

SKILLS AND LABOUR SHORTAGES IN NEW SOUTH WALES, AUSTRALIA & ONTARIO, CANADA

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Executive Summary

This paper examines skills and labour shortages in Ontario, Canada and New South Wales, Australia.

Skills and labour shortages go hand in hand, and it is often difficult to disentangle them from each other. Skills shortages exist when employers are unable to fill or have difficulty in filling vacancies for an occupation at current levels of remuneration. Labour shortages occur when there are no job seekers available to fill vacancies even though these jobs may be entry level and/or do not require specialist skills.

A key conclusion is that while skills and labour shortages in Ontario and NSW were exacerbated by the Global Pandemic, they were a problem pre-Pandemic. In the immediate post-Pandemic period, the confluence of historically strong employment growth combined with a lack of net overseas migration led to severe skills and labour shortages. In both Ontario and NSW employers continue to report recruitment difficulties more generally, and particularly for occupations requiring higher skill levels and qualifications.

The situation in Ontario has eased to some extent and this is predominantly because of falling job vacancies and increased net overseas migration. In NSW labour markets remain tight with the Job Vacancy Rate at extremely low levels. There are now tentative signs in NSW that falling employment levels and job vacancies are easing skills and labour shortages. The easing of skills and labour shortages is not, however, a cause for joy. This is because the current key driver is each country's central banks' policy of controlling inflation by raising interest rates, thereby slowing economic growth and employment. As inflation is brought under control and monetary policy settings return to a more neutral position it can be expected that more severe skills and labour shortages will return. Accordingly, it is likely that labour and skills shortages in key sectors will continue to be an issue into the future.

A number of clear policy implications arise from this paper. Governments should consider to invest more in education and training to resolve skills and labour shortages, including programs to lift participation in skilled trades by under-represented groups (e.g., women, People with Disability and Indigenous people). As a priority more should be done to improve youth participation through programs that lift school completion rates, build employability skills, and promote apprenticeships.

1. Introduction

Skills and labour shortages have been a common theme in many advanced economies, including Canada and Australia. While they were exacerbated by the Global Pandemic, skills and labour shortages have been a problem for many decades.

Employers and business groups have been raising concerns about the economic impact in key sectors. In its *2023 Economic Report*, the Ontario Chamber of Commerce noted:

Labour shortages and skill gaps are ... dampening business confidence as employers across sectors struggle to hire and retain the workers they need to recover and grow in the aftermath of the pandemic.¹

Similarly, in a March 2022 policy paper, the Australian Chamber of Commerce and Industry stated:

The most pressing challenge facing business today is a shortage of skills and labour. With workplaces under enormous strain, it is placing a handbrake on economic growth.

Australia has faced skills and labour shortages during previous economic cycles but never so acutely as now due to the exacerbating impact of the pandemic and the extended period of closed international borders.²

This paper investigates skills and labour shortages in the Canadian Province of Ontario and the Australian State of New South Wales (NSW). Both of these economies and labour markets share many similarities. The paper considers what is meant by skills and labour shortages and their economic implications and then proceeds to discuss the various dimensions of skills and labour shortages using official data sources. This includes occupational and industry employment trends, job vacancies, employer recruitment experiences and information on skills in demand.

In most cases data for Ontario and NSW have been used. However, at times it has been necessary to utilise national data where State or Provincial data are not available.

¹ Ontario Chamber of Commerce. *2023 Ontario Economic Report*, p.6.

² Australian Chamber of Commerce and Industry (March 2022). *Overcoming Australia's Labour and Skills Shortages Through Skills Development, Workforce Participation and Migration*, p.3.

2. Why Ontario and NSW?

While there are differences in size, there are a number of important similarities between the Ontario and NSW economies and labour markets which make this comparison useful from an analytical perspective. Their capitals, Toronto, and Sydney are the most populous and economically significant cities in their nation. Greater Toronto has a population of over 6 million and Sydney over 5 million people. Both cities are considered the pre-eminent financial and business hub of their nation. Ontario and NSW are also the largest economies in their nation, with the Ontarian economy representing 38 per cent of Canada's GDP and NSW comprising 31 per cent of the Australian economy. See [Attachment A](#) for a comparison between Ontario and NSW.

3. What is meant by skills and labour shortages?

Skills and labour shortages arise when the supply of labour is insufficient to meet the demand employers have for workers. They are indicative of disequilibrium in the labour market or at least in some sub-labour markets.

In practice, skills shortages exist when employers are unable to fill or have difficulty in filling vacancies for an occupation, or specialised skill needs within that occupation, at current levels of remuneration and conditions of employment, and at reasonably accessible locations³. Labour shortages occur when there are no job seekers available to fill vacancies even though these jobs may be entry level and/or do not require specialist skills. Skills and labour and shortages go hand in hand, and it is often difficult to disentangle them from each other. Accordingly, in this paper the approach is to consider them as interrelated issues.

4. Causes and economic consequences of skills and labour shortages

There is considerable debate on the causes of skills and labour shortages. Richardson (2007) identifies that skills shortages are generally the result of a combination of the following factors⁴:

- Under-investment in skills development.
- Rapid structural change combined with low levels of unemployment.
- A cyclical surge in employment in a part of the economy.
- Weaknesses in the training system.

³ See S. Richardson (2007). *What is a Skills Shortage?* National Centre for Vocational Education Research, p.12.

