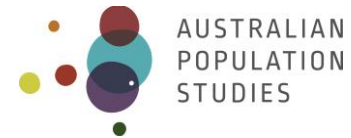

Australian labour force changes under the reduced mobility of COVID-19



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Paper received 11 March 2022; accepted 19 August 2022; published 19 December 2022

Abstract

Background

The geographic mobility of labour has long facilitated a well-functioning labour market for Australia, being of importance in skill-matching and jobs in regional economies. Disrupting the long-distance labour commute, COVID-19 border closures and community lockdowns had an immediate and significant impact on the Australian labour market.

Aims

The aim is to understand Australian labour force demography and provide an empirical understanding of how regions, and their respective states and territories, fared through the pandemic.

Data and methods

Using Australian Bureau of Statistics SA4 level labour force participation and unemployment data, the paper highlights regional changes between 2018 and 2021 - covering periods immediately before and after the emergence of COVID-19. Its analysis is contextualised by the respective state and territory and employment conditions underpinning labour demand via proxies of gross national product and state and territory gross product, gross real income and job vacancies.

Results

The paper finds variations in labour force change are dependent on regional industry economic profiles between and within states and territories. This was in part due to state and territory lockdown and border closure policies as well as respective industry economic profiles.

Conclusions

A more comprehensive mapping and understanding of labour force shifts over time will better capture the trajectories of regional labour markets. This will enable better targeting of specific policy outcomes at various levels of government, including to encourage industry diversity, support labour reskilling and the uptake of technologies. Such policies will be better placed to assist Australian labour force transitions post-COVID and efficient labour market functioning.

Key words

labour mobility, labour participation, unemployment, labour force, COVID-19.

1. Introduction

The geographic mobility of labour has been a long-term means of facilitating a well-functioning labour market across Australia. Long-distance commuting is particularly important for skill-matching and jobs in regional economies, where access to a diverse range of skilled labour is difficult (Productivity Commission, 2013). Indeed, modelling by the Productivity Commission (2013) found labour mobility during a mining boom enabled higher than average real wages and economic growth rates. The prevalence of long-distance commuting contractual arrangements in Australia has seen a range of acronyms emerge describing different mobility types – DIDO (drive-in/drive-out), FIFO (fly-in/fly-out), BIBO (bus-in/bus-out) and SISO (ship-in/ship-out). Most often associated with mining, long-distance commuting is used in a range of industries such as hospitality, transport, medical and health care and agriculture (Hutton, 2021; Martinus, 2016).

Despite the frequency of long-distance commuting in Australia, it is difficult to know how many workers engage in such work practices. During the 2012 mining boom, there were about 276,000 FIFO workers nationally (The West Australian, 2019). In 2018, around 60,000 of the nation's FIFO jobs were in the Western Australian mining sector (The West Australian, 2019), with pre-COVID 2019 estimates showing between 6,000 and 7,000 flew in from other states (Tyson, 2020). Largely halting long-distance labour commuting, COVID-19 border closures and community lockdowns had an immediate and significant impact on the demography of the Australian labour market.

Aside from the sharp decline in long-distance commuting, several other factors also influenced the labour market of Australian states and territories under COVID restrictions. First, there was a decline in workers changing jobs (i.e., 'churn') at the beginning of the pandemic (ABS, 2021a) due to sudden decreases in labour demand as businesses closed. Second, a sharp decrease in long-distance commuting occurred as workers obeyed stay-at-home mandates. Some workplaces adopted hybrid working models, such as office workers whose meetings and conferences went fully online; while others changed their mode of customer engagement, such as restaurants which shifted to online sales and take-way orders. Third, demand for Australian-made products increased due to global supply chain disruptions, and onshoring of processes added to the need for domestic labour in specific areas (Productivity Commission, 2021). As such, the decline in labour mobility due to border closures and community lockdowns measures did not necessarily lead to uniform declines in labour participation and unemployment, but rather variegated national experiences. This paper aims to shed light on the different labour force trends that emerged in regions, states and territories across Australia due to pandemic restrictions.

Indeed, the only workers who commuted throughout the pandemic, irrespective of stay-at-home mandates, were those considered "essential" - such as front-line health care and construction workers. But the definition of 'who' was essential also varied by state and territory. From the onset of the pandemic in Australia, the individual Australian states and territories had clear autonomy in setting rules regarding border closures and community lockdowns. Each implemented COVID-19 restrictions according to respective community sentiments and industry needs, reducing the overall impact on gross national production. Some also closed internal regional borders to protect vulnerable Indigenous communities and enable the on-going operation of essential sectors. For example, Western Australia had notably the most stringent mobility restrictions both intra- and inter-

state, but it classified fly in/fly out workers of the mining sector as 'essential' ensuring continued production of one of the nations' largest export sectors.

