

A gender lens on the workforce impacts of the COVID-19 pandemic in Australia

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Abstract

This paper documents the impacts of the COVID-19 pandemic on the Australian workforce, analysed through a gender lens. A suite of labour market indicators, disaggregated by gender, is examined to identify the ways in which men and women were affected differently by the economic impacts of the pandemic as well as by government policy. Using ABS Labour Force Survey data, the paper develops a cumulative measure of workforce losses over the course of the pandemic, calculated comparatively for men and women, and assessed relative to the workforce's pre-pandemic composition. This measure finds that women experienced the bulk of the cumulative losses in employment throughout the first twelve months of the pandemic from March 2020 to February 2021 – equivalent to a 55 per cent share of total months of lost employment – despite comprising only 47 per cent of total employment prior to the pandemic. Younger women, especially, experienced a disproportionately higher share of employment losses. The Victorian workforce, where lockdowns were implemented for a longer period than in other states and territories, is highlighted as a case study of the disproportionate impact of the pandemic on women's employment. Applying a gender lens to this analysis can inform the application of gender responsive budgeting in the government's future policy-making processes. We also highlight the need to further disaggregate data through an intersectional lens to more fully understand the impacts of the pandemic on particular demographic cohorts of the workforce.

JEL Codes: H53, J16, J21

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1. Applying a gender lens to an analysis of the pandemic's impacts

As the COVID-19 pandemic erupted during the early months of 2020, the Australian and state governments responded with a range of measures to contain the spread of COVID-19, including implementing international and interstate border closures, lockdowns, social distancing and obligations on businesses to implement COVID-19 safety plans. To accompany these containment measures, governments provided a range of support programs designed to mitigate the economic impacts of the pandemic on individuals, households and businesses (Australian Treasury, 2021; Cassells and Duncan, 2020; Storen and Corrigan, 2020). In the words of the Prime Minister, the government's goal was "to save lives, and to save livelihoods" (Prime Minister of Australia, 2020a).

However, concerns were ignited that the repercussions of the pandemic would not be evenly distributed across society and that gender gaps in economic outcomes would be exacerbated, due to a confluence of factors. Firstly, many of the industries that were most acutely affected by the pandemic containment measures were female-dominated or large employers of women, reflective of the gender segregated nature of the Australian workforce (Lind and Colquhoun, 2021; Senate Finance and Public Administration Committee, 2017). Secondly, risks emerged that the changes in household activities brought about by the pandemic, such as the shift to home-learning during school closures, would see a shift towards a traditional allocation of household roles. Concerns arose that men would be more likely to prioritise their traditional role as the breadwinner, while women would be expected to take responsibility for the heightened demands of unpaid care, housework and home-learning. Thirdly, concerns were raised that government support predominantly assisted male-dominated industries and occupations (Wood, Griffiths and Crowley, 2021). Fourth, many of the occupations that experienced intensified pressure and demand for their services during the pandemic – such as frontline nurses, aged care workers, mental health workers, education and training workers – are female-dominated. This presented a higher risk of mental health distress and burnout among the female workforce. Collectively these factors meant that the pandemic posed the risk of stalling, or even worsening, progress in closing the gender gaps that already existed in Australia's workforce (Cassells and Duncan, 2021; WGEA, 2020; World Economic Forum, 2021).

While many previous analyses of the impacts of the pandemic and policy responses have disaggregated the data by gender, this paper contributes to existing literature by contextualising this analysis as an example of gender impact assessment (European Institute for Gender Equality, undated; Sharp and Broomhill, 2013; UN Women, undated). This process of applying a gender lens to analyse the impacts of an economic shock or policy – even one that seems gender-neutral – enables us to detect gender-patterned impacts which could have unintended impacts on gender equity goals. In the context of policy analysis, this process is known as Gender Responsive Budgeting (GRB). The pandemic provides a case study to illustrate the insights that

can be gained by applying a gender lens, which can inform the design of more effective and gender equitable policy responses in the future.¹

To give an example: the government's policy package to support households during the pandemic included making childcare free for several months during the beginning of the pandemic when lockdowns were in place and schools were closed. Gender patterns in the unpaid care of children in Australian society meant that the temporary free childcare policy had larger implications for women's employment than for men (Craig, 2020; Hand, Baxter, Carroll and Budinski, 2020).

The economic conditions underlying the pandemic are also part of this picture, because the spread of the virus, as well as the containment measures enacted to try to suppress the spread, had the effect of curtailing economic activity. During the first twelve months of the pandemic, Australia experienced two major waves in case numbers. The first wave peaked on 30 March 2020 (with a 7-day rolling average case count of 382 cases daily) and the second wave peaked on 4 August 2020 (with a seven-day rolling average case count of 551 cases daily) (Ritchie *et al.*, 2021). Correspondingly, Australia's GDP declined by 0.3 per cent in the March quarter of 2020, and a further 7 per cent in the June quarter of 2020 (ABS, 2021a). This constituted the first recession for the Australian economy since the early 1990s, and saw the national unemployment rate peak at 7.4 per cent for men and 7.5 per cent for women in July 2020 (ABS, 2021b). This compares to previous economic downturns in Australia, where job losses were concentrated among men (Figure 1). In the 1990s recession, the national unemployment rate peaked for men at 12.0 per cent and 10.1 per cent for women (ABS, 2021b). This comparison alone implies that a different set of policy responses are likely to be needed.

1 In this paper, unless otherwise specified, gender is defined according to the binary classification, owing to the way that the data has been collected. We acknowledge the individuals who identify with genders beyond this binary definition and highlight this as an area for future data improvements.

Figure 1. Change in employment during economic downturns by gender, Australia

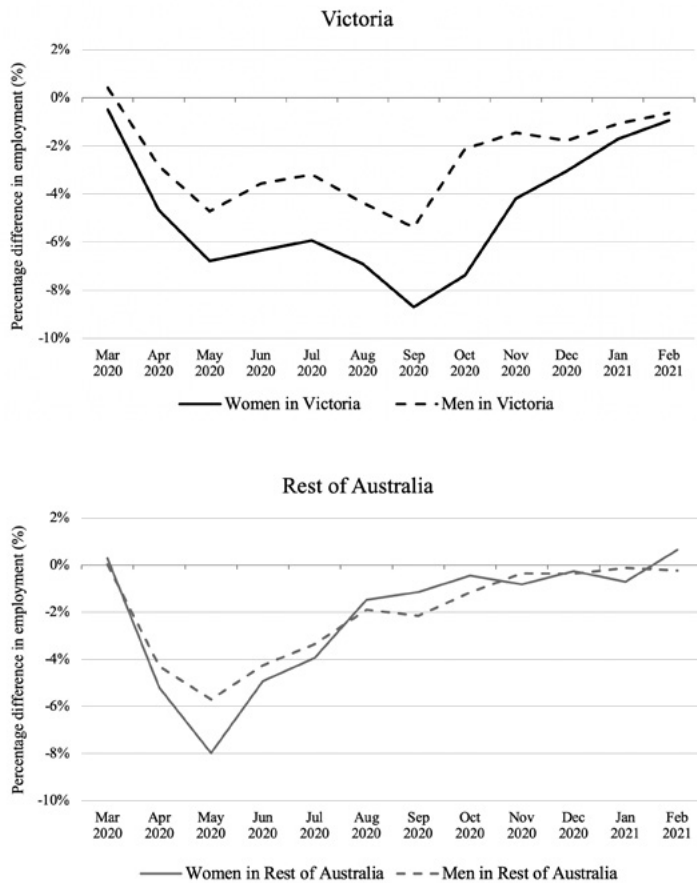


Source: Authors' calculations using ABS Labour Force, Australia. Seasonally-adjusted data series. Net change in national employment measured from the pre-period to the peak of each economic downturn.

The gendered impact of the COVID-19 pandemic has been particularly evident when comparing men's and women's rates of workforce participation. Women's labour force participation rate nationally fell to its lowest point to 57.5 per cent in May 2020, declining by 3.7 percentage points in the space of three months. Men's labour force participation rate declined to 68.0 per cent, a fall of 2.8 percentage points (ABS, 2021b). In the September quarter of 2020, GDP growth turned positive, marking the start of the Australian economy's recovery which has continued, to date, throughout 2021 (ABS, 2021b).

