Jobs and Skills Summit Research Note

Have Real Wages Decoupled from Productivity Growth in Australia?

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Synopsis

As part of its contribution to the Jobs and Skills Summit the ACTU has claimed that wages growth has not kept up with productivity growth.

This claim is enlisted by the ACTU to question the emphasis placed on the importance of productivity growth to real incomes growth and to support a further claim that "without deliberate measures to link wage growth to productivity improvement there is no reason to believe productivity growth will lift wages."

This note digs into the ACTU claims and finds:

- The ACTU analysis of productivity growth and real wages growth is fundamentally mistaken.
- When the ACTU's error is corrected, the clear evidence is that real wages growth and productivity growth are closely matched.
- As a consequence, the ACTU proposals for deliberate policy measures to link wages growth and productivity growth are unfounded.

Have Real Wages Decoupled from Productivity Growth in Australia?

Introduction

As part of its contribution to the Jobs and Skills Summit the ACTU has claimed that wages growth has not kept up with productivity growth.[1]

This claim is enlisted by the ACTU to question the emphasis placed on the importance of productivity growth to real incomes growth and to support a further claim that "without deliberate measures to link wage growth to productivity improvement there is no reason to believe productivity growth will lift wages."[2] This Research Note shows that the ACTU claim is incorrect and that, in fact Australian real wages have grown in lock-step with productivity.

Measuring Changes in Productivity

Production involves the combination of various inputs (for example labour, capital, energy and materials).

Productivity measures the quantity of output obtained from the inputs used in production and *productivity growth* occurs when the same inputs are combined to produce a higher quantity of output.

Measuring productivity growth requires adjusting for changes in the quantity of inputs.

Labour productivity adjusts for changes in the quantity of labour used in production by measuring the amount of output per hour worked. Labour productivity is a quick and dirty measure of productivity change that does not adjust for other changes in inputs – most noticeably it does not adjust for changes in the quantity of capital used in production.

Multifactor Productivity is a more refined and more accurate measure of productivity growth because it adjusts for changes in the quantity of labour and the quantity of capital used in production.

The ACTU's chalk and cheese comparison

The ACTU's central claim about the decoupling of productivity improvements and real wages growth is a chalk and cheese comparison. It is based on a measure of productivity ("labour productivity") that does not adjust for the extra capital employed in production. The ACTU inappropriately uses this measure of productivity growth to benchmark changes in wage rates and ignores the contribution of the extra capital involved in production.

[1] ACTU, (2022), An Economy that Works for People, p. 16.
[2] ACTU, (2022), p.17.

This is how the Australian Bureau of Statistics clarifies what "labour productivity" measures[3]

> *Labour productivity indexes reflect not only the contribution of labour to changes in production per labour unit, but are also influenced by the contribution of capital and other factors affecting production such as technological change*.

The ABS goes on to make the point that multifactor productivity (MFP) offers more comprehensive understanding of changes in productivity and output:

> *MFP statistics are designed to inform how much economic growth originates from productivity growth (increased outputs from the same quantity of inputs) and how much from increased inputs (increased outputs from more capital goods or additional working hours). MFP, therefore, is most commonly used in rigorous productivity analysis.*

Chart 1 below replicates the ACTU's chalk and cheese comparison which it claims is evidence of the decoupling of reals wages growth and productivity.[4]

