

Labour Market Persistence from Recessions

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Photo: Adam Smigielski – Getty Images

Abstract

The COVID-19 pandemic has led to a rapid deterioration in labour market outcomes, some of which may be long-lasting. This article examines the long-lived effects of previous downturns on unemployment in Australia, including by assessing how regional labour market outcomes varied during and after the GFC and early 1990s recession. We find that recessions have enduring effects on unemployment rates: regions that experienced larger-than-average downturns had significantly higher unemployment rates for around a decade afterwards.

COVID-19 and the Labour Market

The COVID-19 pandemic has led to the sharpest deterioration in Australian labour market conditions in several decades. At the time of writing, employment had contracted by around 4 per cent since the beginning of the year. Over that period the unemployment rate had increased by 2¼ percentage points and a further 1½ per cent of the working-age population exited the labour force (Graph 1). Average hours worked also decreased as many firms wound back operations but retained employer-employee connections, particularly via the JobKeeper program.

Many of those affected will be re-employed or have their hours increased once the virus is contained. However, COVID-19 may also have persistent effects on some segments of the labour market. This could occur if workers' skills decline due to a lack of use or because this is perceived to have occurred. It could also be because the skills a person used in their previous job were specific to a particular firm or industry and are not as well suited to other firms. Moreover, the COVID-19 contraction might speed up the process of structural change in the economy, making some workers' skills less well suited to the available jobs, at least until those workers can retrain. These effects, sometimes referred to as

scarring effects, could result in unemployment rates remaining above pre-virus levels even after the pandemic ends and economic conditions normalise.^[1]

Alternatively, sustained high levels of unemployment might instead reflect ongoing weak demand for labour in some areas; for instance, because the contraction causes some large employers in certain cities or regions to close down. Some workers in these areas will be temporarily unemployed until new businesses enter or they are able to retrain or relocate to areas with stronger labour markets, which may take some time.

Recessions can also affect labour markets if they result in lower potential economic growth (Ball 2014; Haltmaier 2012). One way this can occur is through lower business investment. If firms lower investment during recessions – because of weak current and expected demand, or heightened uncertainty – the future capital stock will be smaller, weighing on productivity and employment.

The potential for downturns to have long-lasting effects on the labour market has important implications for policymakers: recessions are even more costly if they have enduring effects, which means macro stabilisation policies should respond more aggressively (Yellen 2016). While it is too soon to assess whether COVID-19 will lead to persistently weak labour market outcomes, we can draw insights from past downturns. This article investigates the performance of the labour market following the GFC and early 1990s recession,

including at a regional level.^[2] We find that regions which experienced a larger-than-average deterioration in labour market conditions during national recessions had significantly higher unemployment rates for around a decade afterwards.

Regional Variation in Labour Markets

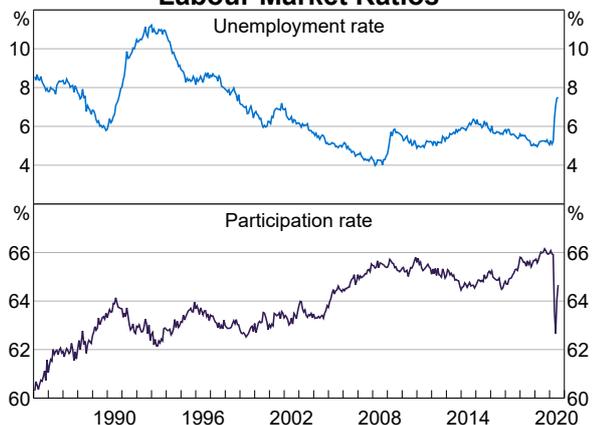
In both the GFC and 1990s recession there was a large and persistent increase in the aggregate unemployment rate. In the early 1990s, the unemployment rate rose by 5 percentage points and took around 10 years to decline to pre-recession levels. The size of the GFC-related increase was smaller, although the unemployment rate declined only gradually after the crisis. Both episodes tentatively suggest that downturns have long-lived effects, consistent with the international literature.

Despite this, it is not straightforward to identify the persistent effect of recessions on the labour market at a national level. This is because the business cycle is affected by other factors, including: housing and mining investment cycles; changes in interest rates; and the stance of fiscal policy. Moreover, structural changes that affect the economy over long periods occur alongside cyclical downturns (Yagan 2019). Over the past few decades, the Australian economy has experienced significant shifts in industry composition (such as the decline of industrial manufacturing and rise in household services), an increase in part-time work, a marked ageing of the workforce, and an increase in the female participation rate. Our challenge is to disentangle the effect of these changes from the long-lasting effects of recessions.