Most of the second wave of COVID-19 cases in Australia occurred in the state of Victoria (Australian Government Department of Health, 2021). Because Victoria consequently endured a second COVID-19 lockdown from June 2020 to November 2020, the negative impacts on the Victorian economy were more prolonged compared to the national economy. Victoria's state final demand contracted for a third straight quarter in September 2020. Throughout 2020, Victorian men's unemployment rate reached a high of 7.0 per cent in June 2020, while Victorian women's unemployment rate kept climbing to a high of 8.6 per cent in October 2020. Victoria's labour force participation rate fell to its lowest point in September 2020, to 68.2 per cent among men and 57.7 per cent among women. It was not until December 2020 that the Victorian economy saw a rebound in state final demand (ABS, 2021a). Overall, throughout the first twelve months of the pandemic, Victorian women experienced a deeper fall in employment, relative both to Victorian men and to women elsewhere in Australia, indicative of the disproportionate effect of the pandemic on women's employment (Figure 2).

Figure 2. Percentage change in employment, by gender, Victoria and Rest of Australia



Source: Authors' calculations using ABS Labour Force, Australia. Seasonally-adjusted data series. Percentage difference relative to monthly average of pre-pandemic quarter.

One of the key components of the Australian Government's support package during the pandemic was the introduction of a financial payment for workers whose jobs and employment income were at risk. The scheme was designed to financially compensate workers for lost earnings, as well as preserve the connections between employees and their employers while the economy went into 'hibernation' during the pandemic (Prime Minister of Australia, 2020a). The Australian Government's JobKeeper scheme provided a flat-rate fortnightly pre-tax payment of \$1500 per worker. The JobKeeper scheme was announced at the end of March 2020 and the

first payments were processed in early May 2020 (Senate Select Committee on COVID-19, 2020). It was available to permanent part-time, full-time and long-term casual staff of eligible businesses that suffered a reduction in turnover of at least 30 per cent (for businesses with a turnover of \$1 billion or less) or at least 50 per cent (for businesses with a turnover of over \$1 billion). Eligibility conditions applied and many workers were out of scope, including casual staff who did not have 12 months of continuous employment, temporary visa holders, and employees of universities and local governments. Workers in the early childhood education and care sector became ineligible for the payment in July 2020, coinciding with the end of free childcare which had been offered from April 2020 as part of the Australian Government's pandemic response. In September 2020, the JobKeeper payment was scaled back and differentiated rates were set for full-time and part-time workers. The fortnightly payment was lowered to \$1000 for fulltime workers and \$650 for part-time workers. The JobKeeper scheme ended in March 2021.

2. What do we know so far about the gender-patterned impacts of the COVID-19 pandemic?

The prolific body of research has been undertaken in the last 18 months examining the gender-patterned impacts of the pandemic. Early analyses highlighted the different nature of the pandemic's shock on the economy compared to previous recessions in Australia, with female-dominated services industries being most vulnerable to job losses and business closures as a result of the pandemic and containment policies such as school closures (Cassells, Duncan, Kiely and Mavisakalyan, 2020). Also distinct from previous economic downturns, women's capacity to maintain their connection to the workforce during the pandemic was jeopardised by school closures, enacted at various times throughout the pandemic to help contain the spread of COVID-19 within the wider community (Hérault, Kabátek, Kalb, and Meeke, 2020). The tendency for women, more so than men, to assume a larger share of unpaid care tasks within the household, including home-schooling, meant that women's workforce participation was more sensitive to school closures. The higher health risks of COVID-19 among elderly and vulnerable cohorts of the population also had the potential to suppress women's capacity to continue their paid workforce involvement, given that women are more likely than men to have responsibility for caring for others, including their elderly family members and people living with a disability (Craig and Churchill, 2021).

Warnings about the potential for the crisis of the pandemic have even more severe economic impacts on women, and repercussions for gender equality, were raised globally (Alon, Doepke, Olmstead-Rumsey and Tertilt, 2020; Baird and Hill, 2020; United Nations, 2020; UN Women, 2020). These early analyses flagged the importance of government taking the gender-patterned impacts into account when forming their policy responses.

As the months of the pandemic unfolded, studies continued to monitor a range of labour market indicators according to gender, including employment, hours worked, unemployment, under-employment and workforce participation rates. Forecasts that women's economic opportunities would be more severely impacted by the pandemic

than men's came to fruition (Wood, Griffiths and Crowley, 2021; Workplace Gender Equality Agency, 2020). Churchill (2021) provides a comprehensive documentation of Australia's labour force statistics throughout the pandemic up to June 2020, using ABS Labour Force Survey data disaggregated by gender and age. This analysis detected that younger women experienced a greater worsening in employment outcomes than other cohorts, and cautioned that gains in women's workforce outcomes could be eroded by the pandemic unless governments provided targeted support and opportunities for younger cohorts. Similarly, the Melbourne Institute, using their Taking the Pulse of the Nation Survey, detected that women, especially younger women, experienced a larger percentage point rise in unemployment than men during the first two months of the pandemic, although men were more likely to experience a reduction in hours (Broadway, Payne, and Salamanca, 2020). Kalb, Guillou and Meeke (2020) provided an informative picture of gender-based changes in ABS labour force indicators over the course of the pandemic up to December 2020, also disaggregating by geographic region, and parental and relationship status. Using the ABS Labour Force Survey and Weekly Payroll Jobs and Wages data to measure impacts by gender, Gilfillan (2020) calculated that, between two data points of March 2020 and October 2020, men experienced slightly more losses in jobs than women when calculated as a percentage loss. This analysis also computed that men experienced a larger loss in wages, attributable to proportionally more men than women working full-time rather than part-time.

International studies illustrate that similar gender-patterned impacts were being felt globally (UN Women, 2020). In their gender analysis of the first two months of the pandemic in Canada, Lemieux, Milligan, Schirle and Skuterud (2020) detected a larger job loss and fall in aggregate hours of work among women, compared to men, during these early stages. Over a longer time horizon, an analysis of Canadian employment data from February to October 2020, by Fuller and Qian (2021), detected a larger net loss in employment among women than men. This analysis found that the gender differential was driven by men's employment recovering more strongly than women's as the economy recovered, with job recovery particularly weak among women with children. Educational qualifications influenced job losses and recoveries: in this Canadian analysis, women with lower educational qualifications experienced larger job losses during the initial months of the pandemic, owing to their higher likelihood of being employed in service jobs that could not be done from home. Women with higher educational qualifications experienced less of an initial fall in jobs, but their employment was weaker to recover than less educated women, in part because service jobs could return when restrictions were lifted. School closures have been linked to women's disproportionate share of job losses. In the US, the states that offered mostly remote instruction during the pandemic experienced a larger widening between men and women's workforce participation rates (Collins, Ruppanner, Landivar and Scarborough, 2021).

Changes in the allocation of unpaid domestic work and care within households has been a complementary part of the gender analysis of the impact of the COVID pandemic. Some analyses, such as a study of UK households by Chung, Birkett, Forbes and Seo (2021), detected that the shift to working-from-home among both men and

women could result in a more gender equitable sharing of housework and caring for children at home. However, surveys of Australian households have detected that, despite the average number of hours spent on unpaid housework and care rising among both men and women, overall women increased their hours of unpaid housework and care even more than men (Craig, 2020; Craig and Churchill, 2020). A similar shift towards traditional gender roles was also observed in studies of US households (Dunatchik, Gerson, Glass, Jacobs and Stritzel, 2021). A study of multiple countries, including Germany, Singapore and the US, detected that men and women's attitudes towards gender roles in society could be reshaped by their own and their partner's labour market experiences throughout the pandemic (Reichelt, Makovi, and Sargsyan, 2020). However, the question of whether the shift towards working-from-home will have the effect of either re-entrenching or dismantling traditional gender norms is an issue for researchers to continue to monitor over time (Ibarra, Gillard and Chamorro-Premuzic, 2020).

Another key focus of gender-based analyses has been the impacts of the pandemic on family relationships and rates of violence against women, with researchers drawing a link between the pressures of the pandemic and restrictions on mobility, and a higher incidence of family and domestic violence (O'Sullivan, Rahamathulla and Pawar, 2020). In addition to clear repercussions for women's safety and wellbeing, the threat or incidence of family and domestic violence is also a factor that influences women's workforce participation and economic security.

We contribute to this existing body of work by offering a statistical measure of labour market impact that encompass both the initial impacts of the pandemic and the Australian economy's climb towards recovery. This contributes to understanding the forces that shaped the pandemic's impact on the Australian labour market, including the influence of gender norms and the gender-segregated nature of Australia's workforce composition, as well as the potential for government policy responses to have different implications for men and women's economic opportunities and outcomes.