⁴ *ibid.*, p.8.

The Global Pandemic impacted heavily on the availability of skilled labour. Both Australia and Canada have historically relied on migration to meet their need for skilled workers. With the closure of borders from 2020 to 2022 this source of labour dried up. In the immediate post-Pandemic period both Australia and Canada experienced low unemployment levels and unemployment rates unseen for around 50 years. While migration has recovered in Ontario, it is taking time for migration to return to pre-Pandemic levels in Australia.

Skills and labour shortages have consequences for employers, workers, and the broader economy. Employers, particularly in the short-term, may suffer from increased recruitment costs, increased input costs, reduced profitability, and constraints on their ability to grow. Over the longer-term shortages may mean that employers are unable to expand into new markets and emerging sectors. This in turn reduces employment prospects for workers, leading to higher levels of unemployment compared to the counterfactual. While skills and labour shortages can lead to upward pressure on real wages, this has not been the experience in Australia and Canada.

For the economy as a whole, skills and labour shortages place a speed limit on the economy. This is because businesses struggle to meet demand and are forced to restrain output and/or face disincentives to innovate and invest in new technologies. Skills and labour shortages therefore act as a constraint on employment levels, productivity, real incomes, and economic prosperity.

5. Labour supply and shortages

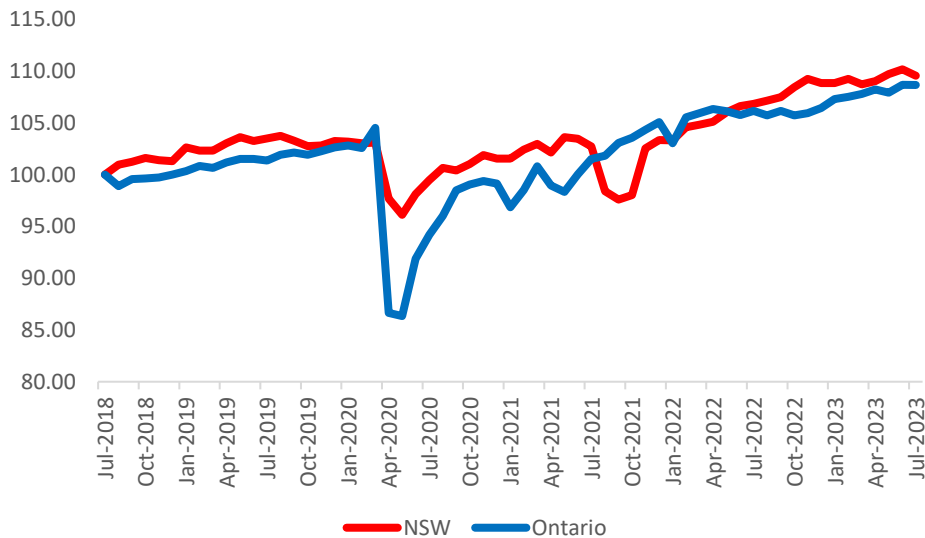
This section investigates the extent of labour supply constraints in Ontario and NSW. As shall be seen, in both jurisdictions a confluence of rapid job vacancy growth, historically strong employment growth, combined with a drop off in net migration led to skills and labour shortages in the immediate post-Pandemic period.

Employment

In July 2023, 7,949,300 people were employed in Ontario compared to 4,348,000 in NSW, meaning that the Ontario jobs market is some 80 per cent larger. Chart 1 provides data on employment trends in both Ontario and NSW as an index (with July 2018 starting at 100). The chart shows that employment levels in Ontario were more heavily impacted by the Global Pandemic than in NSW, however, unlike Ontario, NSW experienced another COVID related fall in employment in 2021. A COVID outbreak in Western Sydney led to the NSW Government

imposing a lockdown, causing an economic downturn. Since the end of 2021, employment has recovered, and in the 18 months to July 2023 employment grew by nearly 7 per cent in NSW and 10.5 per cent in Ontario. This represents an historically high annual employment growth rate of 4.5 per cent in NSW and 6.8 per cent in Ontario.

Chart 1: Indices of Employment, Ontario and NSW, 2018-2023 (July 2018=100.0)



Sources: ABS Labour Force, Australia, Cat No, 6202.0, Table 6202023 and Statistics Canada, Labour Force Survey Data, Table 14-10-0292-01.

