



Quarterly productivity bulletin – March 2024

Key points

- * **Labour productivity increased by 0.5% for the whole economy in the December 2023 quarter.**
 - Australians produced more despite working less. A decrease in hours worked (-0.3%) coupled with an increase in output (0.2%) meant labour productivity increased.
 - This was the second consecutive quarter of labour productivity growth, suggesting the freefall in labour productivity since June 2022 has stopped and the productivity bubble experienced during the COVID-19 pandemic has ended.
- * **Hours worked has fallen for the second consecutive quarter, down from a record high in June 2023.**
 - Hours worked fell as employed people worked, on average, fewer hours. The number of people employed increased by 0.5%, but hours worked per worker fell 0.8% (or 15 minutes per week).
- * **Hours worked has been negatively correlated with movements in labour productivity.**
 - Rapid increases in hours worked in 2022-23 likely reduced labour productivity as new, less experienced workers entered the labour force and the capital stock failed to keep up with expanded labour supply.
 - Since June 2023, declines in hours worked have increased the capital stock per worker, likely contributing to increases in productivity.
- * **Labour productivity increased in half of the market sector industries.**
 - Labour productivity grew the most in information, media and telecommunications (11.9%) and accommodation and food services (6.0%). These industries also had the largest falls in hours worked.
 - Changes in hours worked were strongly negatively correlated with changes in productivity growth at the industry level in the December 2023 quarter.

1. Whole economy productivity

Labour productivity increased by 0.5% for the whole economy in the December 2023 quarter (box 1), the second consecutive quarter of growth after a 1.0% increase in the September 2023 quarter. Despite these increases, labour productivity fell by 0.4% over the 12 months to December 2023 (ABS 2024b).

These two consecutive quarters of labour productivity growth suggest that the 'productivity bubble' highlighted in previous bulletins has ended (figure 1). The productivity bubble describes the rapid rise and sharp decline in productivity that Australia experienced as a result of the COVID-19 pandemic. Labour productivity rose sharply at the start of the pandemic as workers temporarily shifted away from relatively low productivity sectors towards

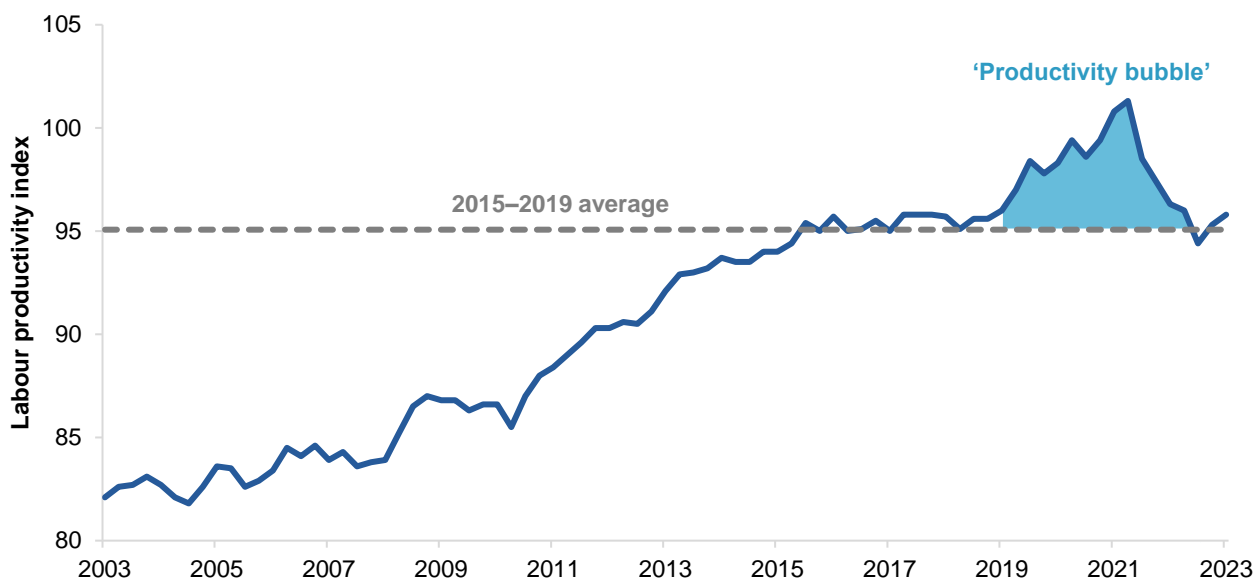
high productivity sectors due to lockdown restrictions, before declining as lockdown restrictions eased (PC 2023a, p. 5). Labour productivity currently sits just above the 2015–2019 average (figure 1).