Our approach to abstracting from the many cyclical and structural changes occurring at a national level is to focus on the diverse experiences of *regional* labour markets. It also allows for a richer analysis as we observe outcomes for around 90 regions in each downturn. During the GFC most regions experienced a sizeable increase in their unemployment rates. However, in some regions the increase was larger than in others and in some areas the unemployment rate actually declined. The early 1990s recession led to an even wider range of

Graph 1

Labour Market Ratios



Source: ABS

outcomes, with regional unemployment rates changing by between -5 and 13 percentage points (Graph 2). These differences in the 'initial exposure' of regions to national recessions can reflect differences in industry composition, demographics and average skill levels, among other factors.

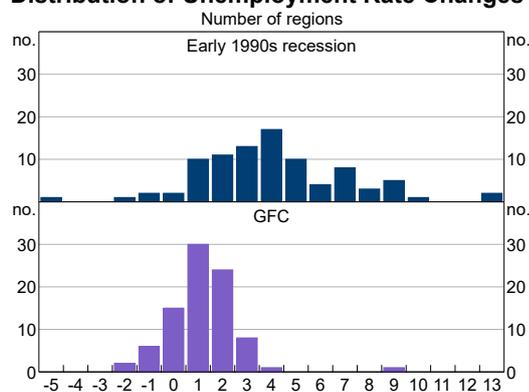
Examining the differences across regions in the aftermath of a national recession provides us with a more robust way of testing whether downturns have persistent effects on labour markets. Under the assumption that all regions are affected in a similar way by structural changes and macro policies that are occurring the national level, we can abstract from those aggregate forces by focusing on the differences across regions at each point in time. Specifically, we can compare whether unemployment rates in regions that were more highly exposed to national recessions – as indicated by a large rise in unemployment rates during the recession – remain elevated in subsequent years, relative to regions that were less exposed to those recessions. As a first pass, we make a simple comparison by grouping regions into those that experienced larger and smaller initial shocks, with each group containing roughly the same number of regions. This exercise points to substantial persistence in labour market outcomes: regions that experience larger initial increases have higher unemployment rates for up to a decade afterwards (Graph 3).

Estimating Labour Market Persistence

To further explore the nature of the persistence identified above, we model regional unemployment rates as a function of their exposure to the downturn and a set of control variables, with separate models estimated for the GFC and early 1990s recession. We measure a region's 'initial exposure' to the recession as the change in its unemployment rate during each national downturn, which we also refer to as the 'shock'. The controls include region, year and year by state indicator variables. The inclusion of the year and year by state variables address concerns that our results could be driven by changes in aggregate or state-specific economic conditions, while the regional indicators account for the average differences in unemployment rates across local labour markets. Our model also accounts for the possibility that some regions had different growth trends as a result of initial differences in their industry composition. This control means that our estimates may not necessarily generalise to the scarring effects from changes in industrial composition caused by economic downturns. However, we find that our results are qualitatively unchanged if we exclude the control for trends in industry composition. Further details of the regression model are provided in Appendix A.

Graph 4 shows our baseline regression estimates. The estimates reflect the degree of persistence from recessions on local labour markets. For example, a value of 0.3 in 1997 implies that a region that

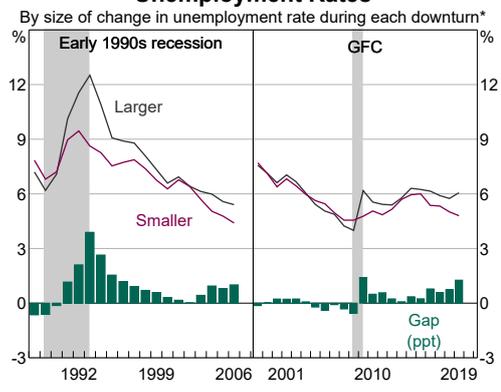
Graph 2
Distribution of Unemployment Rate Changes*



* Peak and trough dates are based on the national unemployment rate in each downturn
Sources: ABS; RBA