Combined with hard international border controls and quarantine measures, Australia managed to emerge with one of the strongest economies of all OECD nations. It was also one of few nations to record a gross domestic product above pre-pandemic levels, and it eased labour mobility restrictions faster than most other OECD nations – a factor linked to higher GDP and economic recovery (ABS, 2021b). Nonetheless, the changes to labour mobility had an immediate impact on the labour demographics of specific regions, particularly in relation to labour participation and unemployment profiles.

Using Australian Bureau of Statistics (ABS) labour participation and unemployment rates at the Statistical Areas Level 4 (SA4) spatial area across the years 2018 to 2021, this paper aims to unpack Australian labour force trends and provide an empirical understanding of how regions – and respective states and territories - fared through the pandemic. The research highlights the different labour force participation and unemployment trends between and within states and territories against a backdrop of individual state economic profiles to understand the economic and employment conditions underpinning labour demand in the respective states and territories. These economic profiles were compiled via proxies of gross national product and state and territory indicators of gross product, gross real income and job vacancy. The research finds regional labour market variations reflected the industry economic profiles of each state and territory.

2. Data and methods

As noted by KPMG's Terry Rawnsley (2021), the 2021 Australian Bureau of Statistics (ABS) journey-to-work data will be of limited use in exploring labour force trends under COVID restrictions due to the increase in people working from home. For this reason, this paper used alternative ABS data of unemployment and labour participation between 2018 to 2021 to understand these changes. Following the ABS definition, "labour force" refers to persons aged 15 to 65 years old. The timeframe of the study covered the two years before the first case of COVID was confirmed in Australia and the two years after. ABS unemployment and labour participation data were collected at the SA4 level (ABS, 2022a), as this spatial unit represents 'labour markets or groups of labour markets within each State and Territory' (ABS, 2016) and were therefore appropriate to analyse labour force trends.

Unemployment and labour force participation are key economic and demographic indicators. In this study, changes in labour force participation and unemployment levels of the different SA4s of each state and territory across the time period was assumed to provide insights into the impact of state and territory border closures and community lockdowns on regional labour force trends. The participation rate is of interest because higher levels often signal more women choosing to work instead of performing unpaid domestic duties. In terms of age groups, labour force participation tends to be higher in the 35 to 55 age group as those younger may choose to study rather than work and those older may chose early retirement (Gustafsson, 2021). The unemployment rate is the proportion of people who are not in paid work but in the labour force actively looking for work (cf. Reserve Bank of Australia, 2021). The participation rate is the proportion of employed workers out of

the total working population age, including retirees, those unable to work and not looking for work for other reasons, such as study or engaged in carer activities (cf. Reserve Bank of Australia, 2021).

Australian gross national product (GDP), individual state and territory gross product (GSP), job vacancy and real gross income data from the ABS were used as proxies to assess the economic and employment conditions underpinning labour demand in respective states and territories. These were appropriate as COVID border closures and community lockdowns constricted labour mobilities within state and territory borders.

3. Results

The Australian labour force participation rate has been steadily increasing over the decades, moving from around 60% in 1983 to 65% in 2011 and 66% in January 2020 (ABS, 2022d; Gustafsson, 2021). Once COVID began to impact the economy, participation rates dropped dramatically from the 66% in March 2020 to 62.6% in May 2020, slowly recovering to a level of 66% in November 2020. The surge of the virus in July 2021 across the nation saw participation rates again fall, being 64.5% in September 2021 and rising again to 66% in November. Figure 1 demonstrates the changes in the Australian labour force participation rate, unemployment rate and job vacancies.

