbreviation for 'Employment'.

Table 10: Projected employment growth over the next 5 and 10 years, by state and territory

	Baseline		5-year outlo	ok			10-year outlook				
State/Territory	D)		(0	of total (%)	Change	Change		otal	Change		
	Emp't ('000) May 2025	Share of total emp't (%)	Emp't ('000) May 2030	Share of the emp't (%)	level ('000) %		Emp't ('000) May 2035	Share of total emp't (%)	level ('000)	%	
New South Wales	4,555.4	31.0	4,843.2	30.9	287.8	6.3	5,132.3	30.8	576.8	12.7	
Victoria	3,783.5	25.7	4,071.0	26.0	287.5	7.6	4,363.0	26.2	579.5	15.3	
Queensland	3,015.6	20.5	3,207.1	20.5	191.5	6.3	3,417.3	20.5	401.7	13.3	
South Australia	969.3	6.6	1,013.3	6.5	44.0	4.5	1,063.0	6.4	93.7	9.7	
Western Australia	1,674.0	11.4	1,787.0	11.4	113.0	6.8	1,901.4	11.4	227.4	13.6	
Tasmania	285.4	1.9	294.6	1.9	9.2	3.2	305.8	1.8	20.4	7.2	
Northern Territory	144.2	1.0	149.9	1.0	5.7	3.9	157.3	0.9	13.1	9.1	
Australian Capital Territory	273.6	1.9	295.8	1.9	22.3	8.1	315.5	1.9	41.9	15.3	
Australia	14,701.0	n/a	15,662.0	n/a	961.0	6.5	16,655.5	n/a	1,954.5	13.3	

Source: 2025-2035 Employment Projections, produced by VU for JSA.

Note: Emp't Is the abbreviation for 'Employment'.

Table 11: Projected employment growth over the next 5 and 10 years, by skill level, Australia

	Baseline		5-year outlo	ok			10-year outlook						
	(0	otal	0)	total )	Change		(0	of total (%)	Change				
Skill Level	Emp't ('000) May 2025	Share of total emp't (%)	Emp't ('000) May 2030	Emp't ('00 May 2030	Emp't ('00 May 2030	Emp't ('00 May 2030	%   30,0  %   31,0	level ('000)	%	Emp't ('000) May 2035	Share of t emp't (%)	level ('000)	%
Skill Level 1	5,181.1	35.2	5,755.7	36.7	574.7	11.1	6,243.1	37.5	1,062.0	20.5			
Skill Level 2	1,793.5	12.2	1,886.7	12.0	93.2	5.2	1,999.0	12.0	205.5	11.5			
Skill Level 3	2,152.2	14.6	2,231.4	14.2	79.2	3.7	2,337.1	14.0	184.8	8.6			
Skill Level 4	3,562.3	24.2	3,751.9	24.0	189.6	5.3	3,955.8	23.8	393.5	11.0			
Skill Level 5	2,011.9	13.7	2,036.2	13.0	24.3	1.2	2,120.5	12.7	108.7	5.4			
Australia	14,701.0	n/a	15,662.0	n/a	961.0	6.5	16,655.5	n/a	1,954.5	13.3			

Source: 2025-2035 Employment Projections, produced by VU for JSA.

Note: Skill Level 1 relates to bachelor's degree or higher qualification; Skill Level 2 relates to advanced diploma or diploma; Skill Level 3 relates to Certificate IV or III (including at least 2 years' on-the-job training); Skill Level 4 relates to Certificate II or III; Skill Level 5 relates to Certificate I or secondary education.

Note: Emp't Is the abbreviation for 'Employment'.

Table 12: 'Unconstrained skill supply scenario' - Projected employment growth over the next 5 and 10 years, by skill level

Skill Level	Current Em	nployment	Baseline Pro	jection	Unconstrained Supply Scenario Projection					
	00) 5	of total (%)	00) 5	nent (%)	00) 4	of total (%)	Deviation f baseline May 2035	rom		
	Emp't ('000) May 2025	Share of t emp't (%)	Emp't ('000) May 2035	Share of employment (%)	Emp't ('000) May 2034	Share of t emp't (%)	level ('000)	%		
Skill Level 1	5,181.1	35.2	6,243.1	37.5	6,136.2	36.8	-106.9	-1.7		
Skill Level 2	1,793.5	12.2	1,999.0	12.0	2,011.8	12.1	12.8	0.6		
Skill Level 3	2,152.2	14.6	2,337.1	14.0	2,371.6	14.2	34.6	1.5		
Skill Level 4	3,562.3	24.2	3,955.8	23.8	4,001.9	24.0	46.1	1.2		
Skill Level 5	2,011.9	13.7	2,120.5	12.7	2,134.0	12.8	13.4	0.6		

Source: 2025-2035 Employment projections (unrestricted skills supply scenario), produced by VU for JSA.

Note: Some occupations in the employment projections data with an 'NFD' status cannot be assigned a skill level. Therefore, the sum of employment by skill levels will not add up to the total employment presented in other tables.