Graph 3

Unemployment Rates



* Shaded area represents downturn period; average unemployment rate of regions that experienced above and below median changes in unemployment rates during recessions
Sources: ABS; RBA

experienced a 1 percentage point larger-than-average increase in its unemployment rate during the early 1990s recession will have a 0.3 percentage point higher-than-average unemployment rate in 1997. The results show that unemployment rates in the regions most adversely affected by the GFC remained significantly higher for around 10 years, relative to less-affected regions. There was an even greater degree of persistence following the early 1990s recession; the effects of the recession on unemployment rates were still statistically significant in the mid-2000s, around 15 years after the initial shock.^[3]

Using the same approach, we can also explore the lingering effect of recessions on other labour market indicators, such as the participation rate and the employment-to-population ratio. Regions with high exposure to the 1990s recession experienced large and enduring declines in both their rates of workforce participation and their employment-to-population ratios, relative to less-exposed regions (Graph 5). This is consistent with a discouraged worker effect where some individuals leave the labour force rather than actively look for work. The evidence for persistent effects from the GFC is mixed; while our estimates show a fall in the participation rate, this effect is not statistically significant after a few years. This might partly reflect that the GFC was a much milder downturn than the 1990s recession in Australia.

We do not control for population flows in our analysis. If people who became unemployed during

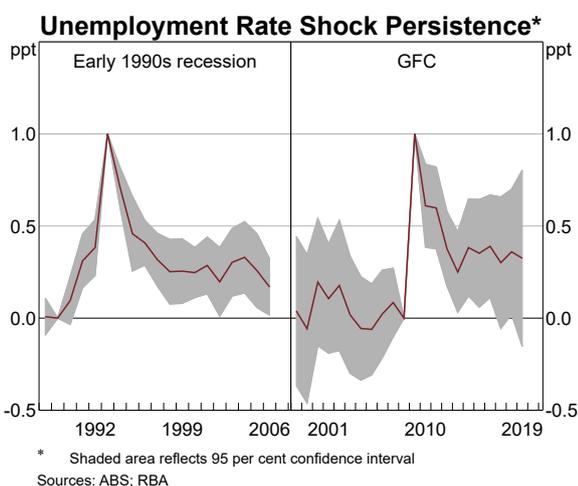
downturns relocate to areas with stronger labour markets, this would reduce our estimates of labour market persistence. However, the fact that we still find persistent effects suggests that inter-regional population flows are not large enough to quickly equalise labour market conditions across regions following recessions.

Insights for the COVID-19 Pandemic

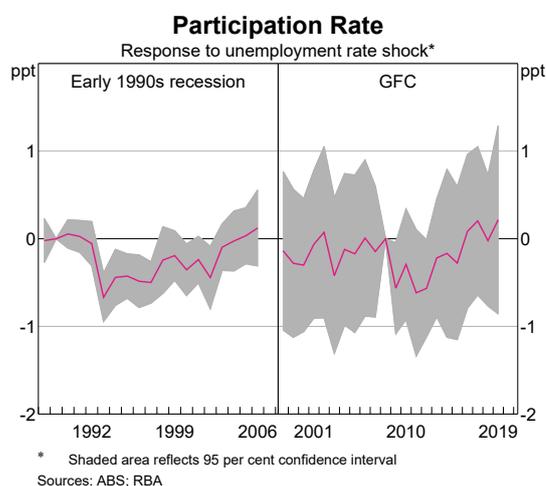
The unemployment rate has risen by around 2¼ percentage points since the start of the year, and is expected to continue to increase further to around 10 per cent over the second half of 2020. Heightened activity restrictions and precautionary social distancing in Victoria are likely to more than offset a pick-up in conditions elsewhere. In addition, people who initially left the workforce and were therefore not recorded as unemployed may start to actively look for work.

Some features of this episode are very different to the early 1990s recession and GFC. The current episode stems from a pandemic, rather than an economic or financial crisis. Accordingly, health outcomes and the severity of containment measures needed to control the pandemic will play a large role in determining the persistence of unemployment outcomes. Another unique feature of this episode is that job losses have been largest in industries which typically have higher staff turnover, particularly food and accommodation (D’Arcy, Gustafsson, Lewis and Wiltshire 2012). This may enable workers to transition more quickly to

Graph 4



Graph 5



new jobs when normal activities resume than would be the case if the job losses were concentrated in industries with typically low staff turnover.