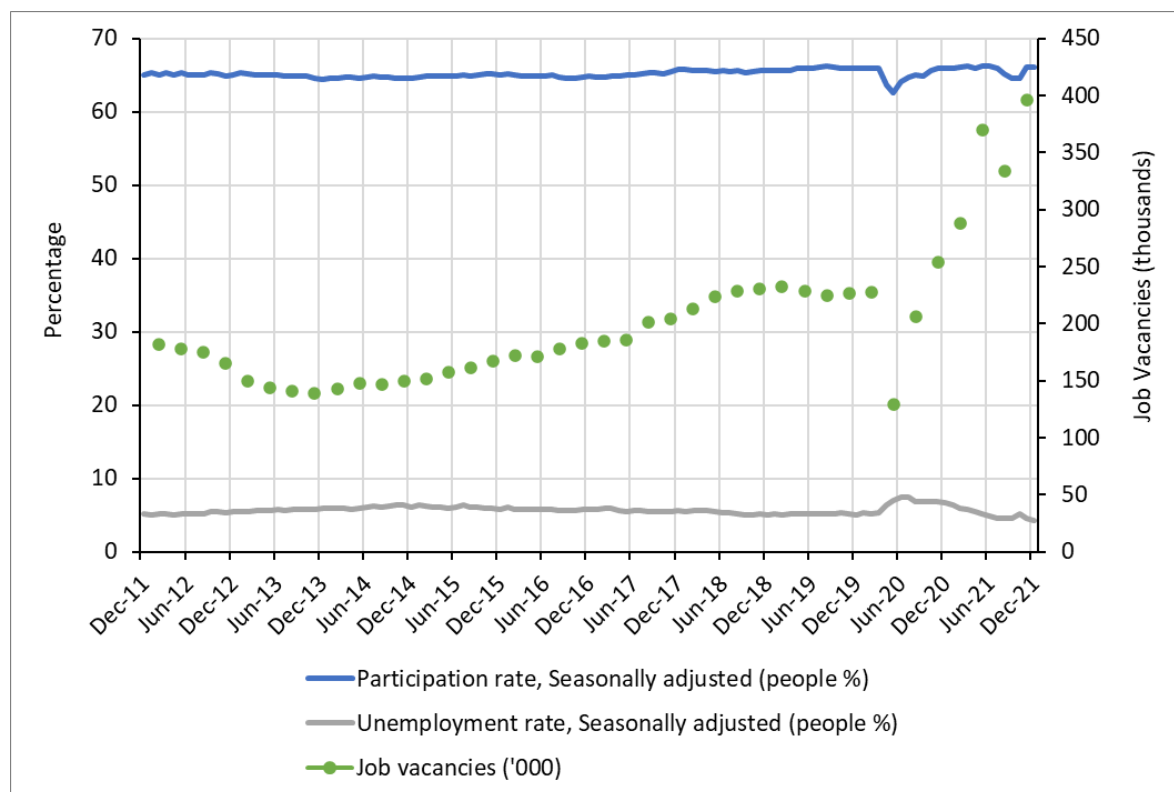


Figure 1: National unemployment rate (%), labour force participation rates (%) and job vacancies ('000s)

Source: Adapted from ABS (2021c, 2022b).

The impact of COVID restrictions is evident with the sharp dip in workforce participation corresponding to a rise in national unemployment and a sudden drop in job vacancies by May 2020. However, by August 2020, the job market had recovered to almost the same pre-pandemic levels. It surpassed this by November 2020, almost doubling by November 2021 to around 400,000 vacant

positions with unemployment rates dropping to around 4.2% in January 2022 compared to a March 2020 rate of 5.3% (ABS, 2022a). January 2022 had the lowest unemployment rate in 13 years. Coupled with extraordinary increases in job vacancies, the rate drop pointed to overall national labour shortages experienced differently by the states and territories due to their respective border restrictions and lockdowns.

To fully understand state and territory labour force participation, variations in Gross Domestic Product (GDP) and Gross State Product (GSP) were considered. Figure 2 demonstrates the consistent rise in Australia’s GDP over the 2018 to 2021 period, with the sharpest jumps occurring in 2019 and 2021. 2020 saw a relatively lower rise in GDP than experienced by 2019 volumes. This same pattern in GDP increases was not found across all states and territories. Most showed slight increases between 2018 to 2019, with Victoria and Queensland generally steady until 2021. New South Wales and South Australia experienced rises in 2021 after plateauing between 2019 and 2020. The largest and most consistent rise across the entire period was found in Western Australia. These patterns were more prominent in the percentage changes in GDP and GSP of Table 3, which shows that Western Australia far outstripped the increases of other states and territories.

Figure 4 shows the average annual unemployment rate by Statistical Area 4 (SA4), where a darker colour demonstrates lower unemployment. Figure 5 illustrates the average annual participation rate, with darker colours meaning higher labour participation, and Figure 6 shows the overall percentage change in annual participation rate across the 2018 to 2021 period. Comparing these unemployment and participation rates across SA4s, the areas experiencing the highest levels of disadvantage from COVID were noticeably the Northern Territory and South Australia, which both have relatively small