Box 1 – The quarterly productivity bulletin

This quarterly productivity bulletin provides a brief update of the most recent trends in productivity from the December 2023 quarter National Accounts, published in March 2024. Quarterly data can be volatile and may deviate from the long-term trend. Data is also subject to revisions in subsequent ABS publications, which warrants caution in interpreting the meaning behind the numbers in any particular quarter. For this reason, medium- and long-term trends are also explored. A primer on productivity, as well as productivity data and their revisions, are included in the appendix.

The rise in labour productivity in the December quarter was due to a 0.2% increase in GDP and a 0.3% decline in hours worked. The market sector registered a 0.6% increase in labour productivity due to a 0.1% increase in Gross Value Added (GVA) and a 0.5% fall in hours worked, while non-market sector labour productivity increased by 0.4% as a 0.6% increase in GVA outpaced the 0.3% increase in hours worked.

Figure 1 – Productivity has grown for two consecutive quarters following large falls
Labour productivity (index, 2021=100) between December 2003 and December 2023



Source: ABS (2023, Australian National Accounts: National Income, Expenditure and Product, December 2023, Cat. No. 5206.0., table 1).

Australians worked less, but produced more

Total hours worked across the economy fell by 0.3% in the December quarter. While the number of employed people actually increased by 0.5%, employed people worked 0.8% fewer hours on average (or 15 minutes less per week).

Hours worked has declined for two consecutive quarters, which suggests that demand for labour has eased since its peak in September 2022 (ABS 2024c). It is unclear why demand has fallen, but possible factors

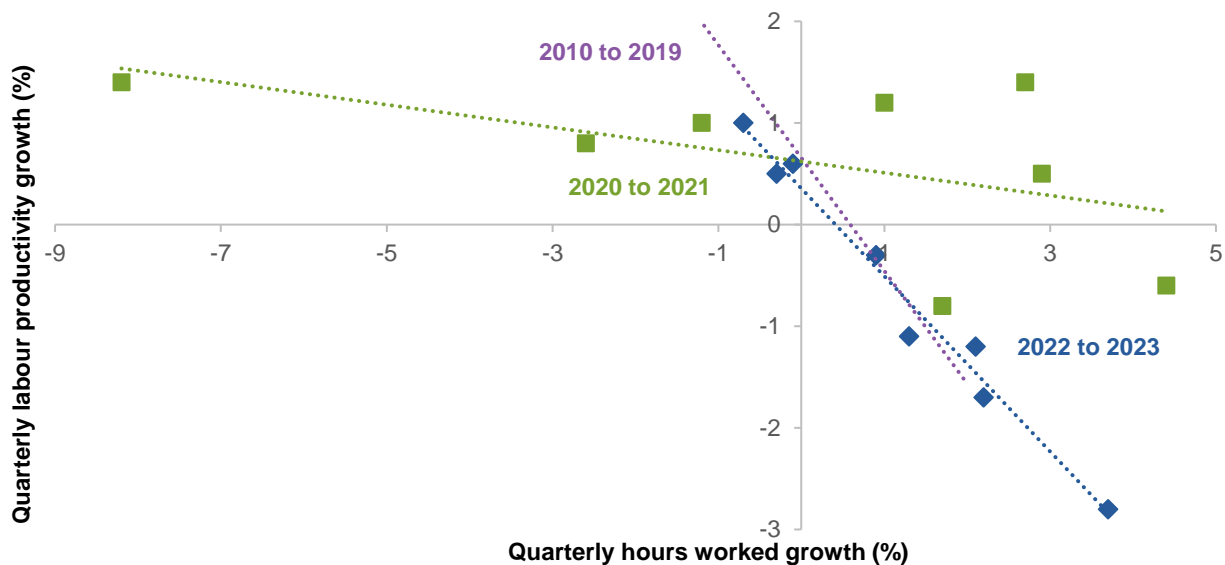
include weaker consumer spending associated with cost of living pressures (ABS 2024b), or higher wage costs (ABS 2024a).

Despite the fall in hours worked, output grew by 0.2% in the December quarter (ABS 2024b). This marked the slowest annual growth since the COVID-19 pandemic (ABS 2024a) reflecting, in part, slowing private demand from cost-of-living pressures and interest rates (ABS 2024b).

The relationship between hours worked and labour productivity

Previous *Productivity Bulletins* and Professor Jeff Borland’s labour market snapshot (Borland 2024, p. 5) have noted that changes in labour productivity have been negatively correlated largely with changes in hours worked over the past two years (as hours worked increases, labour productivity declines and vice-versa). This correlation is consistent with the decade before the COVID-19 pandemic, although the relationship between changes in hours worked and labour productivity did weaken during the start of the pandemic from 2020 to 2021 (figure 2).