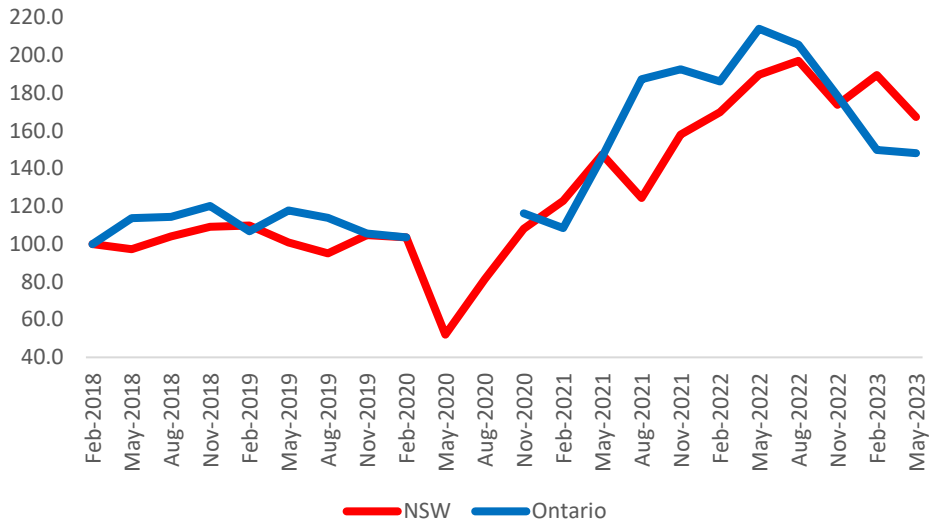
Job vacancies

Chart 2 provides data on job vacancies, expressed as an index (with February 2018 set at 100). It is noted that Statistics Canada discontinued publishing job vacancy data for the period April to September 2020 due to the Global Pandemic.

Both Ontario and NSW have experienced a rapid growth in job vacancies since the depths of the Global Pandemic. By mid-2022 job vacancy numbers in both NSW and Ontario were 85 to 90 per cent higher than what they were pre-Pandemic, pointing to a large increase in the demand for labour in the recovery phase.

More recently there has been a decline in the number of job vacancies from the peak in mid-2022. In May 2023 there were approximately 268,000 vacancies in Ontario, down from 387,000 in May 2022, a fall of 31 per cent. NSW has experienced a similar but less dramatic trend, with job vacancies falling from around 145,000 to 128,000, or by 12 per cent.

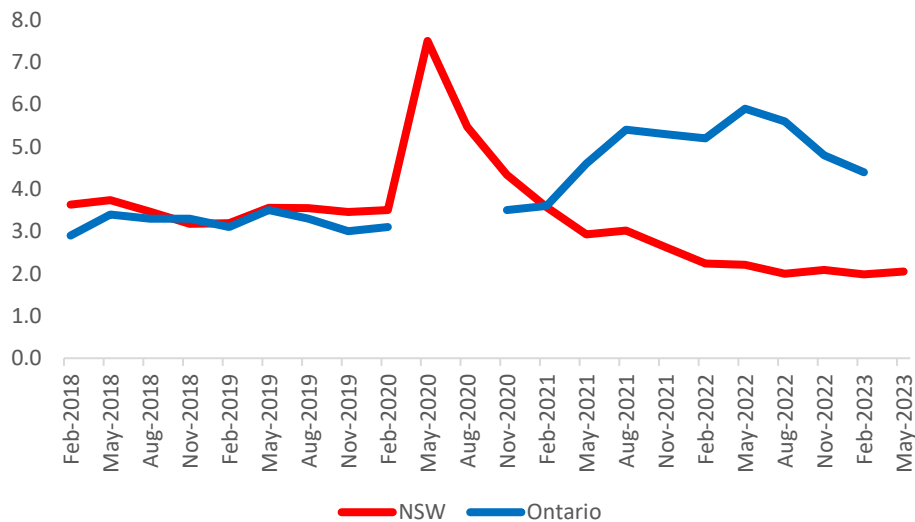
Chart 2: Indices of Job Vacancies, Ontario and NSW, 2018-2023 (February 2018=100.0)



Sources: ABS Job Vacancies Survey, Table 6354001 and Statistics Canada, Job vacancies, payroll employees, job vacancy rate, and average offered hourly wage by provinces and territories, Table 14-10-0325-01.

Chart 3 compares the Job Vacancy Rate for Ontario and NSW. The Job Vacancy Rate is the ratio of the number of job vacancies expressed as a percentage of labour demand (employed and job vacancies). Up until the Global Pandemic, Job Vacancy Rates for Ontario’s and NSW were roughly similar. However, coming out of the Global Pandemic the Job Vacancy Rate in Ontario rose substantially and by November 2021 was double that of the NSW Job Vacancy Rate (5.3 versus 2.6). Although Ontario’s Job Vacancy Rate has fallen, and appears to be on a downward trend, it remains high at 4.4 compared to NSW.

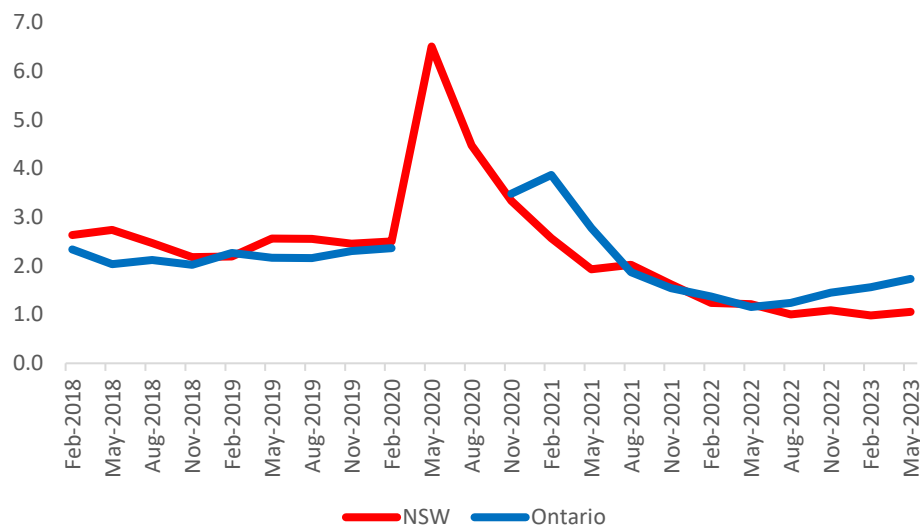
Chart 3: Job Vacancy Rate, Ontario and NSW, 2018-2023



Sources: ABS Job Vacancies Survey, Table 6354001, ABS Labour Force, Australia, Cat No, 6202.0, Table 6202023 and Statistics Canada, Job vacancies, payroll employees, job vacancy rate, and average offered hourly wage by provinces and territories, Table 14-10-0325-01.