3. Analytical approach

3.1 Measuring the cumulative impacts of the pandemic over time

Many existing studies have analysed the effects of the pandemic by simply comparing numbers across points-in-time, commonly using the month of either February or March 2020 as a starting point. A more innovative approach is demonstrated by Lemieux, Milligan, Schirle and Skuterud (2020), who use difference-in-differences in their gender analysis of the Canadian labour market. They compare the change in employment between the months of February 2020 and April 2020 to the change employment between same two months in 2018. We expand on these approaches in two key ways.

Firstly, to assess the impact of the pandemic, we examine monthly labour market data during the pandemic relative to the pre-pandemic quarter. This pre-pandemic reference point is computed by taking the three-month average for the indicator of interest for December 2019, January 2020 and February 2020. We use seasonally-adjusted data where available which controls for calendar-patterned, seasonal factors. We acknowledge that our pre-pandemic reference period unintendedly coincides with

the bushfires and other natural disasters that Australia experienced during the summer of 2019-2020. To the extent that the bushfires and other natural disasters suppressed workforce opportunities during the pre-pandemic quarter, our analysis under-states the impact of the pandemic. Using the latest data available, our analysis extends up to March 2021, which also corresponds to the date that one of the key forms of Australian Government support, the JobKeeper scheme, came to an end.

Secondly, we recognise that measuring the workforce impacts of the pandemic by comparing static data points in time fails to fully represent the effects of all the units of time that are spent out of the workforce between these data points. In the context of examining the gender-patterned impacts of the pandemic, Mooi-Reci and Risman (2021, p.165) highlight that “prolonged unemployment spells lead to erosion of skills and talents, loss of social connections and networks, fewer employment prospects, and greater job insecurity”, pointing to the value of considering cumulative losses, not just comparative snapshots in time. Looking only at point-in-time comparisons overlooks the deleterious effects that time spent out of employment can bring. Unemployment has immediate impacts on individuals, with a loss of earnings and increased probability of distressed mental health (Bartelink, Zay, Guldbbrandsson, and Bremberg, 2020).

Furthermore, time spent out of the workforce can be especially erosive for workers during periods of economic downturn. Entering the labour force during periods of high unemployment can bring costs to new job seekers, including a lesser likelihood of achieving a job match that makes best use of their skills and a lengthier period of job search (Bell, Codreamu and Machin, 2020; Borland, 2020). Workers who experience an interruption to their employment can suffer a deterioration of skills and miss out on the ongoing accumulation of on-the-job experience that benefits those who retain employment. Those who have experienced a break in employment can lose the continuity of service required for eligibility for certain leave benefits such as parental and long service leave.

These labour market scarring effects have been found to persevere for up to ten years, translating into lower wages and a lower likelihood of employment for the individual than would otherwise be experienced. There is a gender dimension to this, as previous research has found that entering the workforce at a time of high unemployment has a more severe long-term effect on women than on men (Andrews, Deutscher, Hambur and Hansell, 2020). A one percentage point increase in the youth unemployment rate at the time of entry into the workforce corresponds to a 1.5 per cent decrease in earnings among women and 1.8 per cent decrease in earnings among men during their first year of employment. After five years, this translates into a 0.7 per cent decrease in earnings among women and a 0.6 per cent decrease in earnings among men, which stretches to a 0.4 per cent decrease in earnings among women and a 0.1 per cent increase in earnings among men after ten years. Even for those workers who retain their employment during periods of recession, the experience of being employed in a job that is below their skill requirements, or of working fewer hours than they are seeking, also means forgone earnings and productivity.

To account for these effects, we develop a measurement of the impact of the pandemic that sums up the labour market losses experienced at each month of the pandemic, generating a cumulative measure of units of employment lost over time.

We compute these cumulative losses using the formula expressed in Equation 1. The labour force indicator of interest is denoted by y , and cumulative losses are denoted correspondingly by Y . Units of time are denoted by t , where $t = 1$ corresponds to March 2020. We calculate these cumulative losses separately for each gender, represented by K . The pre-pandemic level used in the analysis as a reference level for comparison is represented by y^* , computed as the average value of the preceding three months.

$$\sum_{i=1}^t Y_K = (y_{Kt} - y_K^*) \text{ where } y_K^* = \frac{y_{K(t-1)} + y_{K(t-2)} + y_{K(t-3)}}{3} \quad (\text{Equation 1})$$

For our measures of employment and labour force participation, this formula generates a cumulative measure of the number of months that individuals were no longer employed or participating actively in the workforce throughout the pandemic. For our measures of unemployment and under-employment, this formula generates a cumulative measure of the number of additional months in which individuals were in states of unemployment or under-employment during the pandemic. This methodological approach overcomes a shortcoming of static point-in-time comparison measurements, where subsequent periods of recovery fail to fully represent the effects of the forgone months of employment that occurred prior.

While we focus on labour force indicators, we recognise that measuring the full costs of the pandemic is a more complex exercise beyond the aim of this study. Beyond jobs, there are many additional factors to consider when quantifying potential impacts. These include the repercussions of educational disruptions for young people's future economic prospects (Foster, 2020) and the impacts on safety, violence, mental health and other dimensions of wellbeing, which can also be gender-patterned (Broadway, Mendez, and Moschion, 2020). Researchers have also made the perceptive point that the capacity for the pandemic to destabilise traditional gender norms, including in ways that some individuals might find confronting, could prompt anxiety and other negative repercussions for health and wellbeing (Ruppanner, Tan, Scarborough, Landivar and Collins, 2021). Furthermore, we highlight that quantifying the net costs of COVID-19 containment measures would require comparing the outcomes that were observed during the pandemic relative to the outcomes that would otherwise have been experienced if containment measures were not taken, which is also beyond the scope of this study.

A further strength of our analysis is that we assess gender-disaggregated changes in workforce indicators relative to the gender composition of the workforce that was observed pre-pandemic. That is, the relative falls in employment experienced by men and women are compared to each gender's respective share of total employment to begin with. This provides a more accurate reference point by which to measure the gender-disaggregated changes that occurred.

3.2 Data

Our analysis uses labour force data collected monthly by the Australian Bureau of Statistics (ABS). The ABS Labour Force Survey is a survey of Australia's residential population aged 15 years and older, with a sample size approximately 26,000 dwellings which generates a sample of approximately 50,000 people (ABS, 2021d). One-eighth of the sample is rotated out of the sample each month and a dwelling from the same geographical area recruited into the sample to replace them. The sample covers approximately 0.32 per cent of Australia's residential population aged 15 years and over. The ABS makes seasonally-adjusted data available at monthly intervals for aggregate labour force indicators, disaggregated according to several demographic characteristics include gender and age. A limitation of the Labour Force Survey is that it excludes temporary residents from the respondent sample (for example, migrants on temporary visas) who are part of the workforce. However, data on the composition of temporary visa holders in Australia show that, although there is gender variation within some visa subclasses, visa holders are not significantly unbalanced in gender composition overall (Australia Government Department of Immigration and Border Protection, 2016). We infer that their exclusion from the sample is unlikely to drive any of the gender differentials we might observe in the data.

Employment data that are disaggregated according to workers' industry, occupation and educational qualifications are made available by the ABS at quarterly intervals, and only in original data series form. Because these disaggregations are only available at quarterly point-in-time intervals, cumulative losses or gains cannot be meaningfully calculated as part of our analysis. We approach these quarterly data as a sequential set of data points that must be examined collectively, again as distinct from simply comparing the first and most-recent point in time.

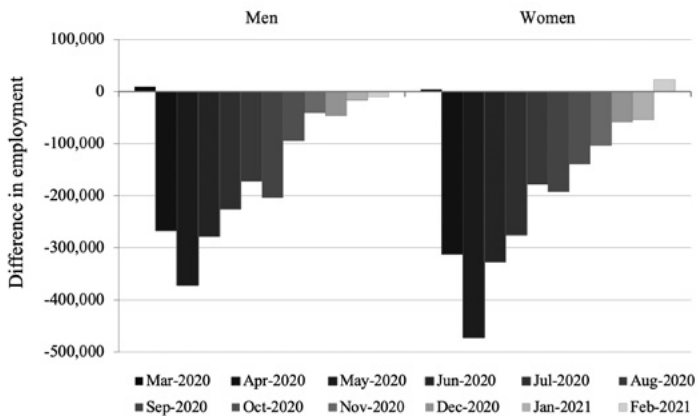
In addition to employment numbers, we examine gender-specific rates of unemployment (a measure of the people who are actively looking for paid work and available to start work within the next four weeks), under-employment (a measure of the people who are employed but working fewer hours than they are seeking), and the labour force participation rate (a measure of people of working age who are either employed or actively looking for and available to start work).