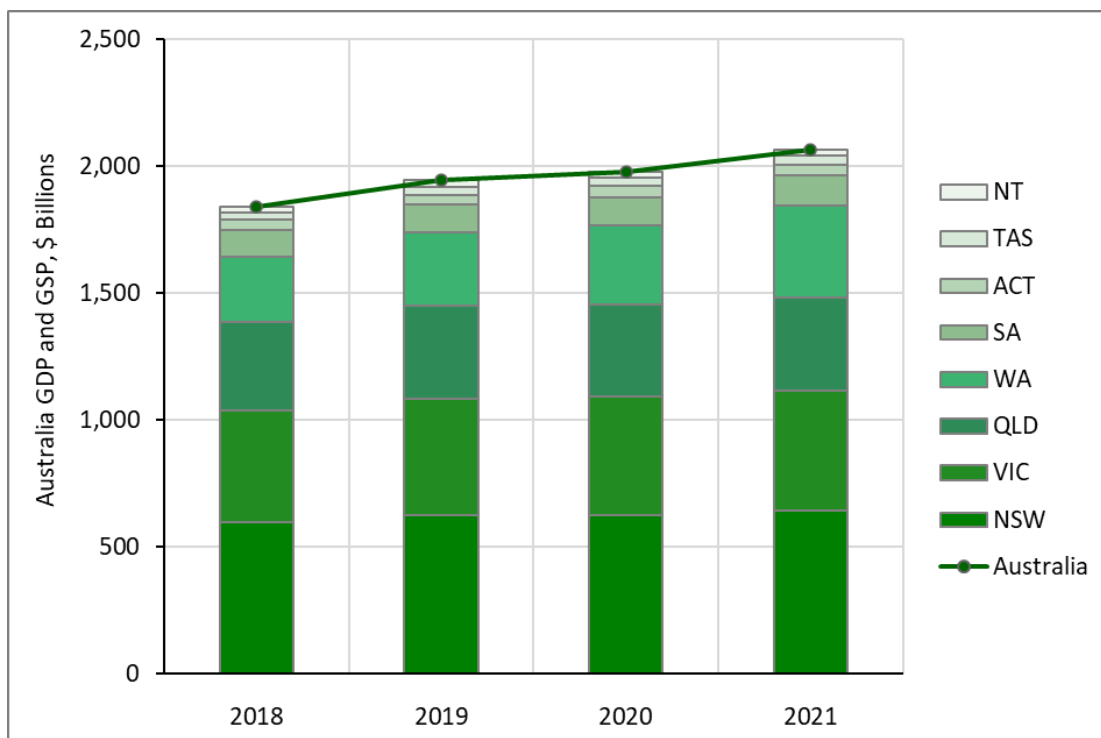


Figure 2: Australian gross domestic product (GDP) and gross state products (GSP), by chain volume measure and current prices

Source: Adapted from ABS (2022c).

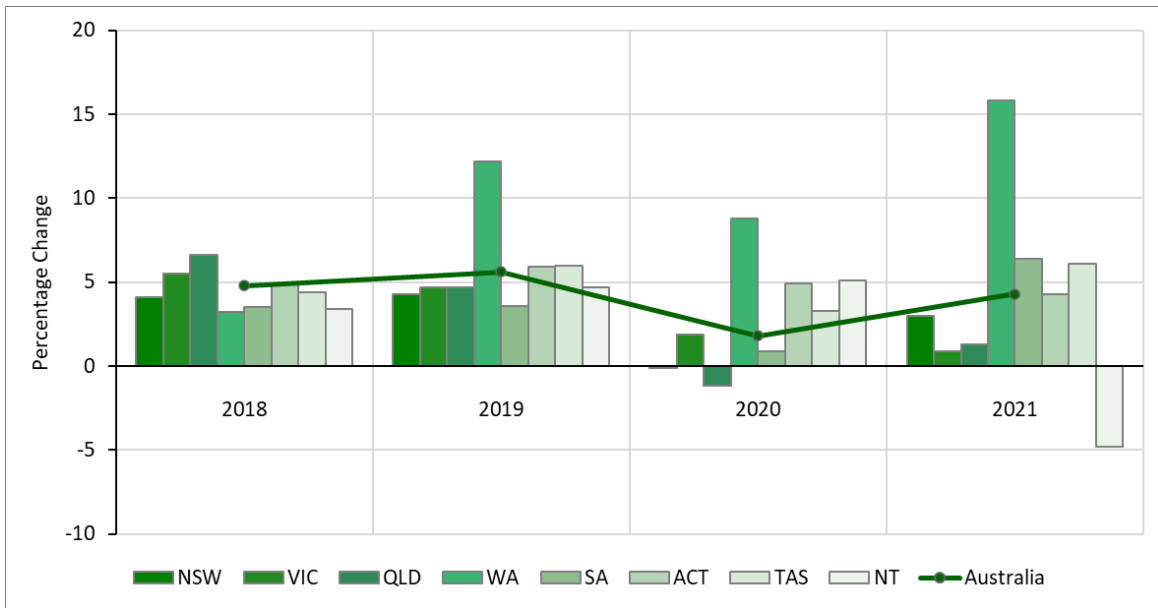


Figure 3: Australian GDP and GSP, percentage change

Source: Adapted from ABS (2022c).