Chart 4 shows the ratio of unemployed people to job vacancies. Prior to the Global Pandemic NSW had on average 2.5 unemployed persons per job vacancy compared to 2.2 for Ontario. During the Global Pandemic the labour market tightened significantly and in NSW the ratio of unemployed people to job vacancies increased to 6.5. While data are not available for Ontario for this period, it is likely the situation in Ontario would have been similar. Post-Pandemic the labour market tightened considerably and by mid-2022 there was only about 1 unemployed person per job vacancy. The labour market appears to have eased a little in Ontario, with 1.7 unemployed persons per job vacancy in May 2023. NSW, however, continues to experience a tight labour market with still just over 1 unemployed person per vacancy in May 2023.

Chart 4: Unemployed persons to Job Vacancies, Ontario and NSW, 2018-2023



Sources: ABS Job Vacancies Survey, Table 6354001, ABS Labour Force, Australia, Cat No, 6202.0, Table 620203 and Statistics Canada, Job vacancies, payroll employees, job vacancy rate, and average offered hourly wage by provinces and territories, Table 14-10-0325-01 and Labour Force Survey Data, Table 14-10-0292-01.

The analysis of job vacancies, the Job Vacancy Rate, and the ratio of unemployed people to job vacancies point to labour shortages post-Pandemic that continue well into mid-2023. There is evidence that labour shortages are ameliorating in Ontario, but the labour market remains severely tight in NSW.

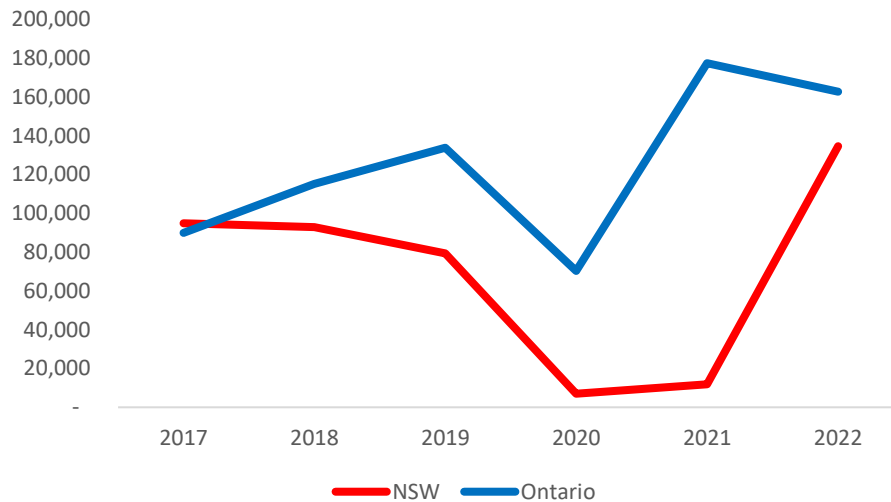
Migration

Both Canada and Australia have historically relied on migration to meet their demand for skilled workers. As NSW and Ontario are the largest State and Province in each country both receive the largest share of migrants due to the economic and employment opportunities available.

Chart 5 shows net overseas migration for Ontario and NSW. Net overseas migration is overseas migration less overseas departures. As can be seen, net overseas migration collapsed in 2020

due to COVID induced border closures. NSW experienced a proportionally larger fall in net overseas migration, falling from around 80,000 per year in 2019 to only 7,000 in 2020 a decrease of 91 per cent. In Ontario net overseas migration fell by 47 per cent, from 134,000 to 70,000. The length of Australian Government border closures and the ‘tyranny of distance’ meant that in NSW migration levels did not recover until 2022.

Chart 5: Net Oversea Migration, Ontario and NSW, 2017 to 2022



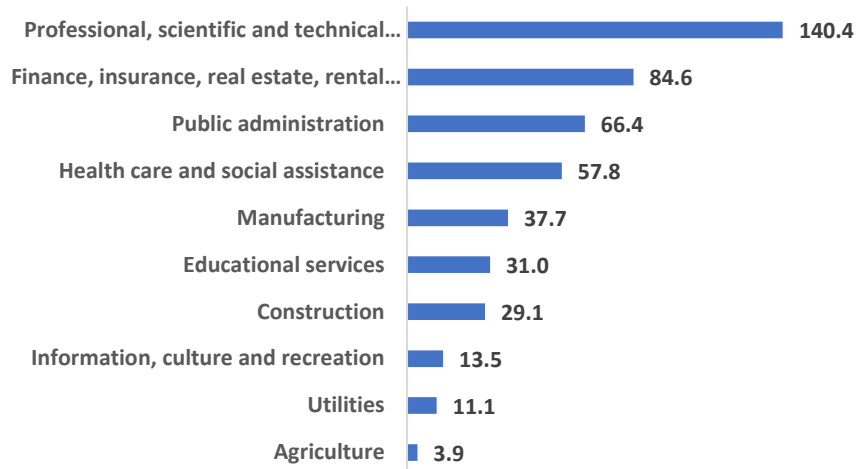
Sources: ABS National, State and Territory Population, Table 31010do001 and Statistics Canada, Estimates of the components of international migration, quarterly, Table 17-10-0040-01.