Workers who retained their employment and income through the Australian Government's JobKeeper scheme are classified in the ABS data as employed, regardless of how many hours they worked. This means that workers who worked zero hours, but retained their job through the JobKeeper scheme, are counted in the employment numbers. In this respect, the employment numbers can primarily be interpreted as a measure of job retention and income security. Treasury's analysis of the uptake of the JobKeeper scheme found that women constituted 47.1 per cent of JobKeeper recipients nationally during the month of April 2020 (Australian Treasury, 2020b). Compared to females' share of private sector employment prior to the pandemic, Treasury's analysis found that women were over-represented among JobKeeper recipients. This is indicative, at least in part, of women's over-representation among the workforce sectors that were most affected by the pandemic restrictions. Workers who were ineligible for JobKeeper, who were made unemployed, or who dropped out of the workforce completely, were not counted among the JobKeeper numbers.

4. Results

Firstly, we inspect the effect of the pandemic on aggregate employment numbers. The monthly change in the number of people in employment, disaggregated by gender, is illustrated in Figure 3. Women experienced a larger fall in aggregate employment numbers relative to men, most sharply during the first two months of the pandemic. In May 2020, by the time lockdowns had been enacted across all jurisdictions, around 472,000 fewer women and 371,000 fewer men were employed relative to pre-pandemic levels. Summing these losses over a twelve-month time-period (March 2020 to February 2021), the cumulative loss in employment status amounts to a net loss of 2,084,881 months of employment for women, and 1,716,182 months of employment for men (Table 1). Proportionally, women experienced 54.8 per cent of these cumulative employment losses, meaning they were over-represented relative to their 47.4 per cent share of pre-pandemic total employment. Women's over-representation is evident in both the full-time and part-time workforces. While women comprised 37.7 per cent of the pre-pandemic full-time workforce, they experienced 43.2 per cent of cumulative losses in total full-time employment. While comprising 68.1 per cent of the pre-pandemic part-time workforce, women experienced 72.4 per cent of cumulative losses in part-time employment.

Figure 3. Change in employment relative to pre-pandemic levels, by gender, Australia



Source: Authors' calculations using ABS Labour Force, Australia. Seasonally-adjusted data series. Difference in employment for each month, relative to the monthly average of the pre-pandemic quarter.

Table 1. Cumulative change in aggregate labour force indicators relative to pre-pandemic quarter, by gender, Australia

Month	Change in employment		Change in full-time employment		Change in part-time employment		Change in unemployment		Change in under-employment		Change in labour force	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Mar 2020	4,958	4,243	11,991	-7,058	-3,081	11,301	4,969	11,678	38,068	3,871	13,832	15,921
April 2020	91,163	-312,245	-113,605	-106,433	-152,961	-205,812	91,169	47,150	397,182	246,002	-175,368	-265,095
May 2020	111,015	-472,048	-165,720	-150,390	-205,676	-321,658	110,969	98,667	357,350	170,759	-260,368	-373,380
June 2020	140,668	-326,791	-178,926	-151,297	-99,067	-175,494	140,669	135,344	293,684	98,690	-137,368	-191,447
July 2020	144,066	-274,718	-172,362	-129,735	-53,001	-144,983	144,069	153,411	268,109	88,271	-81,268	-121,306
Aug 2020	112,694	-178,412	-151,986	-120,634	-20,615	-57,779	112,669	95,730	278,312	89,377	-59,868	-82,683
Sep 2020	118,267	-192,032	-198,952	-118,880	-4,354	-73,152	118,269	101,351	286,399	92,947	-85,068	-90,681
Oct 2020	116,679	-139,077	-104,171	-118,153	9,982	-20,924	116,669	127,455	185,683	80,688	22,532	-11,621
Nov 2020	94,650	-103,454	-64,196	-77,775	23,766	-25,679	94,669	140,926	103,632	21,159	54,232	37,472
Dec 2020	99,659	-58,599	-72,533	-43,755	26,300	-14,845	99,669	101,289	37,142	-24,285	53,432	42,690
Jan 2021	92,624	-54,311	-49,680	-16,273	32,567	-38,038	92,569	83,984	31,963	-54,379	75,532	29,673
Feb 2021	65,712	22,563	-37,499	54,357	27,395	-31,793	65,669	38,184	44,045	-45,070	55,832	60,747
Cumulative change up to Feb 2021	1,192,156	-2,084,881	-1,297,638	-986,025	-418,544	-1,098,855	1,192,026	1,135,170	2,321,568	768,030	-523,913	-949,710
Gender share of cumulative change	51.2%	54.8%	56.8%	43.2%	27.6%	72.4%	51.2%	48.8%	75.1%	24.9%	35.6%	64.4%
Gender share pre-pandemic	54.1%	47.4%	62.3%	37.7%	31.9%	68.1%	54.1%	45.9%	41.1%	58.9%	52.7%	47.3%

Source: Authors' calculations using ABS Labour Force, Australia. Seasonally-adjusted data, May 2021 release. Data refers to change in number of people relative to the pre-pandemic level for the respective indicator, which is computed as the three-month average of December 2019, January 2020 and February 2020.

Turning towards unemployment numbers, a larger absolute number of men experienced unemployment, but women were over-represented relative to their pre-pandemic share. Women constituted 45.9 per cent of pre-pandemic total unemployment, but 48.8 per cent of the cumulative increase in unemployment over this twelve-month period.

In the face of higher unemployment prospects, labour force participation numbers reflect, in part, the extent to which jobseekers stepped out of the workforce completely. A decline in the number of people in the workforce can not only reflect jobseekers' disillusioned response to the difficulty of finding work, but also the challenges of maintaining a paid job while caring for family members during the pandemic. Surveys of Australian households inform us that, on average, women were taking on the bulk of the additional domestic caring, parenting and home-schooling responsibilities that arose during the pandemic (Craig, 2020; Craig and Churchill, 2020). While women constituted 47.3 per cent of the Australian labour force pre-pandemic, they represented 64.4 per cent of the cumulative decline in labour force numbers throughout the pandemic. This indicates that women's job losses were more likely than men's to be absorbed through a withdrawal from the labour force, more so than through a rise in unemployment.

A weakening in labour market opportunities can also take the form of under-employment, where a worker remains employed but receives fewer hours of work than they would like. Pre-pandemic, women's under-employment already notably exceeded that of men's. Both men's and women's under-employment numbers rose throughout the pandemic, but men were over-represented relative to their pre-pandemic share. This can be attributed, at least in part, to women's higher levels of under-employment to begin with, combined with men's over-representation in full-time employment and overtime hours, which provides more scope for men's hours to be curtailed while still retaining their job. Comparatively, weakened labour market opportunities for women were more likely to take the form of job losses or workers stepping out of the labour force completely. These dynamics were observed despite the availability of the JobKeeper scheme that aimed to sustain workers' attachment to their employer, even if it meant working fewer or zero hours.

Changes in hours worked provide further insight into gender-patterned differences in how the pandemic affected intensity of workforce participation (Table 2). A comparison of women's share of cumulative changes in employment numbers relative to their pre-pandemic gender share shows that women were over-represented in the net declines in employment within the 35-39 hours and 40-44 hours categories. It is most likely that these workers experienced either a reduction in hours or a job loss, although it is also conceivable that some women who shifted out of these categories could have moved into categories that demanded even more hours, due to higher demand for their services during the pandemic. This is a possibility if we consider, for example, the intensified need for female-concentrated occupations such as nurses and aged care workers. This also reflects a distinction that governments made between the essential and non-essential workforce when declaring which types of economic activity could continue as part of their containment measures. An earlier study of the impact of the pandemic on the Dutch labour market found that gender gaps in labour force impacts were not as profound in non-essential occupations (Meekes, Hassink and Kalb, 2020).

In all other categories of hours worked, men experienced a relatively larger share of job losses relative to their pre-pandemic share. Looking at workers who work more than 45 hours weekly, men comprised at least 70 per cent of the workers in these categories pre-pandemic, but were more likely than women to move to another category, implying a decline in hours. Women comprised at least 60 per cent of workers who worked up to 34 hours per week pre-pandemic, yet they experienced only between 33 per cent to 46 per cent of total job losses in this category of hours worked.

