



Australian Government
Productivity Commission

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Productivity before and after COVID-19

Research paper – Overview



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Overview

The COVID-19 pandemic led to much human suffering and the tragic loss of life in Australia and around the world. In response to the virus, governments restricted the movement of people and activity in parts of the economy. Combined with declines in peoples' health and wellbeing and the uncertainty of the pandemic itself, this had effects on real economic activity.

In Australia, a peculiar pattern in labour productivity – a labour productivity bubble – emerged during the pandemic. Labour productivity rose to a record high from the onset of the pandemic in January 2020 to March 2022 before declining and returning to its pre-pandemic level in June 2023. This bubble can be divided into three phases which this paper seeks to explain (figure 1).

- A 'reallocation' phase – the initial phase, between December 2019 and December 2020, where labour productivity rose as lockdowns were most severe, economic activity was curtailed, and labour was reallocated away from disrupted industries.
- A 'productivity gain' phase – the second phase, between December 2020 and March 2022, where labour productivity continued to rise as lockdowns eased and economic activity slowly rebounded.
- A 'productivity loss' phase – the third phase, between March 2022 and June 2023, where labour productivity declined rapidly and returned to its December 2019 level.

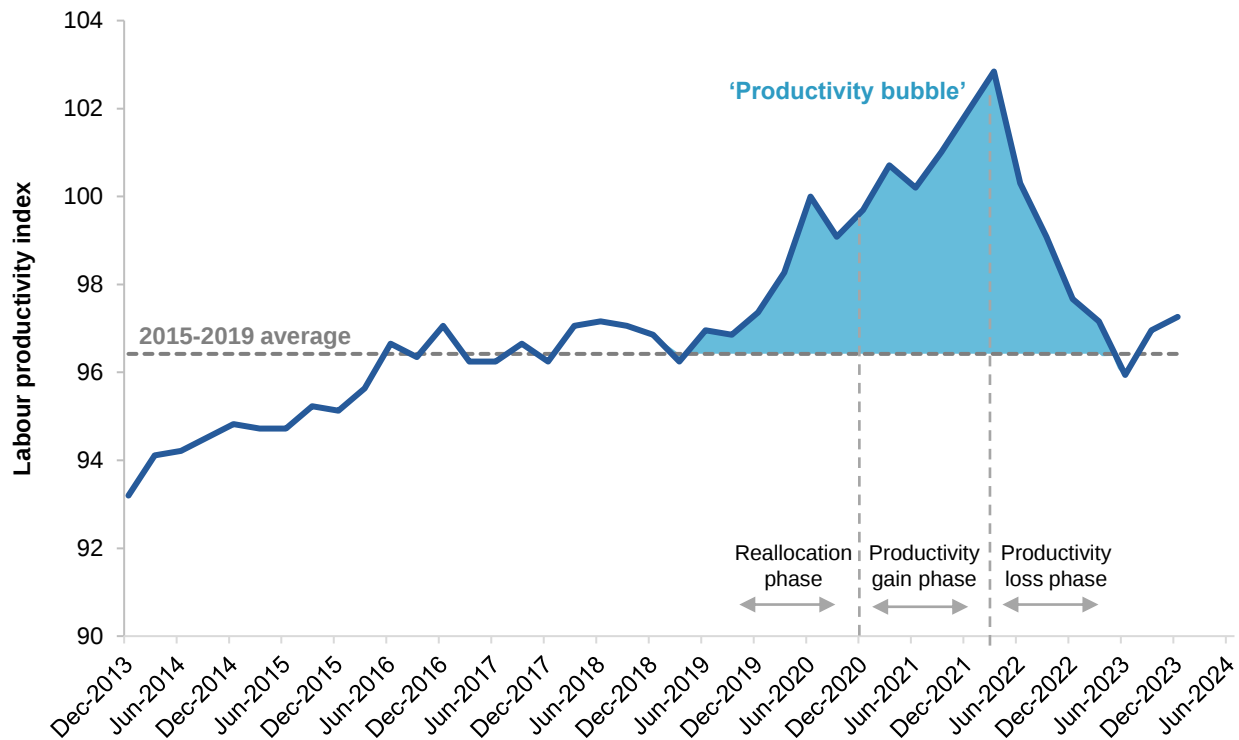
What happened to labour productivity during the COVID-19 pandemic is important to understand. Even small movements in labour productivity have significant implications for wages and living standards – for example, a decline in productivity from 1.5% to 1.2% per year would reduce average income per capita by about \$11,000 in 40 years' time. Therefore, changes in labour productivity of the magnitude seen during the pandemic could have significant implications for Australia's long run prosperity, particularly if the trends were sustained over a number of years.

Given labour productivity had been stagnant in the years leading up to the pandemic, these large movements were naturally of great interest to the Productivity Commission (PC) – first to determine whether the upswing was sustainable, and second to identify, and address, the reasons for the downswing. The motivation for this paper is therefore to understand the reasons for the changes in productivity during the pandemic, to inform productivity policy.