Figure 2 – Hours worked has been strongly associated with productivity growth
Quarterly growth in labour productivity and hours worked^a, whole economy, by year



a. The dotted lines represent linear fitted lines for the data points.

Source: Commission estimates based on ABS (2024, Australian National Accounts: National Income, Expenditure and Product, December 2023, Cat. no. 5206.0., table 1).

Hours worked increased significantly from the June 2022 to June 2023 quarters, as growth in aggregate demand following the end of lockdowns buoyed labour demand, and record levels of participation and migration boosted the supply of labour (figure 2).¹ This is likely to have reduced labour productivity as:

- **new entrants entered the workforce.** Labour force participation increased to historical highs (PC 2023b, pp. 3–4), meaning that newer, less experienced workers were more likely to be active in the workforce. This is likely to put temporary downward pressure on labour productivity growth, as new workers require time to learn and upskill in their new jobs (PC 2023b, p. 3)

¹ As cost-of-living pressures bite, workers may respond to this negative real wealth shock by seeking to work more hours to try to maintain a reasonable standard of living over time (PC 2023c, p. 8).

- **the capital-labour ratio declined.** The increase in hours worked led to a historical decline in the capital-labour ratio as increases in the capital stock did not keep pace (PC 2024, pp. 2–3). This led to a decline in labour productivity as workers had access to less capital.

Labour productivity was also affected by major (but temporary) shifts in where people were employed throughout the pandemic. Employment shifted away from relatively low productivity sectors at the start of the pandemic but shifted back as COVID-19 restrictions unwound and the economy rebounded (PC 2023a, p. 5).

Since June 2023, the trend in increasing hours worked has reversed; and as hours work has declined, labour productivity has grown. This may reflect that the short-term effects of the COVID-19 pandemic have come to an end – for example, previously new entrants into the workforce may now be integrating and catching up to their colleagues, thereby, increasing their productivity.² And as hours worked has declined, workers would have (on average) access to more capital (as capital is sticky in the short term), which would reverse recent declines in the capital-labour ratio.

2. Industry level productivity

Half of market sector industries had positive productivity growth

Although overall labour productivity increased by 0.6% in the market sector, only eight out of the 16 market sector industries had positive labour productivity growth. Labour productivity grew the most in information media and telecommunications (11.9%) and accommodation and food services (6.0%), while administrative and support services (-3.0%) experienced the largest fall.

Falls in hours worked led to rises in productivity

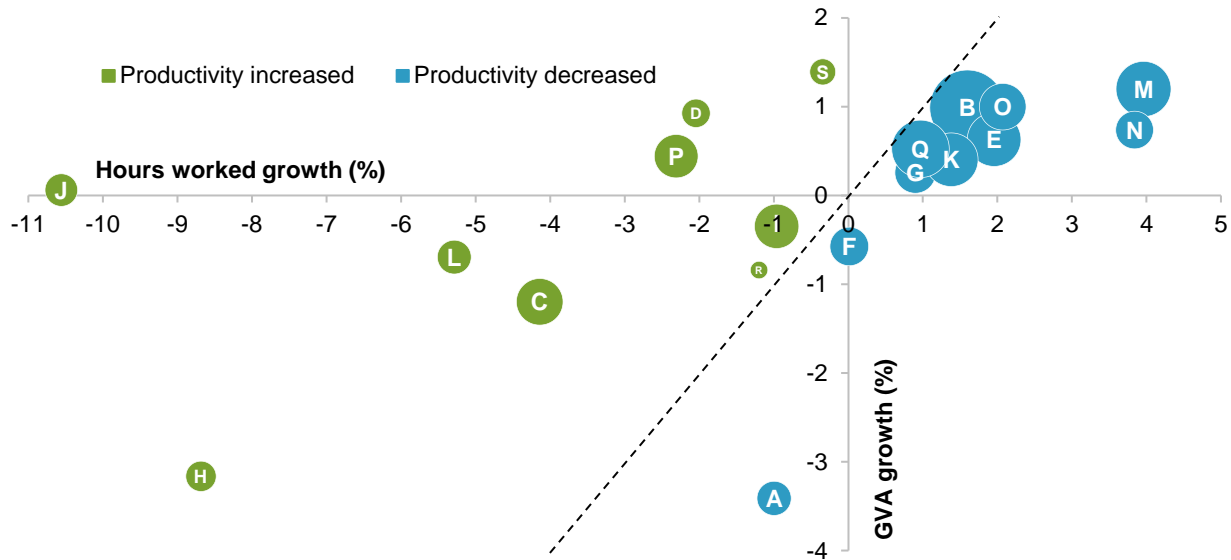
Nine of 16 market sector industries experienced falls in hours worked (figure 3). Information, media and telecommunications (-10.6%) and accommodation and food services (-8.7%) had the largest falls in hours worked; these two industries also had the largest increases in labour productivity. Although seven industries experienced increases in hours worked, these tended to be relatively modest (between 0 and 4%) compared to the decreases in hours worked experienced by some industries.