Table 2. Change in employment, relative to pre-pandemic levels, by gender and hours worked

<i>Weekly hours worked</i>	<i>Cumulative change up to Feb 2021</i>		<i>Gender share of cumulative change</i>		<i>Gender share of pre-pandemic employment</i>	
	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>
0 hours (Did not work)	-1,181,486	-1,096,146	51.9%	48.1%	46.4%	53.6%
1-9 hours	400,857	345,932	53.7%	46.3%	38.3%	61.7%
10-19 hours	320,242	226,260	58.6%	41.4%	35.4%	64.6%
20-29 hours	717,932	480,513	59.9%	40.1%	36.2%	63.8%
30-34 hours	1,777,512	881,868	66.8%	33.2%	41.2%	58.8%
35-39 hours	-621,987	-1,026,286	37.7%	62.3%	53.2%	46.8%
40-44 hours	-895,738	-1,307,329	40.7%	59.3%	62.3%	37.7%
45-49 hours	-830,754	-316,729	72.4%	27.6%	69.1%	30.9%
50-59 hours	-808,630	-107,603	88.3%	11.7%	73.5%	26.5%
60-69 hours	-339,946	-58,106	85.4%	14.6%	76.1%	23.9%
70 hours or more	-380,260	-57,127	86.9%	13.1%	80.1%	19.9%

Source: Authors' calculations using ABS Labour Force, Australia, Detailed. Original series data available monthly.

Partly, signs of labour market recovery reflect new entrants joining the workforce, and not necessarily displaced workers regaining employment. This is evident in our analysis of net employment changes by age cohort, as it is not possible for most people to change their age cohort within the period under analysis. Mid-age and older age cohorts experienced net employment gains during the recovery, while younger age groups experienced net losses, which were largest amongst young women (Table 3). Cumulatively, by far it was women aged 15 to 24 years who shouldered the largest number of employment losses throughout the first twelve months of the pandemic. Partly these age-based differentials reflect younger workers' higher share of casual employment, which pre-disposes them to a higher chance of losing their job if employers are more inclined to hold on to permanent and full-time staff during precarious times. The gender differences in net employment losses are profoundly observable when comparing younger-aged women to younger-aged men (Figures 4 and 5). Gender differentials within a given age group can also be attributed to parental and other care pressures falling disproportionately on women throughout the pandemic.

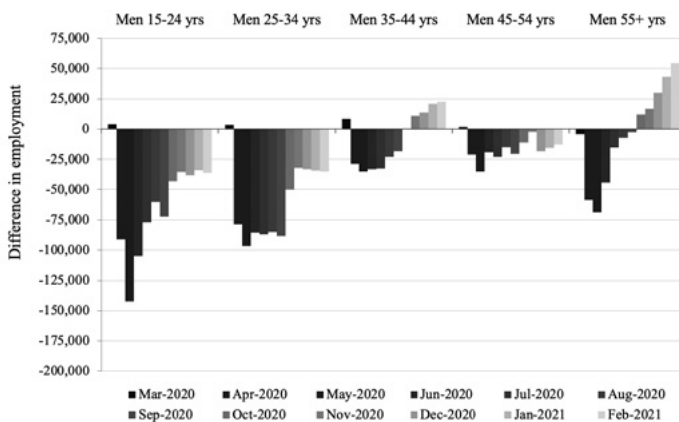
Compared to younger women, older women's net employment numbers increased. The entry of a larger number of older-aged workers into the workforce during this period of economic pressure could reflect an 'added worker effect', where additional members of the household join the workforce during times of economic precariousness, as a way of buffering total household income. However, despite older women exhibiting net employment gains over this time period, older men made up the disproportionate share of net gains in employment among the older age cohorts.

Table 3. Cumulative change in employment, relative to pre-pandemic levels, by gender and age

Age group	Cumulative change up to Feb 2021		Gender share of cumulative change		Gender share of pre-pandemic employment	
	Men	Women	Men	Women	Men	Women
15-24 years	-729,663	-954,331	43.3%	56.7%	50.0%	50.0%
25-34 years	-701,045	-711,577	49.6%	50.4%	52.9%	47.1%
35-44 years	-92,899	34,170	158.2%	-58.2%	53.5%	46.5%
45-54 years	-191,615	-231,067	45.3%	54.7%	51.6%	48.4%
55 years and older	-43,953	-197,877	18.2%	81.8%	54.4%	45.6%

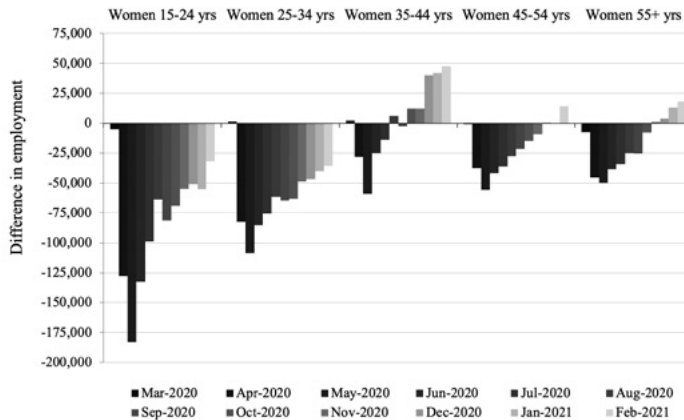
Source: Authors' calculations using ABS Labour Force, Australia. Seasonally-adjusted data available monthly. In the 35-44 age group, men experienced a net loss in employment while women experienced a net gain and the age cohort overall experienced a net loss. As a result, men's share of 'Gender share of cumulative change in employment' exceeds 100%, and women's net gain generates a negative sign.

Figure 4. Change in men's employment relative to pre-pandemic levels, by age, Australia



Source: Authors' calculations using ABS Labour Force, Australia. Seasonally-adjusted data series. Difference in employment for each month relative to monthly average of the pre-pandemic quarter.

Figure 5. Change in women's employment relative to pre-pandemic levels, by age, Australia



Source: Authors' calculations using ABS Labour Force, Australia. Seasonally-adjusted data series. Difference in employment for each month, relative to monthly average of the pre-pandemic quarter.

The larger cumulative loss in women's employment was, in part, attributable to gender patterns in industry and occupation of employment. Many of the industries that encountered large declines in jobs throughout the pandemic were those in which the gender balance was not too far from parity to begin with, and yet women carried a larger volume of employment losses (Table 4). Retail trade is the fourth-largest industry of employment for women, though its workforce composition is fairly gender balanced with women comprising 56 per cent of all workers (ABS, 2021c). Yet, three months into the pandemic, there were 73,000 fewer women employed in retail compared to pre-pandemic levels, yet only 11,300 fewer men. In part, this reflects differences in the types of retail jobs in which men and women were employed.² By November 2020, women's employment in retail trade was still 2,000 less than pre-pandemic levels, though men's net employment had increased by 44,400. The accommodation and food services industry is the fifth-largest employer of women across the entire workforce, yet is fairly gender balanced in its composition, comprised of 55 per cent women and 45 per cent men (ABS, 2021c). Indicative of women's over-representation among job

2 Within Retail Trade, a larger share of women are employed in the retailing of clothing, footwear and personal accessories and in departments stores, while a larger share of men are employed in the retailing of motor vehicle, electronic goods, hardware, and building and garden supplies, and in occupations that are not forward-facing to the public such as shelf fillers (Authors' calculations using ABS *Census of Population and Housing 2016, TableBuilder*). These female-concentrated sectors of the retail industry were more profoundly affected by the business restrictions and declines in consumer demand experienced in the first months of the pandemic (ABS *Retail Trade, Australia*).

losses in this industry, by November 2020, 65,800 fewer women were employed in accommodation and food services relative to pre-pandemic levels, while men's jobs had fallen by 33,500. Similarly, in professional, scientific and technical services, where women make up around 44 per cent of the workforce, women's employment was below pre-pandemic levels at every quarter, while men's job numbers rose above pre-pandemic levels in some quarters. This gender-based disaggregation also enables us to identify areas of the labour market where men experienced larger losses in employment compared to women. In the public administration and services workforce, where men occupied 56 per cent of jobs prior to the pandemic, men experienced a net job loss at every quarter, whereas women's employment numbers exceed pre-pandemic levels at every quarter. Construction, which is 88 per cent male, provides an example where men's employment was weaker than pre-pandemic levels in every quarter, while women's employment was higher.