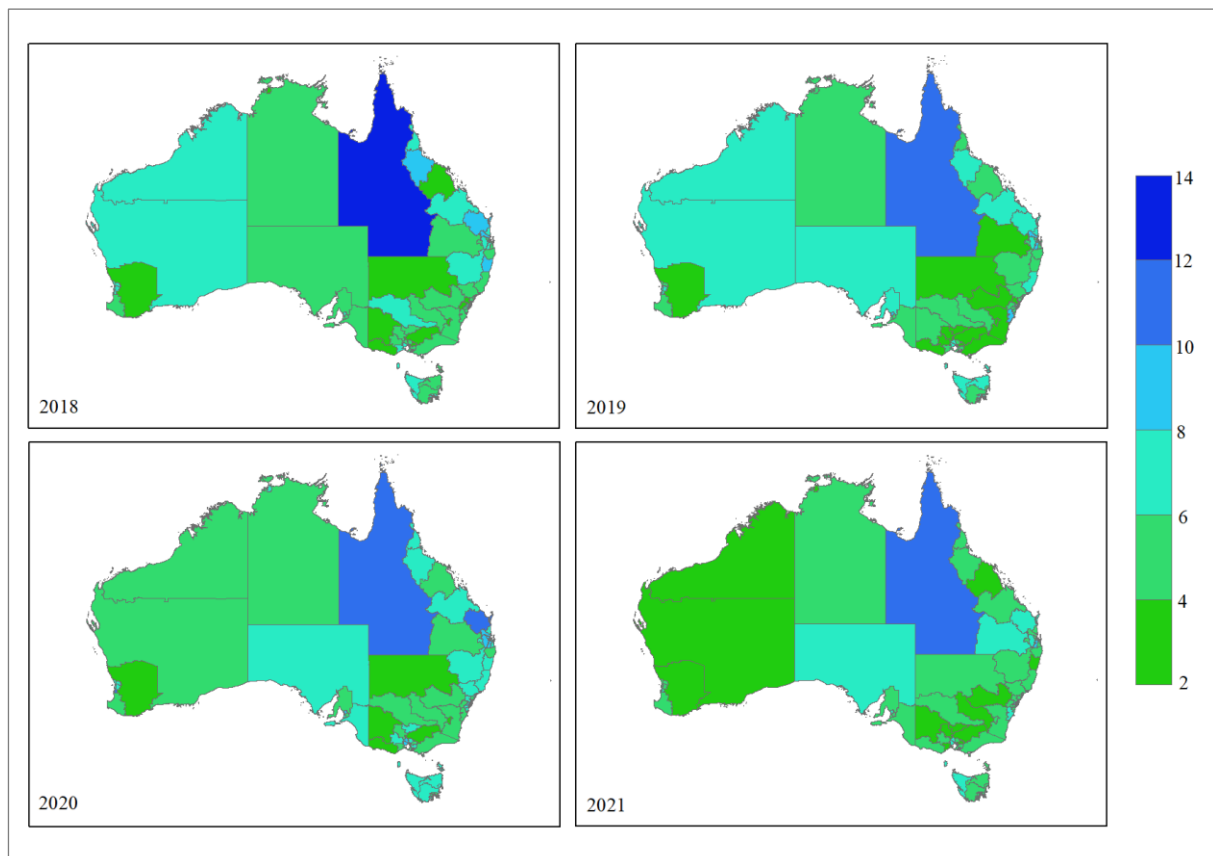


Figure 4: Average annual unemployment rate (%) SA4, 2018-2021

Source: Adapted from ABS (2021c).

Note: Darker green is improvement in unemployment rates (decrease), darker blue is worsening (increase).