Chart 1: Indexes of Labour Productivity and Real Wages: 1997-98 to 2020-21

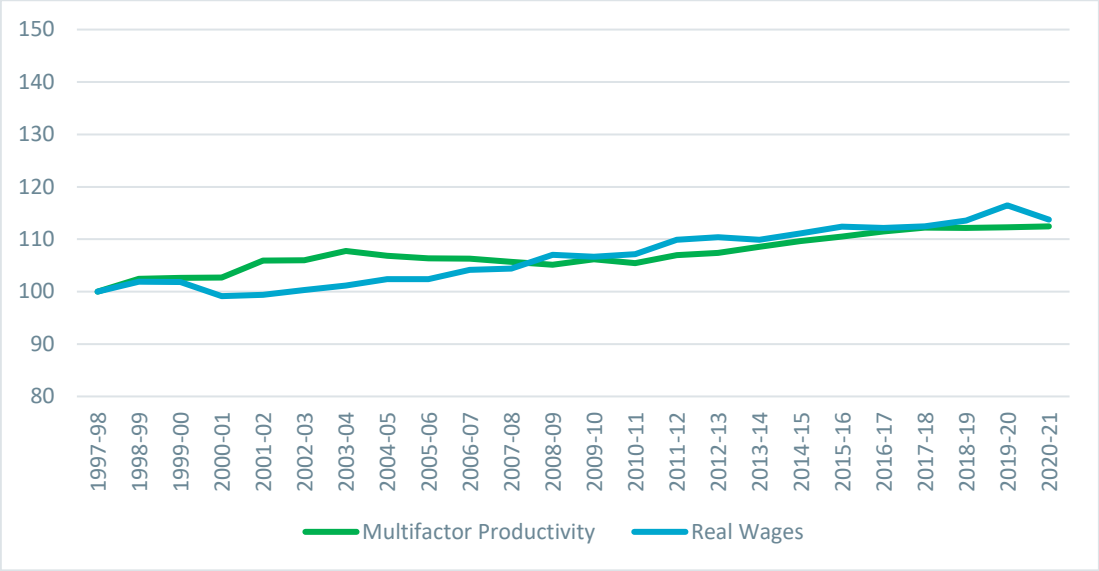
Sources: ABS, Estimates of Industry Multifactor Productivity; Consumer Price Index; and Wage Price Index (all indexes are rebased with 1997-98 set at 100).

If, instead of the quick and dirty measure of productivity used by the ACTU, real wage changes are mapped against changes in the more rigorous measure of multifactor productivity, the claim of a decoupling of productivity growth and real wages growth dissipates. This is evident from Chart 2 which shows that over this near quarter-century period, the two series track each other very closely (notwithstanding some divergences over shorter time frames).

[3] Australian System of National Accounts; Concepts Sources and Methods, Chapter 19 Productivity Measures. (see ABS Productivity Measures).

[4] Chart 1 covers a longer time period than in the ACTU report (on page 18) and ends with the 2020-21 year data whereas the ACTU data goes into 2022. The limit to data to the end of 2020-21 in the present paper allows use of a broader range of ABS productivity measures.

Chart 2: Indexes of Multifactor Productivity and Real Wages: 1997-98 to 2020-21



Sources: ABS, Estimates of Industry Multifactor Productivity; Consumer Price Index; and Wage Price Index (all indexes are rebased with 1997-98 set at 100).

Thus, when productivity is measured more rigorously, there is no evidence of the decoupling of productivity growth and real wages growth suggested by the ACTU. It also follows that the ACTU's proposals about the need for deliberate policy measures to ensure wages and productivity growth converge are ill-founded. In fact, Australian real wages growth matches closely with productivity growth.

Why such a large difference between labour productivity and multifactor productivity?