Our occupation-based disaggregation detects instances where relative job losses were not necessarily commensurate with initial gender shares (Table 5). For example, among professionals, which is 56 per cent female in composition, women were over-represented in job losses. There were 47,000 fewer women in this industry were in employment by the end of the May 2020 quarter, compared to only 7,500 fewer men. Similarly, there are also instances where men have been over-represented among job losses. Among machine operators and drivers, which is 90 per cent male, men absorbed all of the net losses in jobs, while women's net employment numbers strengthened relative to pre-pandemic conditions. Employment changes within the community and personal services workforce – which is around 72 per cent female – provide an example where job losses were generally commensurate with initial gender shares. By May 2020, there were 224,100 fewer women and 89,100 fewer men employed in this occupation: this amounts to women experiencing around 72 per cent of these net losses.

Table 4. Change in employment relative to pre-pandemic levels, by gender and industry, Australia

Industry	Difference in employment relative to pre-pandemic level												Gender share of pre-pandemic employment	
	May 2020		Aug 2020		Nov 2020		Feb 2021		Men	Women				
	Men	Women	Men	Women	Men	Women	Men	Women						
Agriculture, Forestry and Fishing	19,400	2,100	27,000	-2,600	8,700	2,100	-2,200	3,700	65.9%	34.1%				
Mining	-10,200	-600	2,100	-500	19,300	5,600	4,000	6,600	83.2%	16.8%				
Manufacturing	-32,200	-14,500	-47,800	-16,900	-69,400	-1,500	-22,300	2,800	71.3%	28.7%				
Electricity, Gas, Water and Waste Services	21,400	11,400	7,400	8,000	14,000	5,600	13,000	3,600	77.7%	22.3%				
Construction	-11,100	5,700	-52,500	21,000	-27,900	18,500	-40,100	9,500	87.6%	12.4%				
Wholesale Trade	-6,300	10,100	8,600	7,800	-18,400	-1,100	-1,000	1,600	66.7%	33.3%				
Retail Trade	-11,300	-73,000	-3,000	-53,500	44,400	-2,000	63,000	7,700	43.6%	56.4%				
Accommodation and Food Services	-115,200	-161,800	-68,700	-87,800	-33,500	-65,800	-28,300	-54,800	44.8%	55.2%				
Transport, Postal and Warehousing	-71,000	-27,200	-70,300	16,300	-31,400	18,800	11,900	11,500	80.3%	19.7%				
Information Media and Telecommunications	-10,200	-13,800	-4,400	-12,800	-6,000	-12,700	-6,400	-3,200	58.0%	42.0%				
Financial and Insurance Services	22,600	-9,100	16,700	-8,900	15,100	-5,800	12,600	-8,100	49.4%	50.6%				
Rental, Hiring and Real Estate Services	-1,400	6,800	1,500	-300	-6,700	-1,500	100	-5,300	51.1%	48.9%				
Professional, Scientific and Technical Services	-32,100	-33,400	-1,500	-54,300	43,800	-37,000	46,100	11,900	55.7%	44.3%				
Administrative and Support Services	-29,500	-30,100	-13,200	-34,700	8,000	-10,500	-25,600	-29,400	49.4%	50.6%				
Public Administration and Safety	-19,700	34,100	-23,000	56,000	-200	44,900	-10,300	39,700	53.4%	46.6%				
Education and Training	-25,500	-38,200	9,800	6,900	1,200	16,900	-28,600	-8,300	28.9%	71.1%				
Health Care and Social Assistance	-13,600	-59,500	-3,200	-15,700	-8,100	-37,800	-2,600	17,800	22.3%	77.7%				
Arts and Recreation Services	-47,500	-45,700	-14,200	-30,500	-7,100	-12,400	1,100	-7,000	50.3%	49.7%				
Other Services	-25,400	-26,500	-33,200	-21,900	-19,600	-8,500	1,900	14,500	55.0%	45.0%				

Source: Authors' calculations using ABS Labour Force, Australia, Detailed. Original series data available at quarterly intervals. Industry categories are defined according to the Australian and New Zealand Standard Industrial Classification (ANZSIC).

Table 5. Change in employment, by gender and occupation, Australia

Industry	Difference in employment relative to pre-pandemic level						Gender share of pre-pandemic employment			
	May 2020		Aug 2020		Nov 2020		Feb 2021			
	Men	Women	Men	Women	Men	Women	Men	Women		
Managers	-14,500	-19,700	25,700	5,700	-27,400	10,600	32,500	41,100	61.5%	38.5%
Professionals	-7,500	-47,000	7,900	-1,900	82,600	26,400	81,900	66,000	44.2%	55.8%
Technicians and Trades Workers	-96,500	-12,500	-87,000	-16,900	-26,300	-3,100	-49,800	14,000	84.0%	16.0%
Community and Personal Service Workers	-89,400	-224,100	-42,300	-13,900	-22,700	-101,900	24,600	-71,600	29.9%	70.1%
Clerical and Administrative Workers	-13,800	-3,200	-30,500	24,400	6,600	32,500	-56,500	8,000	27.5%	72.5%
Sales Workers	-35,300	-111,300	-16,500	-15,200	5,400	-52,900	20,500	-35,000	38.6%	61.4%
Machinery Operators and Drivers	-25,900	4,200	-51,800	2,800	-17,900	3,000	25,100	1,300	89.5%	10.5%
Labourers	-115,900	-49,700	-97,500	-9,600	-74,100	-3,200	-92,100	-9,000	67.1%	32.9%

Source: Authors' calculations using ABS Labour Force, Australia, Detailed. Original series data available at quarterly intervals. Occupation categories are defined according to the Australian and New Zealand Standard Classification of Occupations (ANZSCO).

Disaggregating by gender and education reveals an education gradient in employment losses, among both men and women. For example, men and women with secondary school education experienced a larger fall in employment (6.6 per cent and 13.1 per cent respectively) than men and women with a diploma qualification or higher (4.4 per cent and 4.9 per cent respectively), when comparing the pre-pandemic quarter of February 2020 to the May 2020 quarter.

When inspecting these employment losses relative to pre-pandemic employment shares, gender differentials are noticeable among workers at the lowest end of the education spectrum. Among workers with no post-secondary qualifications, women comprised around 47 per cent of the employment cohort pre-pandemic. Yet by May 2020, women in this education cohort had experienced a net loss in employment of 258,000 jobs, compared to 147,700 lost jobs among men, and women's net employment loss continued to exceed that of men's for each subsequent quarter.

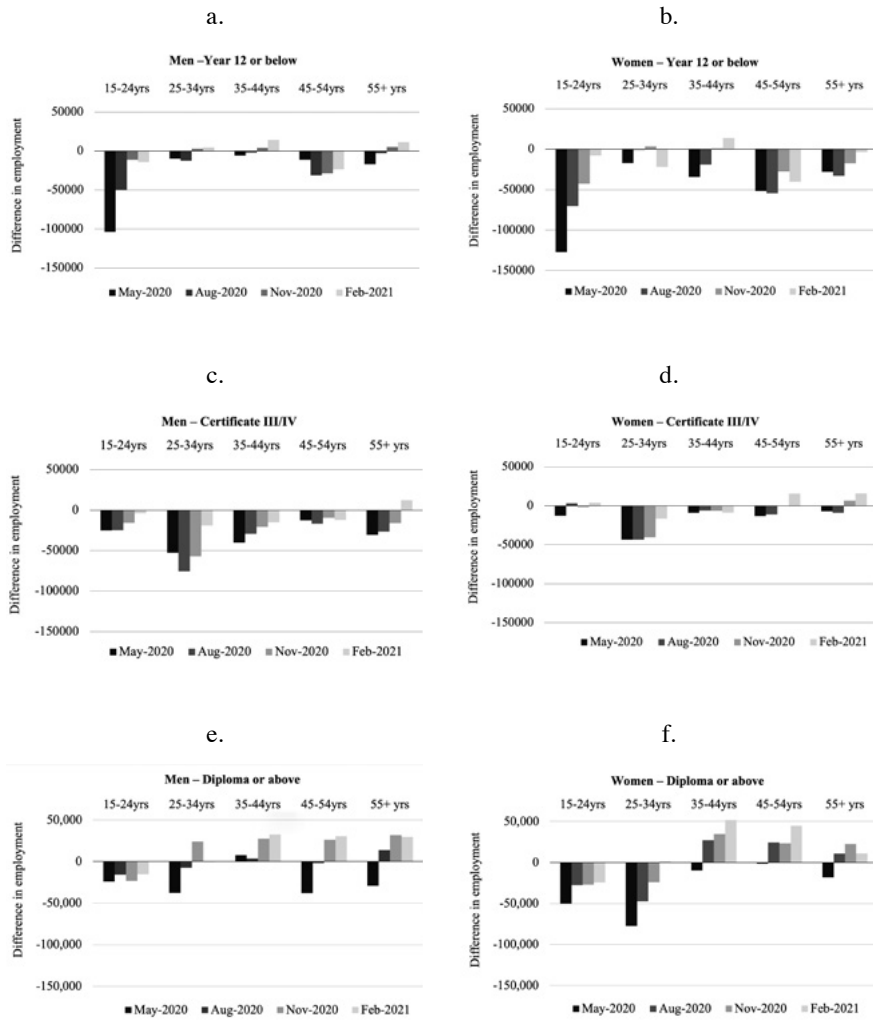
Looking at the intersections of gender and education with age, young women with higher qualifications were impacted more severely than similarly-qualified young men through the pandemic. Between the February 2020 and May 2020 quarters, employment numbers of women aged 15-24 years with a diploma qualification or higher fell by 20.8 per cent, compared to a 15.0 per cent fall for men in the same education and age cohort. In the 25-34 year cohort, employment for women with a diploma qualification or higher fell by 8.0 per cent, compared to a 4.9 per cent fall for men of the same age. The dynamic was opposite amongst older cohorts. Men with a diploma qualification or above in the 55 years and older cohort experienced a 5.9 per cent fall in employment between February 2020 and May 2020, compared to a 3.7 per cent fall for women in the same cohort.