Other features are similar to previous downturns. The unemployment rate has risen by the most for young people, which is common in recessions both in Australia and overseas (Graph 6). Previous research both domestically and overseas finds that cohorts of students who graduate during a weak labour market have persistently lower employment and wages than similar people from cohorts that graduated during better times, with these effects lasting up to a decade (Andrews, Deutscher, Hambur and Hansell 2020; Rothstein 2019). This sensitivity is often explained with reference to the shorter work history of younger workers or the increased likelihood of poor early career firm-worker matches created by recessions (Fontenay *et al* 2020). A modified version of our model provides tentative evidence that younger and older cohorts experience similar degrees of persistence in their unemployment rates following recessions.

Another common feature has been a reorganisation of some economic activity, some of which may outlast the pandemic. The need for social distancing in response to COVID-19 has led to an increased uptake of online retailing, while there has also been a shift towards goods consumption as many service industries have been unable to operate at full capacity under social distancing restrictions. However, it is too early to tell whether structural

changes in the economy induced by the virus will lead to persistent dislocations in the labour market, such as skill mismatches.

Evidence from previous downturns, both domestically and overseas, shows that recessions can have long-lived effects. This suggests that the current episode may affect the economy beyond the time the pandemic is contained. The large scale fiscal and monetary policies introduced since the pandemic began were designed, in part, to reduce the risk of these persistent effects. In particular, wage subsidy programs such as JobKeeper should help reduce scarring effects by maintaining employee-employer relationships and limiting the rise in unemployment.

Appendix A

Our regression model is similar to the approach used by Hershbein and Stuart (2019). Specifically, we estimate the below equation separately for the 1990s recession and the GFC:

$$u_{it} = \alpha + \delta_t shock_i + \tau_t + \psi_i + (\tau_t \times B_i) + \epsilon_{it}$$

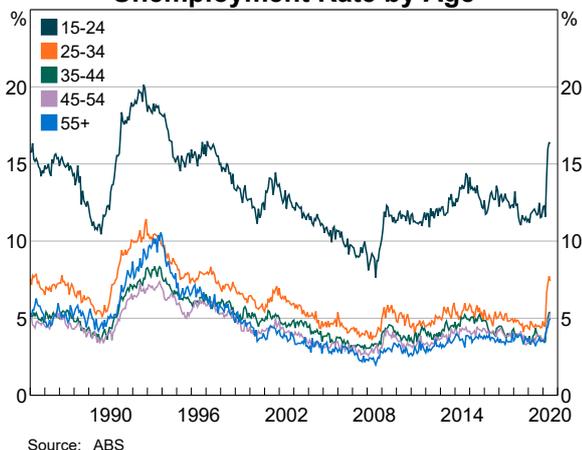
Where,

- u_{it} is the average unemployment rate in region i and year t . We also estimate versions of the model where the dependent variable is the labour force participation rate or the employment-to-population ratio.
- $shock_i$ is the change in a region's unemployment rate during the national recession/downturn.
- τ_t and ψ_i are year and region fixed effects.
- B_i is a vector of additional control variables, including state dummies and industry employment shares in 2006 and 1988 for the GFC and early 1990s estimations, respectively.

The parameter of interest is the vector, δ_t , which gives the association between a region's unemployment rate in year t and the size of the shock it experienced during the relevant downturn. For example, a value of $\delta_{1997} = 0.3$ implies that a region that experienced a 1 percentage point larger-than-average increase in its unemployment rate during

Graph 6

Unemployment Rate by Age



the early 1990s recession will have a 0.3 percentage point higher-than-average unemployment rate in

1997. Our estimates of this parameter are shown in Graphs 4 and 5. ✎

Footnotes

- [*] The authors both work in the Economic Research Department. We would like to thank James Bishop, Anthony Brassil, Natasha Cassidy, Blair Chapman, Amelia Gao, Calvin He, Adam Gorajek, Rochelle Guttmann and Gianni La Cava for helpful feedback and suggestions.
- [1] We deliberately avoid referring to these effects as 'hysteresis'. In the economics literature, hysteresis effects typically imply that changes in the unemployment rate affect the equilibrium unemployment rate. Testing this hypothesis is beyond the scope of this article.
- [2] Earlier recessions, such as the early 1980s and 1970s downturns, are not included in our analysis due to a lack of regional labour market data for these periods. Our analysis is based on the micro data from the ABS Labour Force Survey.
- [3] Importantly, there are not significant differences across regions in the period prior to the shock.

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