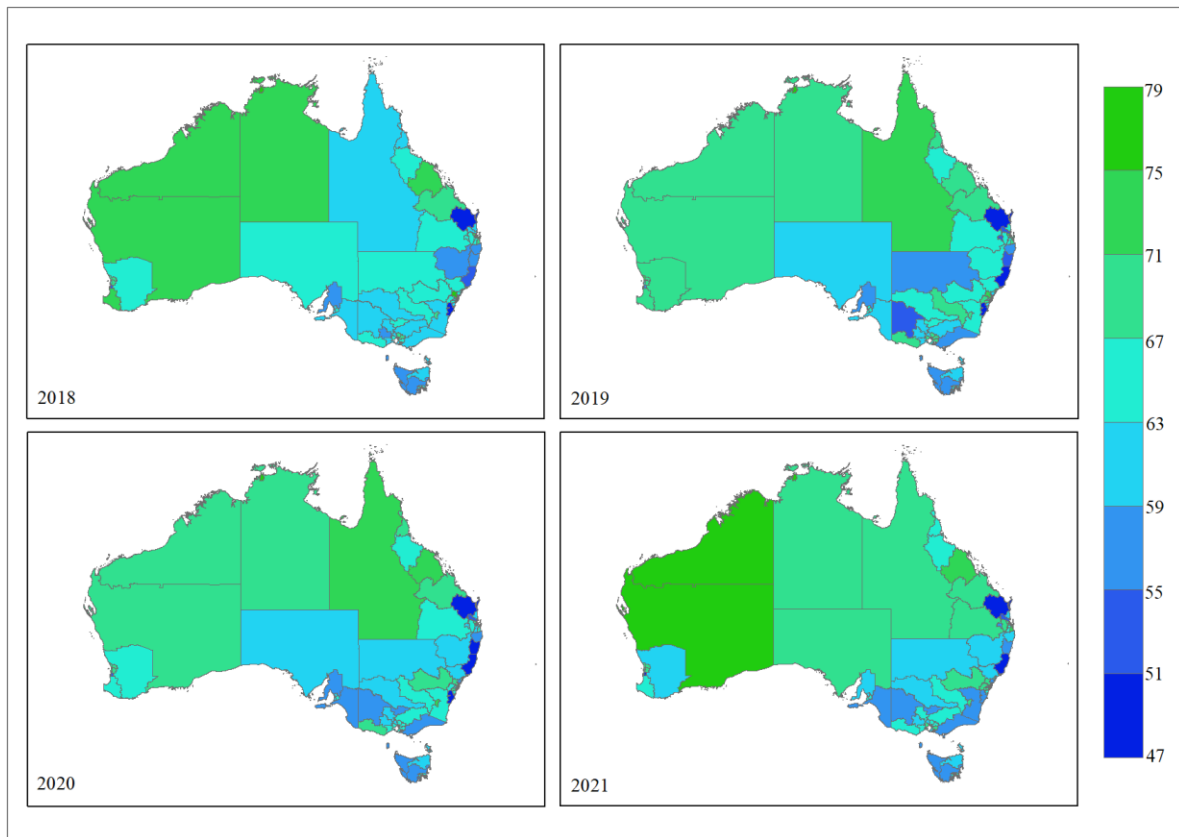


Figure 5: Average annual labour participation rate (%) by SA4, 2018-2021

Source: Adapted from ABS (2021c).

Note: Darker green is improvement in labour participation rates (increase), darker blue is worsening (decrease).

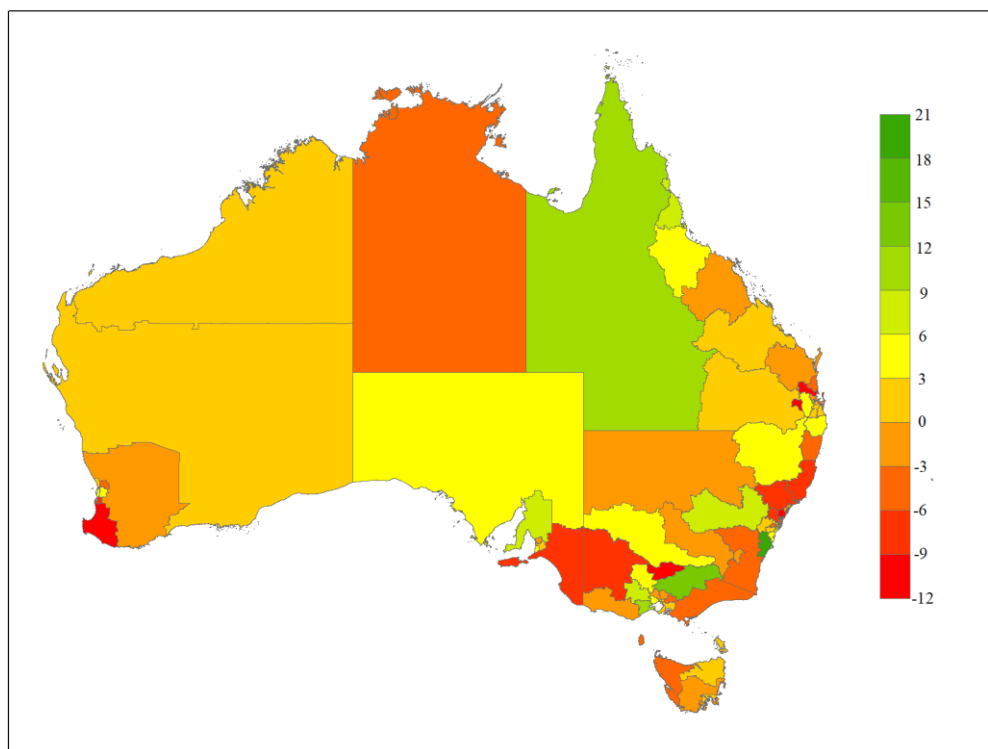


Figure 6: Percentage change in average labour participation rate by SA4, 2018-2021

Source: Adapted from ABS (2021c).

Note: Darker green shows more labour participating in employment over the period; darker red is negative change.

economies by GSP. The Northern Territory was the only state or territory with negative growth in GSP, experiencing greater unemployment and significant decline in the labour force participation rate of change across the periods for all SA4s. South Australia and Tasmania had comparatively higher percentage GSP growth rates over the period, though the major metropolitan areas of these states and territories experienced overall 2018-2021 unemployment decreases and positive labour participation changes.