Table 6. Change in employment relative to pre-pandemic levels, by gender and educational qualifications, Australia

Highest educational qualification	Difference in employment relative to pre-pandemic level						Gender share of pre-pandemic employment			
	May 2020		Aug 2020		Nov 2020		Feb 2021			
	Men	Women	Men	Women	Men	Women	Men	Women		
Diploma or above	-121,400	-157,100	-7,900	-12,600	86,300	29,600	76,800	84,300	46.4%	53.6%
Certificate III/IV	-160,600	-85,800	-72,700	-66,400	-118,400	-42,000	-37,800	10,300	66.2%	33.8%
Year 12 or below	-147,700	-258,000	-98,200	-177,200	-27,500	-82,700	-7,200	-58,900	53.1%	46.9%
Level not determined	30,900	37,500	16,900	31,500	-14,300	6,700	-45,600	-21,000	59.2%	40.8%

Source: Authors' calculations using ABS Labour Force, Australia. Original series data available at quarterly intervals. Educational qualifications are defined according to the Australian Standard Classification of Education (ASCED). Diploma or above includes: Diploma, Advanced Diploma, Bachelor Degree, Graduate Diploma, Graduate Certificate, and Postgraduate Degree. Year 12 or below includes no educational attainment. 'Level not determined' constitutes around 3 per cent of the total sample.

Figure 6. Change in employment relative to pre-pandemic levels, by gender, education and age, Australia



Source: Authors' calculations using ABS Labour Force, Australia, Detailed. Original series data available at quarterly intervals. Difference in employment for each quarter, relative to pre-pandemic quarter. Educational qualifications are defined according to the Australian Standard Classification of Education (ASCED). Educational qualifications are defined according to the Australian Standard Classification of Education (ASCED). Diploma or above includes: Diploma, Advanced Diploma, Bachelor Degree, Graduate Diploma, Graduate Certificate, and Postgraduate Degree. Year 12 or below includes no educational attainment. 'Level not determined' constitutes around 2.5 per cent of the total sample and is not illustrated.

5. Comparison between Victoria and Australian Government responses

The gender-disaggregated analysis presented in this paper provides an instructive example of how to undertake gender impact analysis, which can then be used to inform policy design. This is a methodological approach that governments, of all levels, can adopt as a means of developing policy that supports the principles and objectives of gender equity. Such a process of undertaking a gender impact assessment, and using the analytical insights to inform and guide policy formation, is part of a process recognised internationally as gender responsive budgeting (OECD 2021; Sharp and Broomhill, 2013; UN Women, undated website).

The process of GRB involves analysing government policies for potential differences in their impact on men and women. This analysis can then guide decisions on whether to pursue a policy proposal, amend the proposal or formulate additional policies to support gender equity goals. In broader international practice and literature, it has been recognised that GRB incorporates three broad processes that can be implemented in isolation or together: gendered-informed resource allocation, where an assessment of budget proposals is undertaken; gender-assessed budgets, where assessment of the impacts of the budget are conducted; and need-based gender budgeting where an assessment of gender needs informs the budget process (Downes, von Trapp and Nicol, 2017). Undertaking these steps requires the collection of gender-disaggregated data combined with an understanding of the deeper economic, societal, cultural and institutional factors that shape men and women's participation in the economy and broader experiences in society. Conducting ongoing evaluations of a policy's impact after the initial gender impact assessments is part of the GRB process, and involves articulating a set of gender gap indicators against which progress can be benchmarked (Government of Canada, 2021). Applying an intersectional lens to gender-based economic analysis is important for understanding the different experiences of diverse groups of women within the population, as is exemplified by Canada's approach to gender-based analysis and has been similarly prescribed for designing health policy responses (Government of Canada, 2021; Ryan and El Ayadi, 2020).

As noted in our review of previous studies, the disproportionate impact of COVID-19 on women was acknowledged early in the pandemic by analysts, researchers and international agencies. In particular, it was clear that women accounted for a higher proportion of overall job losses during the COVID-19 recession when compared to previous economic downturns (Figure 1). It was, consequently, widely commented that the governments could not rely on the same set of policy responses that had been used in previous downturns (Wood, Griffiths and Crowley, 2021). However, there were differences in the degree to which governments in Australia acknowledged, assessed and addressed these gender-patterned impacts. Comparing the responses of the Victorian Government to that of the Australian Government provides a case study in how the principles and processes of applying a gender lens, such as through the application of GRB, can shape a government's policy responses.

5.1 Australian Government policy approach

The Federal Budget 2020-21, focused squarely on facilitating Australia's recovery from the pandemic, was released on 6 October 2020, and did not include any gender analysis of the economic impact of the pandemic (Commonwealth of Australia, 2020). Although the Treasurer acknowledged in the 2020-21 Budget speech that the majority of job losses throughout the pandemic had been experienced by women, no systematic gender analysis was undertaken in the 2020-21 Federal Budget and no policies were announced to specifically address the impact of COVID-19 on female employment.

These observations are consistent with the assessments made by the Senate Select Committee on COVID-19 that "despite strong evidence early in the pandemic that women were being disadvantaged, neither the pre-existing economic inequality experienced by Australian women nor the pandemic's direct economic impact has been meaningfully considered in the government's economic response" (Senate Select Committee on COVID-19, 2020, p. 84). In terms of support for women, the Federal Budget 2020-21 announced a \$256 million Women's Economic Security Package focused on female leadership and promoting women in STEM. This expenditure amounted to only a fraction of the total of \$233 billion in new government spending outlined across the whole of the Budget (Commonwealth of Australia, 2020).

A centrepiece of the 2020-21 Federal Budget was the \$74 billion JobMaker plan which included tax cuts, additional expenditure on infrastructure, and boosting apprenticeships (Commonwealth of Australia, 2020). These policies were similar to those implemented during previous recessions when the economic impacts had been greater on male than female employment. Analyses of the predicted impacts of the proposed tax cuts have found that this policy will disproportionately benefit men, delivering \$2.28 of benefits to men for every dollar of benefit for women (The Australia Institute, 2020). The Australian Government's expenditure on infrastructure supports a construction industry that is 88 per cent male (ABS, 2021c), while apprenticeship policies support a cohort that is 65 per cent male (NCVER, 2021). At the same time that Federal Government support was channelled towards these male-dominated sectors, the Australian Government ended the JobKeeper support scheme for workers in the childcare sector in July 2020, ahead of schedule, despite extending the scheme for all other eligible sectors until March 2021. The childcare and early childhood education workforce in Australia is over 95 per cent female (ABS, 2016). No other sector of the workforce had JobKeeper support withdrawn ahead of schedule.