It is apparent that the closure of borders in both Ontario and NSW restricted labour supply and exacerbated skills and labour shortages in the immediate post-Pandemic period. Since 2021 net overseas migration has recovered and is now well above pre-Pandemic levels. However, in NSW much of this has been catch up, with net overseas migration for the three years to 2022 some 110,000 below what it was in the three years to 2019. This indicates that low post-Pandemic levels of skilled migration are continuing to contribute to skills and labour shortages in NSW.

Industry labour supply challenges

Charts 6 and 7 show the change in employment between February 2020 and February 2023 (pre- and post-Pandemic) for the ten industries with the highest employment growth in Ontario and NSW respectively.

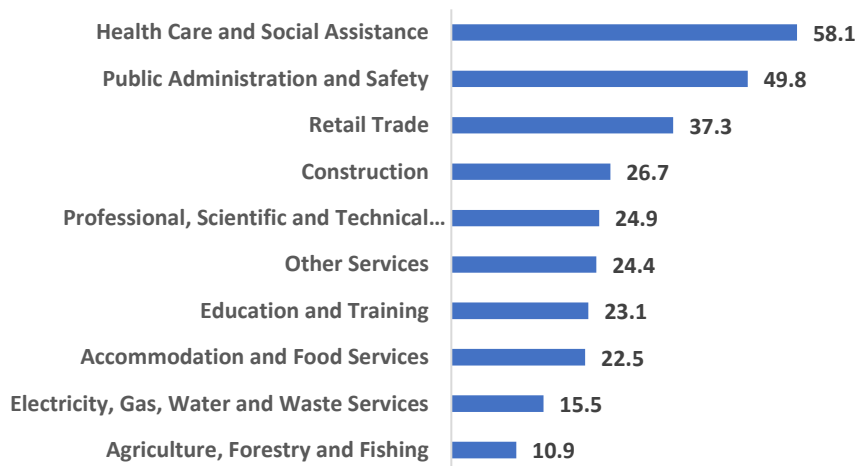
Chart 6: Change in Employment (000s), Top 10 Industries, Ontario, February 2020 to February 2023



Source: Statistics Canada, Employment by Industry, March 2023, Table 14-10-0355-01.

Both Ontario and NSW have seen strong growth in employment in Health Care and Services, Public Administration, Education and Training, Professional, Scientific, and Technical Services and Utilities (i.e., electricity, gas, and water). These are typically skilled jobs. NSW has also seen strong employment growth in retail, construction and services, Ontario has experienced employment growth in Finance and Real Estate related industries, Manufacturing, and Construction.

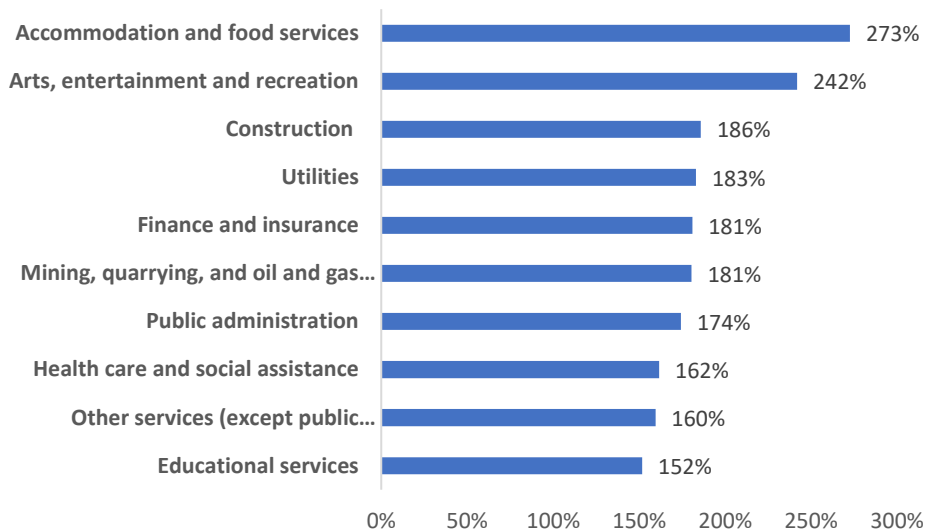
Chart 7: Change in Employment (000s), Top 10 Industries, NSW, February 2020 to February 2023



Source: ABS Labour Force, Detailed, 6291.0.55.001, Employed persons by State, Territory and Industry division of main job, February 2023, Table 5.