Other states and territories also exhibited uneven GSP increases. Regional areas in Queensland (e.g., Outback) experienced higher unemployment rates than the rest of the nation, despite having the highest national labour participation growth rate across 2018-2021. Queensland coastal areas of Cairns, Townsville, Mackay and Fitzroy showed marked improvements in unemployment numbers, and little overall percentage change in their comparatively high labour participation over the 2018-2021 period. This perhaps pointed to the residential attractiveness of these regions for Queensland's workforce.

The experiences of regional Victoria and New South Wales were more varied. Some locations saw unemployment declines and labour force participation rate rises (Riverina, Central West - NSW; Hume - Vic); others saw rises in unemployment and falls in participation rates (Far West and Orana, Murray – NSW; Gippsland – Vic) through 2018-2021. Again, populations around Sydney and Melbourne were varied in their experiences in unemployment and participation movements. Western Australia appeared to operate differently to the rest of the country, with all SA4s seeing extremely low unemployment rates – even in highly remote locations. Perth also had relatively low unemployment across all SA4s compared to that of other metropolitan areas, with most of WA experiencing growth in participation rates – except for Bunbury which had one of the largest drops in the nation. The negative change in participation rate across WA regions is due to their high levels before the pandemic, and that there was a slight decline due to those who lost jobs as parts of the economy shut down. This is evident as most negative change is in the State's southwest where there was an increase in labour as many took refuge to escape Perth restrictions.

Overall, there were no drops in jobs available once COVID arrived. Figure 7 shows the percentage change in job vacancies of all states and territories, with the Northern Territory, South Australia and Western Australia all surpassing 100%. The rise in jobs may partly explain observed declines in unemployment and rises in labour force participation across the SA4s given that job vacancies were not evenly distributed across the states and territories or industries. Table 1 provides a measure of state and territory income using real gross income. The substantially higher percentage change - as a whole and per capita - points to the extraordinary wealth of Western Australia as underpinning why workforce trends function differently to those of other states and territories.

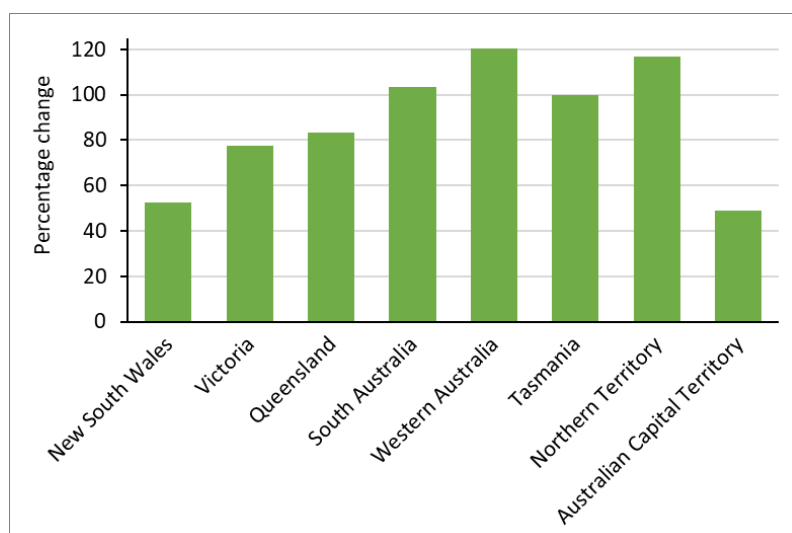


Figure 7: Percentage change in state and territory job vacancies, Feb 2020 to Nov 2021

Source: Adapted from ABS (2022b).

Table 1: Change in real gross state and territory income (RGSi), 2020-2021

	RGSi %	RGSi per capita %
New South Wales	1.6	1.2
Victoria	-0.3	-0.3
Queensland	0.2	-0.9
South Australia	5.2	4.6
Western Australia	18.1	17.0
Tasmania	5.5	4.8
Northern Territory	-3.9	-4.4
Australian Capital Territory	2.9	2.2
Australia	3.7	3.2

Source: Adapted from ABS (2022c)

4. Discussion and conclusions

COVID has profoundly changed how Australians live and work. While the technologies and capabilities existed before COVID, 2020 saw much of the Australian workforce become digitally hyper-mobile with the mass and sudden adoption of virtual meetings and working from home. The 2020 Families in Australia Survey found 67% were working from home compared to 42% before the pandemic (Baxter and Warren, 2021). Nonetheless, the degree of change depended on the industry sub-sector and an individuals' occupation type. Not all work was easily transferred to the online space, for example, those in the university sector adapted relatively quickly to online teaching whereas those in primary and secondary education found it more difficult. While some workplaces were forced to shut down as they were unable to operate virtually, other workplaces were deemed to deliver essential goods or services and continued to operate. For example, gyms and restaurants paused but those in health care and the resources industry commuted throughout the pandemic.

The changes experienced had different labour demographic implications across Australia, particularly given the extent that national industries relied on long-distance commuting before the pandemic.