In May 2021, with the Australian economy having shifted from recession to recovery yet still experiencing some restrictions on business activity, the Australian Government released its 2021-22 Federal Budget. As part of the 2021-22 Federal Budget, the Australian Government re-instated the Women's Budget Statement, which included a gender-based analysis of the impact of the pandemic (Commonwealth of Australia, 2021b). The 2021-22 Budget outlined a package of policies to specifically support women, mainly focused on women's safety and addressing violence against women (Prime Minister of Australia, 2021). Policy changes were announced in relation to childcare and superannuation eligibility that would generate relatively greater benefit to women than for men, providing examples of how existing policy setting

disproportionately disadvantage women. However, the share of women who stand to benefit from these policy adjustments is limited in scope.³ More fundamentally, the Australian Government did not undertake any steps to systematically apply GRB across the whole of the budget's policy initiatives. It did not implement any policies to specifically support women's economic participation in the aftermath of the recession and its stimulus measures disproportionately favoured male-dominated sectors of employment (Commonwealth of Australia, 2021a). When asked about the matter in the lead-up to the Budget, the Minister for Women's Economic Security, Jane Hume, stated "I don't think you can appropriately put a gender lens on the budget" (cited by Commins, 2021, p. 7).

5.2 Victorian Government policy approach

The Victorian Government's 2020-21 Budget was delivered on 24 November 2020 and included analysis of the gender impact of the pandemic (State of Victoria, 2020). It highlighted that while women's employment fell by 6.7 per cent from the March to September quarters (equivalent to 109,000 women), male employment only fell by 3.9 per cent (equivalent to 70,000 men).

The centrepiece of the Victorian Government Budget was a Jobs Plan (State of Victoria, 2020). In addition to large additional investments in social housing and infrastructure, the Jobs Plan focused on supporting women to return to the workforce (State of Victoria, 2020). It included \$170 million to make kindergarten and childcare programs free during 2021 to support women returning to the labour market, and \$82 million to increase the availability of outside school hours care (State of Victoria, 2020). The budget also included direct employment supports for female jobs (State of Victoria, 2020).

The Victorian Government's approach in the 2020-21 Budget employed aspects of GRB, including an assessment of gender-based needs and gender-informed resource allocation. The result was a set of policies that addressed female economic participation in the aftermath of the recession. This was augmented in the 2021-22 State Budget with funding for the establishment of a unit within the Victorian Treasury to undertake GRB in the future (State of Victoria, 2021). The creation of a GRB unit will allow for the third element, gender-assessed budgets, to be conducted going forward.

Given the gender-sensitive policy response of the Victorian Government, compared to the apparent absence of a gender lens in Federal Government policy responses, we may expect to see that the gender differential in rates of economic recovery will be narrower in Victoria than for the rest of Australia, as could be

3 The proposed reduction in childcare subsidies only applies to families who have two or more children in childcare (Commonwealth of Australia, 2021b). The proposed improvement in superannuation eligibility only applies to women with a monthly income of \$450 or less. The Federal Budget reported that women constitute 63 per cent of the cohort who would benefit from this policy change (Commonwealth of Australia, 2021b). The Australian Treasury's Retirement Income Review concluded that removing the \$450-a-month threshold was important for gender equity but would only have a small effect on women's retirement incomes (Australian Treasury, 2020a).

indicatively analysed by comparing the two graphs presented in Figure 2. However, isolating the effects of these different approaches is complex given the multiple factors at play, including in other jurisdictions, and the fact that the impacts of the Victorian Government's policy responses may not yet be visible in labour market data. Nevertheless, there is a need to continue to track and analyse the impacts of the pandemic and governments' comparative policy responses, including the longer-term effects across a range of indicators such as gender gaps in workforce earnings, job security, superannuation, representation in senior occupations and leadership, unpaid care allocation, mental health and other measures of wellbeing. The incidence of further COVID-19 outbreaks and implementation of containments restrictions in other jurisdictions in Australia throughout 2021 and beyond must continue to be analysed through a gender lens.

6. Discussion and conclusion

This study provides a statistical documentation of the gender-patterned nature of the economic effects of the COVID-19 pandemic in Australia, analysing labour force indicators across the first twelve months of the pandemic. Even though aggregate labour market indicators look to have recovered to pre-pandemic levels as the economy emerged from the recessionary period of 2020, the job losses that occurred throughout the pandemic cannot be passed over. Relative to their share of employment in the months immediately leading up to the pandemic, women were over-represented in the cumulative losses in employment throughout the first twelve months of the pandemic. Women were also over-represented among the cumulative rise in unemployment and in the cumulative losses in labour force participation numbers. Men were over-represented among the cumulative increase in underemployment, indicative of relatively more men than women being able to retain a job during the pandemic despite working fewer hours than they hope for. Collectively, these findings indicate that women were more likely than men to drop out of the workforce completely under the pressures of the pandemic, which has repercussions for gender gaps in overall economic security, lifetime earnings and superannuation.

The gender-differentiated effects that were observed in the Australian labour market are similar to the global picture, illustrating how gender norms relating to work and family roles – the male-breadwinner/female caregiver model of society – transcends country borders and is a pervasive feature of many cultures more broadly.

Some caveats and considerations surround our findings. Although the Australian economy has emerged from recession, the longer-term economic effects of the pandemic are still unfolding. Our analysis has identified that the cohort that has experienced the bulk of job losses are younger-age women, implying that proportionately more women than men will be predisposed to the scarring effects of unemployment. Longer-term, this can have a bearing on gender gaps in lifetime earnings.

We also highlight that, in addition to labour force indicators, a broader suite of wellbeing measures need to be considered when analysing the impact of the pandemic, including women's safety and the incidence of violence, measures of mental and physical health, financial stress and housing insecurity. Furthermore, the aggregated labour

force statistics presented in this analysis do not reflect the experiences of the especially vulnerable cohorts of women. Single-parent mothers, Aboriginal and Torres Strait Islander women, women living with a disability, LGBTIQ women, migrant women, and women from culturally and linguistically diverse backgrounds are among those for whom the economic impacts of the pandemic have generally been more severe. There is a need for gender impacts to be further analysed through an intersectional lens, to account for the influence of these other demographic characteristics.

Although our analysis identified that women, on average, carried the bulk of workforce losses overall, we acknowledge that there are many thousands of men in Australia who also experienced job losses, financial insecurity, and pressures on their mental health. Studies have also identified the health risks that men have been highly vulnerable to during the COVID-19 pandemic (Betron, Gotter, Pulerwitz, Shattuck and Stevanovic-Fenn, 2020).

Our gender-based analysis of the impact of the COVID-19 pandemic and assessment of the government's policy responses exemplifies the rationale for the adoption of gender lensing, which can be formally enacted in policymaking through the legislation of GRB. In simple terms, GRB involves conducting a gender-based assessment of the impact of a policy shock or a policy setting and using this analysis to inform policy design. The importance of gender lensing is consistent with a finding of the Australian Senate Committee that "the Australian Government should have undertaken analysis of the gendered impact of the decisions it made when responding to the pandemic. This would have improved the information available to decision makers and ensured that specific impacts were considered before finalising fiscal or policy measures" (Senate Select Committee on COVID-19, p. 84). While GRB is not currently a formal procedure in the Australian or any State and Territory Governments, in the 2020-21 Victoria Budget announced in May 2021, the Victorian Government announced the establishment of the Gender Responsive Budgeting Unit in the Department of Treasury and Finance. In terms of embedding mechanisms to instil gender equity into economic analysis and policymaking, this is a significant marker of progress.

In future analysis, it would be informative for public policymaking to examine the impacts of gender-sensitive policy responses and assess the extent to which a gender lens contributes to a narrowing of men's and women's economic outcomes over time in Australia. Although it is a complex task to analyse – as testing for causality requires careful analytical design, and any differences in prevailing economic conditions and the nature of external shocks needs to be controlled for – it can be hypothesised that the gap between men's and women's economic outcomes is expected to narrow at a greater rate in settings that adopt GRB compared to those that do not. In the context of the COVID-19 pandemic and building ongoing resilience to future economic shocks, investing in our understanding of the impact of gender lensing is particularly valuable for policymakers striving for an equitable and inclusive economic recovery. Irrespective of the pandemic, the tools of GRB provide policymakers with mechanisms to both embed the principle of gender equity into policymaking and enhance the analytical rigour of the policymaking process, both of which are critical ingredients for responsible and effective public policy.

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