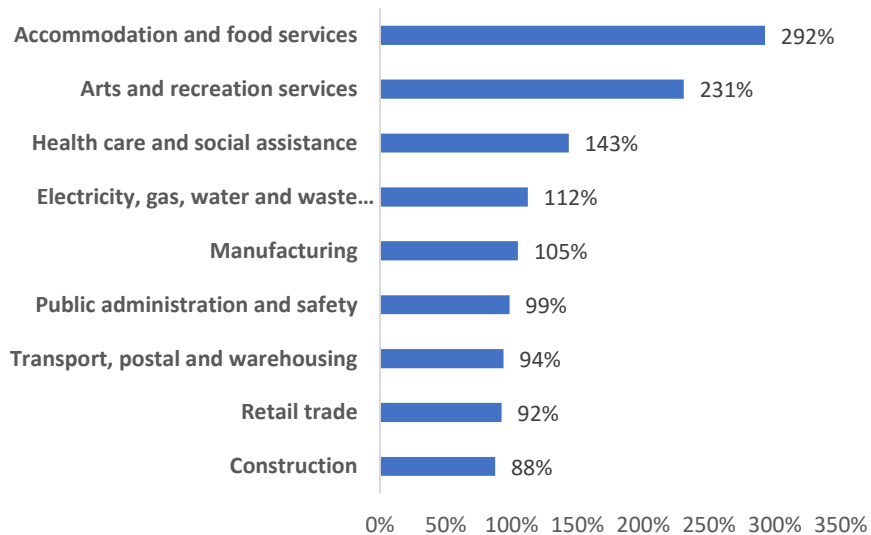
Charts 8 and 9 provide data for Ontario and Australia on the ten industries with the largest growth in job vacancies since the global pandemic. Australian data has been used in lieu of NSW data, as the ABS does not publish job vacancy data by industry by State. It is also noted that there are differences between Canadian and Australian industry classifications.

Chart 8: Job vacancies by industry, Ontario, Change from February 2020 to February 2023 (% change)



Source: Statistics Canada, Job vacancies, payroll employees, job vacancy rate, and average offered hourly wage by provinces and territories, Table: 14-10-0326-01.

Chart 9: Job vacancies by industry, Australia, Change from February 2020 to February 2023 (% change)



Source: ABS Job Vacancies Survey, February 2023.

In the three years to February 2023 vacancies in Accommodation and Food Services and Arts and Recreation Services grew by over 200 per cent in both Australia and Ontario. Other industries recording high vacancy growth in both jurisdictions were Health care, Utilities, and

construction. Construction vacancies in Ontario grew by 186 per cent and by 88 per cent in Australia. Ontario and NSW have also seen rapid growth in Construction employment. This is probably the result of investment in public infrastructure by Federal and State/Provincial governments. In Western Sydney, the Aerotropolis at Badgery's Creek involves AU\$23 billion in public investment and is expected to generate up to 200,000 jobs.

Ontario is also investing heavily in infrastructure. The March 2023 Provincial Budget announced infrastructure investments of CA\$184 billion over the next decade, particularly in transport projects such as: CA\$27.9 billion construction of highway expansion and rehabilitation projects and CA\$70.5 billion in public transit investment.

There are evident some differences between Ontario and Australia, in particular:

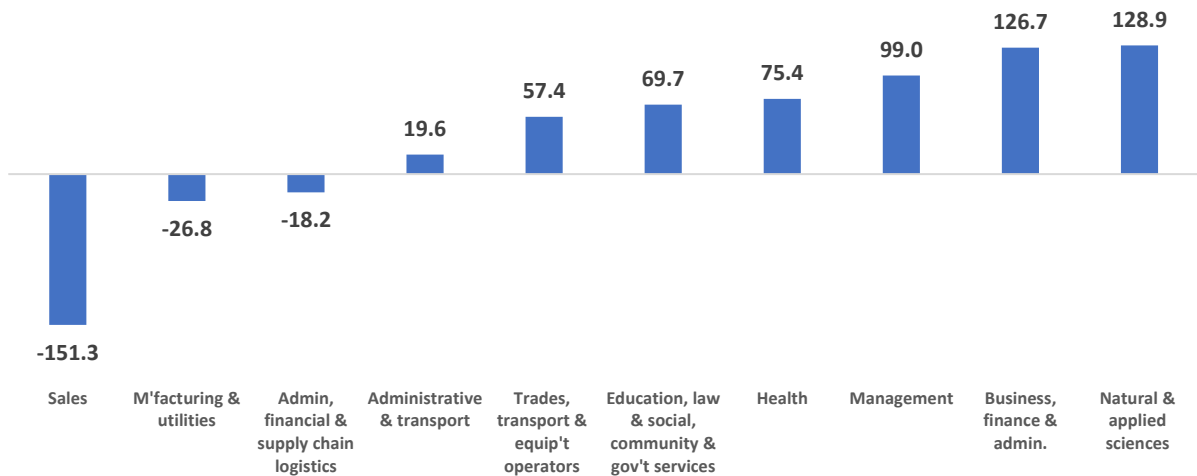
- Ontario experienced vacancy growth in Mining of 181 per cent compared to only 63 per cent in Australia.
- Vacancies in Education increased by 152 per cent in Ontario, but by 75 per cent in Australia.
- Vacancies in Transport increased by 147 per cent in Ontario but by only 94 per cent in Australia.

Industry vacancy data confirms that Ontario has faced more significant labour supply challenges than Australia with nine in ten industries experiencing vacancy growth in excess of 100 per cent compared to one in four in Australia.

Occupational shortages

Charts 10 and 11 provide data on employment growth for key occupation groups for the period February 2020 to February 2023 for Ontario and NSW. It is important to note that Canada and Australia use different occupational classification systems, complicating direct comparisons.