Some of the influencing factors were the rules around shutdowns due to community lockdowns and border restrictions. These varied by state and territory, demonstrating the respective autonomies of states and territories over their citizens. The experiences of regions across the Australia states and territories were influenced by different industry profiles and border restrictions (Gilfillan, 2020; National Skills Commission, 2020). Given the relative limitations of ABS journey-to-work data to capture working-from-home arrangements, this paper examined regional labour force trends using ABS SLA4 labour participation and unemployment rates. The period of analysis, from 2018 to 2021, captures the timeframe immediately before and after the emergence of COVID-19 in Australia. This data is contextualised by the economic conditions of the respective states and territories using state and territory gross product (GSP), job vacancies and gross income data.

The results show that labour demand across the entire Western Australia, even remote areas, was much higher than other states and territories and resulted in the most significant improvements in unemployment and labour participation. This was reflected in a high increase in GSP, job vacancies and real gross state income due to a strong export demand for WA resources. Further, the WA labour market demonstrated a distinct pattern which was likely linked to its strict inter- and intra-state border closures inhibiting long-distance commuting – particularly from other states and territories. Interestingly, despite WA unemployment rate declines, Bunbury SA4 labour participation had the sharpest decline. This may be due to the increase in people moving away from Greater Perth metropolitan areas to WA's Southwest region during COVID restrictions. The large positive changes in unemployment and labour participation of the WA Outback SA4 may also reflect WA's fly-in / fly-out workers moving to the region rather than living in Perth, given intra-WA regional travel restrictions.

The resource state of Queensland did not follow this pattern, with the most remote SA4 (Queensland Outback) retaining the highest national unemployment rate despite gains in the labour participation rate. Interestingly, this area contains resource towns (Mt Isa and Cloncurry) which did not shut down like other Queensland towns dominated by tourism, leisure and entertainment. The uneven labour force changes of Queensland SA4's was different to WA as intra-state regional movement enabled FIFO workers to live and work in separate locations. Nonetheless, FIFO workers who had previously commuted from homes in New South Wales were forced to locate to Queensland. Despite the vulnerability of industries such as tourism and entertainment, the unemployment declines and relatively stable and high labour participation of coastal lifestyle areas likely reflects more people living in these regions and working elsewhere (e.g., mining).

The states of Victoria and New South Wales were the hardest hit by border closures and prolonged lockdowns (Jamaldeen, 2020; Mizen, 2021), experiencing the lowest nationally recorded gross state income changes, low job vacancies and percentage GSP changes. The labour demographic patterns in the regional and metropolitan areas of these states were varied, though the coastal lifestyle SA4's generally had the worst unemployment and labour participation rates. This was perhaps due to the household spending contractions of extended state lockdowns impacting the dominant industries (retail, tourism, leisure) in these towns (cf. Brinsden, 2021).

The higher unemployment and lower labour participation profile of the Northern Territory reflects a significant decline in job opportunities due to negative economic growth and that it was a 'COVID refugee' location. Indeed, despite hard Northern Territory border closures, many people entered as it was relatively COVID-free and provided a migration pathway into Western Australia (cf. Thompson, 2020). South Australia and Tasmania performed relatively well economically given their small economic sizes and that neither experienced extended lock downs (cf. Wright, 2021). Though improvements in labour market trends were concentrated in the metropolitan SA4s of Hobart, Launceston and Northeast, and Adelaide. Regional areas of these states did not demonstrate the same positive changes in unemployment and labour participation across the study period.

The findings of this paper show the varied experiences between and within states and territories. This was in part due to state and territory lockdown and border closure policies as well as respective industry economic profiles. Nonetheless, this research has limitations as it does not specifically breakdown findings by industry sector. This offers several avenues for future research exploration: first, around the relationship between industry sector and indicators of labour demographic change, such as labour participation and unemployment; and second, around the appropriate government policy responses to these changes at the different Federal, state, territory, regional or local levels. More comprehensive mapping and understanding labour force shifts over time will better capture the trajectories of regional labour markets, providing evidence to target specific policy outcomes at various levels of government. Indeed, the OECD (2021) suggests that policies must account for the diversity of industry sector, support labour reskilling and the uptake of technologies to assist labour demographic transitions and labour market functioning across Australia for different economy types.

Key messages

- Geographic mobility of labour facilitates a well-functioning labour market for Australia, particularly in terms of skill-matching and jobs in regional economies.
- Labour force change varied between and within states and territories due to differences in state and territory industry economic profiles and lockdown and border closure policies.
- More comprehensive mapping and understanding labour demographical shifts over time will better capture the trajectories of regional labour markets, enabling more specifically targeted policy outcomes.

Acknowledgments

I would like to acknowledge the contributions of Bo Guo, PhD candidate at the University of Western Australia, for his work on the figures and maps in this paper. In addition, I would like to acknowledge the support of the Australian Research Council (grant number DE170100727).

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