At the industry level, changes in hours worked were strongly negatively correlated with changes in productivity growth in the December 2023 quarter. The eight market sector industries where hours worked decreased (left hand side of Figure 3) all saw positive productivity growth, and seven of the eight industries in which hours worked increased experienced a fall in productivity.

² Recent productivity growth could reflect other factors. For example, it could be that productivity has grown as people took time to find a job which best used their skills and knowledge after returning to work at the end of COVID-19 lockdowns.

Figure 3 – Productivity increased in half of the market sector industries, with large increases in smaller industries leading to an overall increase in productivity

Growth in gross value added (chain volume) and hours worked^a by industry, Sep-Dec 2023



a. Hours worked by industry uses the hours actually worked by industries in the quarterly labour account. Bubble sizes indicate relative GVA weights of the industry in the December 2023 quarter. Industries are represented by their Australian and New Zealand Standard Industrial Classification (ANZSIC) letter code. A=Agriculture, forestry and fishing, B= Mining, C= Manufacturing, D=Electricity, gas, water and waste services, E=Construction, F= Wholesale trade, G=Retail trade, H=Accommodation and food services, I=Transport, postal and warehousing, J=Information, media and telecommunications, K=Financial and insurance services, L= Rental, hiring and real estate services, M=Professional, scientific and technical services, N=Administrative and support services, O=Public administration and safety, P=Education and training, Q=Health care and social assistance, R=Arts and recreation services, S=Other services.

Source: Commission estimates based on ABS (2024, Australian National Accounts: National Income, Expenditure and Product, December 2023, Cat. no. 5206.0, table 6) and ABS (2024, Labour Account Australia, December 2023, industry summary table).

Two industries drove the increase in aggregate labour productivity

The industries that contributed to the greatest changes in hours worked also contributed to the greatest changes in labour productivity (figure 4).

The accommodation and food services industry contributed the largest increase (0.4 percentage points) in labour productivity, as well as the largest decline in aggregate hours worked (-0.5 percentage points). The large fall in hours worked could be due to high level of hours worked in the September quarter, which featured significant sporting events, as well as decreased demand for discretionary items due to cost of living pressures (ABS 2024c). The manufacturing industry contributed the second largest increase in productivity (0.2 percentage points) as well as the second largest decline in aggregate hours worked (-0.3 percentage points).

In contrast, the professional, scientific and technical services industry contributed to the largest decrease in aggregate labour productivity (-0.2 percentage points), as well as the largest increase in aggregate hours worked (0.3 percentage points).

Figure 4 – Decomposed economy-wide growth in productivity, hours worked and output
Growth in aggregate labour productivity^a, aggregate hours worked^b and aggregate gross value added (chain volume) decomposed by the top 3 industries, Sep-Dec 2023



a. Market sector labour productivity is decomposed using ABS’s method of decomposition of aggregate labour productivity (Wei 2012). **b.** Industry hours worked uses the hours actually worked in the quarterly labour account.

Source: Commission estimates using ABS (2024, Australian National Accounts: National Income, Expenditure and Product, December 2023, Cat. no. 5206.0, tables 6 and 45; 2024, Labour Account Australia, December 2023, industry summary table).

References

ABS (Australian Bureau of Statistics) 2024a, *11 things that happened in the Australian economy during the December quarter*, <https://www.abs.gov.au/articles/11-things-happened-australian-economy-during-december-quarter> (accessed 7 March 2024).

— 2024b, *Australian National Accounts: National Income, Expenditure and Product, December 2023*, <https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-national-income-expenditure-and-product/latest-release> (accessed 7 March 2024).

— 2024c, *Hours worked continued to fall in December quarter 2023*, <https://www.abs.gov.au/media-centre/media-releases/hours-worked-continued-fall-december-quarter-2023> (accessed 13 March 2024).

Borland, J 2024, *Labour market snapshot #103 February (13) 2024*, Department of Economics University of Melbourne.

PC (Productivity Commission) 2023a, *PC Productivity Insights: Bulletin 2023*, 1 July.

— 2023b, *Quarterly productivity bulletin – December 2023*, PC Productivity Insights, Canberra.

— 2023c, *Quarterly productivity bulletin – September 2023*, PC Productivity Insights, Canberra.

— 2024, *Annual productivity bulletin 2024*, PC productivity insights, Annual report series.

Wei, H 2012, *The Industry Sources of Australia's Productivity Slowdown*, Australian Bureau of Statistics.

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Publication enquiries:

Phone 03 9653 2244 | Email publications@pc.gov.au

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