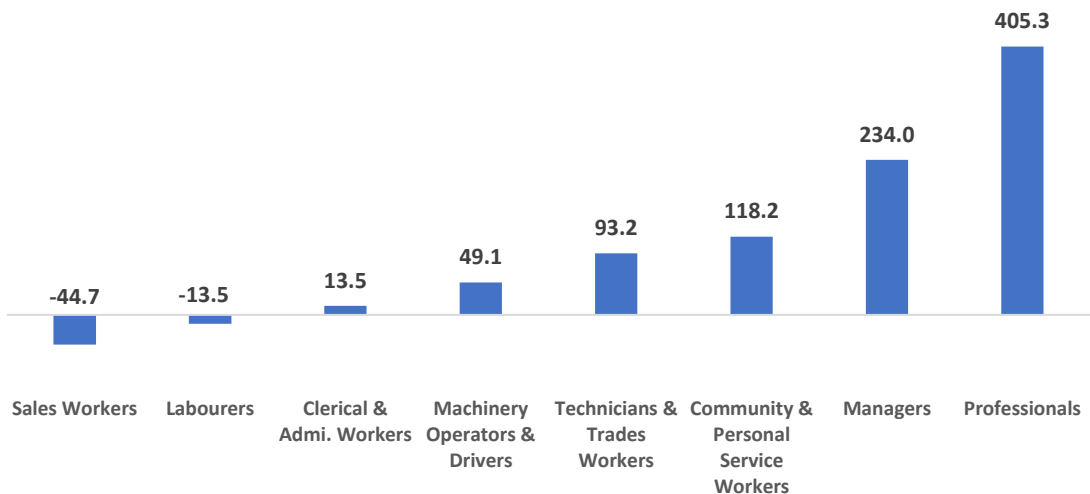
Chart 10: Growth in Employment (000s) by major occupations, Ontario, February 2020 to February 2023



Source: Statistics Canada, Labour force characteristics by occupation, monthly, April 2023, Table: 14-10-0421-01.

Nonetheless, the data does confirm that since the Global Pandemic, employment growth in both jurisdictions has been concentrated in more highly skilled occupations such as in Health, Community Services, Professionals (e.g., Science, Engineering, etc) as well as Trades Workers. Lower skilled jobs such as Labourers in Manufacturing and workers in Sales have experienced a decline in employment since February 2020.

Chart 11: Growth in Employment (000s) by major occupations, NSW, February 2020 to February 2023



Source: ABS, Labour Force, Detailed, Employed persons by Occupation major group of main job (ANZSCO) and Sex, Table 6291007.

Employer recruitment experiences

Both Canada and Australia have surveys of employer recruitment experiences, with employers in both countries reporting similar challenges.

Statistics Canada's 2023 Survey on Business Conditions found that 40 per cent of businesses were expecting to experience difficulties recruiting and retaining skilled staff in the near future⁵. Industries that were expecting the most difficulties in recruiting skilled staff in the next three months were Accommodation and Food Services (50 per cent of businesses), Manufacturing (50 per cent) and Health Care and Social Assistance (48 per cent).

The Australian 2023 Survey of Employers who Recently Advertised found that in July 2023, 59 per cent of recruiting employers (representing 60 per cent of all employers) were finding it hard to find skilled and experienced staff. This compared to 75 per cent in July 2022, indicating an easing of recruitment difficulties. The decrease in recruitment difficulty was due to the declining recruitment difficulty in Capital Cities, down by 7 percentage points to 55 per cent. Compared to July 2023, the recruitment difficulty for Capital Cities was 19 percentage points below the 74 per cent recorded in July 2022; while for regional and remote areas, the recruitment difficulty was 11 percentage points below the series high of 77 per cent.⁶

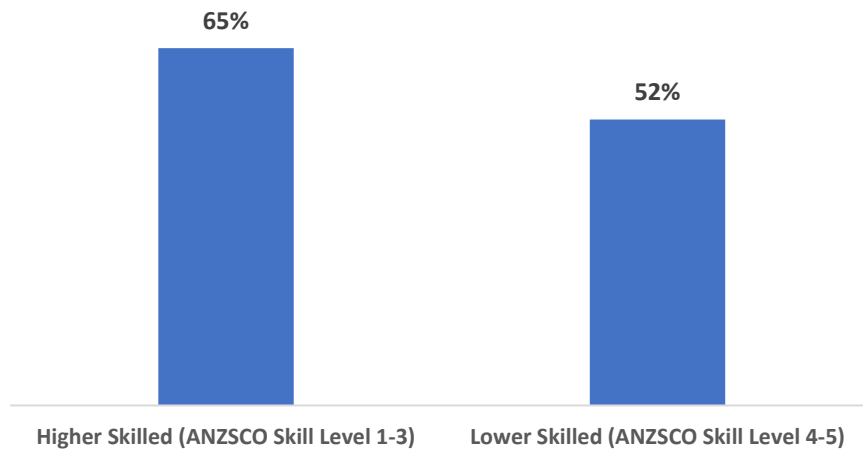
Recruitment difficulty also vary across industries. In particular, recruitment difficulty was highest for Manufacturing (73 per cent of businesses), followed by Construction (70 per cent). The lowest recruitment difficulties were for Accommodation and Food Services (52 per cent) and Professional, Scientific and Technical Services (57 per cent).