The initial rise in productivity – from December 2019 to December 2020 (the 'reallocation' phase) – can be explained almost entirely by the lockdowns during COVID-19 pandemic. Lockdowns did not affect all industries equally – the industries most affected by lockdowns (such as accommodation and food services or arts and recreation services) tended to also have the lowest levels of labour productivity. As these industries shut down, the composition of employment shifted to more productive industries. The policy implications from these initial gains in productivity are limited, as they are not actually reflective of people or firms producing more – they simply reflect the compositional changes that were forced on the workforce during lockdowns.

Figure 1 – Labour productivity rose sharply at the onset of the pandemic, before quickly returning to pre-pandemic levels

Labour productivity index, June 2020 = 100



Source: PC estimates using ABS data (ABS 2024d table 1).

The changes in productivity *after* December 2020 are more reflective of real productivity gains and losses – in other words, these are predominantly due to workers producing more – and then less – in their existing industries, rather than shifts between industries.

The gains made between December 2020 and March 2022 (the 'productivity gain' phase) were broad-based across the economy – 15 out of 19 industries experienced a productivity gain. During this time, lockdowns were unwinding, economic activity was returning, and the labour market was recovering slowly. As output returned faster than employment grew in this period, labour productivity continued to rise.

But almost none of these gains were sustained. Only two industries (the information media and telecommunications sector and the administrative and support services sector) were able to hold onto their productivity growth. Every other industry which experienced productivity growth between December 2020 and March 2022 experienced a decline between June 2022 and June 2023 (the 'productivity loss' phase).

These declines predominantly reflected Australia's post-COVID-19 labour market. The strong post-COVID-19 economic recovery fuelled a labour market with record lows in unemployment, and record growth in hours worked. And while strong employment is undoubtedly a good thing for the economy (as more people are able to earn a living) the pace of growth in hours worked brought with it some downsides to labour productivity (which could have resulted in wages being slow to rise). There are two primary reasons for this.

First, the capital stock was simply unable to keep pace with the growth in hours worked. The capital stock is inherently slower to move than hours worked because many forms of capital (like equipment or infrastructure) are made for long-term use and cannot be easily acquired in response to short-term economic

changes. Further, firms may delay purchasing new capital until they can determine whether increases in demand are permanent or temporary. And less capital available for workers tends to diminish productivity.

Second, with the record growth in hours worked, younger and less experienced workers joined the workforce.¹ This brought down the average quality of the workforce – at least temporarily – as these workers require time to learn the skills and competencies required to succeed in their job and match the output of their more experienced colleagues.

It is unlikely that both of these factors will lead to permanent changes to productivity – the capital to labour ratio should rise as firms' respond to the labour market growth, and the workforce quality should rise as workers gain experience in their new jobs. This may even suggest some potential upside to the productivity outlook.

Policy choices matter too. The rise of the care economy – a sector with low *measured* productivity (although measurement challenges mean there is a substantial difference between measured and actual productivity) – has also dragged productivity down. And the rapid employment gains in this sector have reflected government funding and subsidies (such as the NDIS and childcare subsidy) being directed towards these sectors.

Australia also undertook a deliberate policy choice to support firms and workers in staying attached to specific jobs. This policy choice limited worker mobility, firm entry and exit, and the potential for a more dynamic economy. While this may not have led to a *decline* in productivity, it may have prevented the type of productivity-enhancing movements of firms and people observed in other economies, such as the US.² Conversely, it may also have prevented the significant decrease in employment rates observed in the US (where almost one in ten people lost their job during the pandemic). But these policy decisions underpinned economic resilience through the pandemic – it is a reminder that there are trade-offs to seeking productivity-enhancing policies.

There were also some economic challenges that occurred through the pandemic – such as disrupted supply chains and an increasing propensity to work from home – that do not appear to have caused significant changes to labour productivity.

All of this is to say: there are no obvious long-term implications arising from Australia's productivity performance during the pandemic. And although the decline has been arrested, and productivity stabilised at its pre-COVID-19 level, this is not a cause for celebration. Productivity growth had been stagnant in Australia for the five years leading to the pandemic, and the 2010s produced the lowest decade of productivity growth since the 1960s. But our current predicament does not appear to be caused, or unduly exacerbated, by our experience during COVID-19. Rather, we need to address the long-term drivers of the decline, such as the long-term decline in investment and business dynamism, and improving the diffusion of ideas and innovation to move all firms closer to the productivity frontier. There might be some grounds for optimism as new workers benefit from the on-the-job learning and firms invest to improve the capital available to workers, but there is still a lot of work to do.

¹ People also worked more hours, or worked second jobs, without a commensurate increase in output.

² The PC's December productivity bulletin provided some insights into the productivity growth the US have enjoyed since the COVID-19 pandemic.