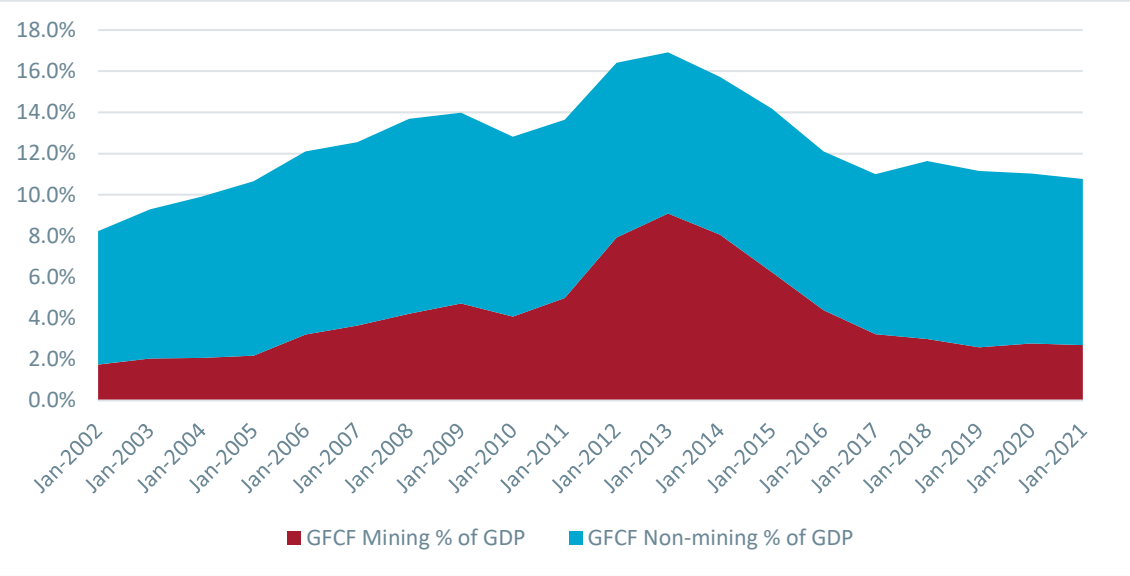
In the first two decades of the present century in Australia the mining investment boom drove a wedge between the quick and dirty measure of labour productivity and the more rigorous measure of multifactor productivity growth.

The dimensions of the investment boom are illustrated in Chart 3 with private sector business investment rising from the equivalent of 8 per cent of GDP in 2002 to 14 per cent of GDP in 2009 and then to just short of the equivalent of 17 per cent of GDP in 2013 before tapering towards earlier levels over the years to 2017.

The mining-led investment boom was at the centre of a series of important changes in the Australian economy. One of the more fundamental of these was a very large increase in the amount of capital used in production. According to the ABS[5], the capital / labour ratio for the market sector of the Australian economy grew by 73 percent in the twenty years from 2000-01.

[5] ABS, Estimates of Industry Multifactor Productivity, 2021.

Chart 3: Private Sector Gross Fixed Capital Formation (GFCF) (chain volume measures % of GDP): 2002 to 2021



Source: ABS, National Accounts.

As the ABS point out in an extract quoted above, measures of labour productivity (for instance value added per hour worked) capture not just the extra output that is derived from an extra hour of work, but also the extra output due to other changes that occur at the same time. These include increased capital investment.

The mining investment boom brought with it a sharply higher contribution by capital investment to Australian economic activity. One manifestation of this was a boost to labour productivity (which includes increases in output due to the higher quantity of capital employed in production). In contrast, the multifactor productivity measure, which corrects for the increase in the quantity of capital employed in production, results in a much more rigorous, and in this case, much lower measure of productivity improvement.

Concluding Comments

A fundamental source of increased Australian output over recent years was the mining investment boom. This investment boom saw a very large increase in the quantity of capital used in the Australian economy capital and was reflected in a large increase in the capital / labour ratio.

This development created an unusual divergence between the quick and dirty measure of "labour productivity" and the more rigorous measure of multifactor productivity growth preferred by the ABS. It also highlighted the flaws in the ACTU's choice of labour productivity as the benchmark against which to compare real wages growth.

Despite its name, "labour productivity" over the past couple of decades was overwhelmingly driven by the increase in mining investment. It is no surprise therefore that wages growth and changes in labour productivity were out of kilter in this period.

The mistaken analysis of the ACTU is a clear, albeit unusual example of why multifactor productivity is the preferred measure of productivity growth. On a closer and more rigorous analysis there has not been a decoupling of real wages growth and productivity improvement.

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