Furthermore, as shown in Chart 12, recruitment difficulty varies according to skill level of the job. In June 2023, employers were experiencing much greater difficulty recruiting for higher skilled occupations.

⁵ Canadian Survey on Business Conditions, first quarter 2023: <https://www150.statcan.gc.ca/n1/daily-quotidien/230227/dq230227b-eng.htm>

⁶ See Jobs and Skills Australia, Recruitment Experiences and Outlook Survey July 2023 at <https://www.jobsandskills.gov.au/work/recruitment-experiences-and-outlook-survey>

Chart 12: Proportion of Australian employers experiencing recruitment difficulty by skill level of occupation, July 2023.



Source: Jobs and Skills Australia, Recruitment Experiences and Outlook Survey, data file, July 2023.

6. Policy considerations

Post-Pandemic, it is essential that governments re-examine the mix of training, employment and related policies and programs to effectively remediate skills and labour shortages. In particular:

- Including occupational skills training in labour migration programs would help address sectors experiencing shortages, as found in the economic analysis.
- It is clear that both Canada and Australia should invest in its own skills development, over relying on migration. Federal and State/Provincial governments should consider re-evaluating education and training policies and programs to ensure they maximise the human capital of the current and future workforce.
- Vocational training programs should have more of an emphasis at meeting the current and future needs of employers. Employers and industry input into the design and delivery of skills training is essential. At the same time employers should consider investing in more in training their own workforces.
- There is a pool of untapped potential labour that can help plug skills shortages. This includes groups traditionally underrepresented in trades occupations such as women, People with Disability, and Indigenous people. Programs should consider shifting their focus on opening trade occupations to these cohorts through vocational education that is capable of accommodating diverse training and learning needs to tackle these shortages.

- Finally, there is a pressing consideration to invest in youth. Although not addressed in this paper, both Ontario and NSW have significant numbers of youth not in employment, education, or training, particularly in regional and remote locations. This includes programs that raise school completion rates, build employability skills, and promote apprenticeships and traineeships.

7. Conclusions

The key conclusions reached from the above analysis are that both Ontario and NSW had significant skills and labour shortages before the Global Pandemic and that these became more severe in the immediate post-Pandemic period. Skills and labour shortages were demonstrated by historically high vacancy levels, low Job Vacancy Rates, and low ratios of unemployment to job vacancies. The analysis also demonstrates that there are skills and labour shortages in key industry sectors and high skilled occupations requiring vocational and tertiary qualifications.

The situation in Ontario eased from about mid-2022, mainly because of falling job vacancies and increased net overseas migration. There is some evidence that the Ontarian labour market may be tightening again as the Job Vacancy Rate has fallen from 5.9 in May to 2022 to 4.4 in February 2023. By contrast, the NSW labour market has remained tight in 2023 and has recorded an historically low Job Vacancy Rate of 2.1 and an unemployment to Job Vacancy Rate of 1.1. There are now signs in NSW that falling employment levels and job vacancies are easing labour shortages.

The easing of labour shortages does not, however, spell good news as the key driver is each country's central banks' policy of controlling inflation by raising interest rates, thereby slowing the economy. As inflation is brought under control and monetary policy settings return to a more neutral position it can be expected that more severe labour shortages will return. It is likely, therefore, that skills shortages in key sectors will continue in both Ontario and NSW into the near future and beyond.

It is apparent that governments should consider to invest more in education and training to resolve skills and labour shortages. This includes programs to lift participation in skilled trades by groups traditionally underrepresented (e.g., women, People with Disability and Indigenous people). As a priority, governments should invest in youth through programs that lift school completion rates, build employability skills, and promote apprenticeships.

Economic and demographic comparison of Ontario and New South Wales

Table A.1 provides a brief comparison of the Canadian Province of Ontario and the Australian State of New South Wales (NSW).

Table A.1: Key statistics, Ontario and New South Wales, 2022

	Ontario	New South Wales
Size	1,076,395km ²	801,150 km ²
Population	14.2 million	8.2 million
Proportion of national population	31.4%	38.4%
Largest city	Toronto	Sydney
Population of largest city	6.3 million	5.2 million
Indigenous Population	406,590 (2.9% of Ontario pop,n)	278,000 (3.4% of NSW pop'n)
Proportion born overseas	23.0%	27.6%
Gross Provincial/State Product	CA\$956.7 billion*	AU\$697.4 billion
Median weekly household income	CA\$1,750	AU\$1,829

Sources: ABS, 2021 Census of Population and Housing and National Accounts; Statistics Canada, 2021 Census of Population.

* Data relates to 2021 and is from Ontario Fact Sheet at <https://www.ontario.ca/page/ontario-fact-sheet#section-4>.

Ontario is geographically and demographically larger than NSW. Both Ontario and NSW are the largest economies in their nation and their capital cities, Toronto and Sydney are the economic and financial capitals.

Adjusting for exchange rates, household incomes are higher in NSW than in Ontario. However, this may reflect a higher rate of urbanisation in Australia. Incomes are higher in larger cities and 63 per cent of the NSW population live in Greater Sydney compared to 44 per cent of the Ontario population living in Greater Toronto.

Other similarities are that First Nations People comprise about 3% of the population in Ontario and NSW. Both have a significant proportion of the population who were born overseas, reflecting the reliance on immigration for population and economic growth in both nations. Another common feature is that Ontario and NSW are geographically diverse with significant populations in regional and remote locations.