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# Are wages or profits driving Australia's inflation?

## An analysis of the National Accounts

***Labour costs have played an insignificant role in the recent increase in inflation, accounting for just 15 percent of economy wide price increases while profits have played an overwhelming role, accounting for about 60 percent of recent inflation.***

Discussion paper

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# Introduction

In recent months the role of wages in driving inflation has been frequently discussed, with many commentators expressing concern that Australia risks a 'wage price spiral'.

For example:

> "Aggressive wages growth will only spur further inflation growth."
> — Andrew Mackellar, CEO of the Australian Chamber of Commerce and Industry[1]

> "We are now at risk of a wages and inflation and interest rates death spiral."
> — Innes Willox, CEO of Australian Industry Group[2]

> "In the current circumstances, there is a clear risk that a high increase in wages without improved workplace productivity would fuel inflation and increase the likelihood of a steeper rise in interest rates to the detriment of growth and job creation."
> — Innes Willox, CEO of Australian Industry Group[3]

The fear that wage growth has, or could, play a significant role in Australia's inflation typically ignores the fact that, as shown in Figure 1, real wage growth is at historically low levels and has been for some time.

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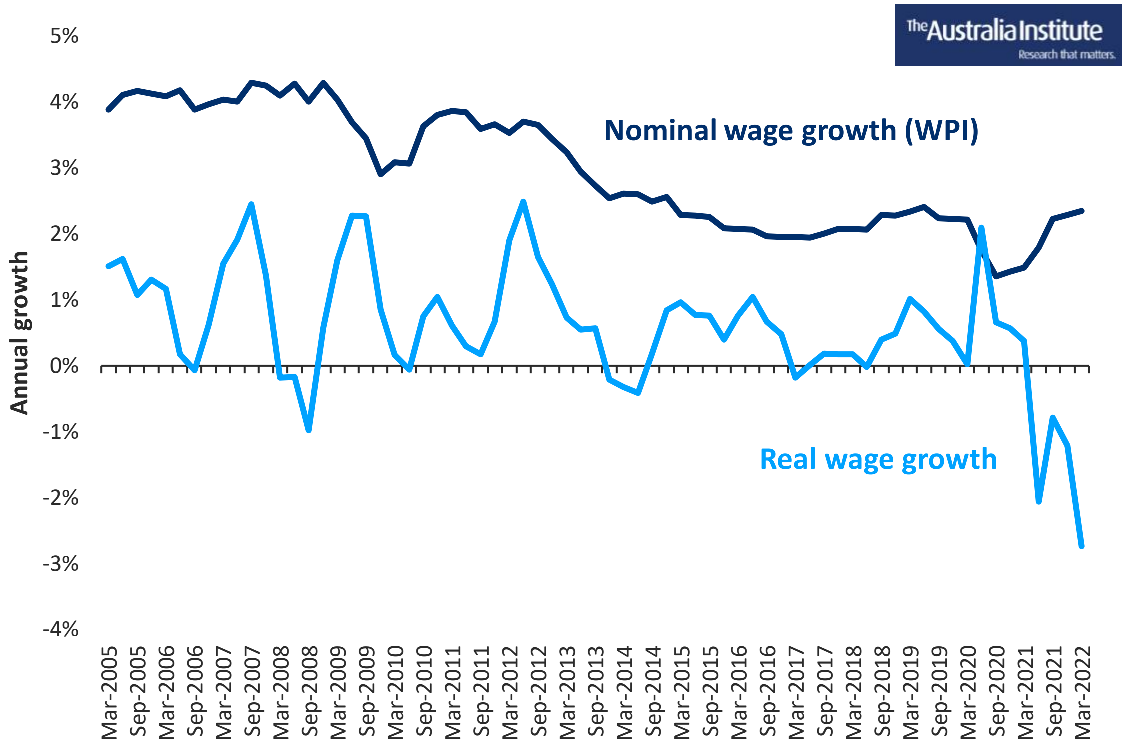
[1] Marin-Guzman and Shapiro (2022) *Reserve Bank warns of wage-price spiral as unions push for pay,* Australian Financial Review, 6 May, available at <https://www.afr.com/work-and-careers/workplace/reserve-bank-warns-of-wage-price-spiral-as-unions-push-for-pay-20220506-p5aj3e>

[2] AAP (2022) *Business warns of economic 'death spiral',* InDaily, 8 June, available at <https://indaily.com.au/news/2022/06/08/business-warning-of-economic-death-spiral/>

[3] Hannam (2022) *'Over-the-top alarmism': economists dismiss concerns wage rises cause inflation,* Guardian, 16 July, available at <https://www.theguardian.com/australia-news/2022/may/11/over-the-top-alarmism-economists-dismiss-concerns-wage-rises-cause-inflation>

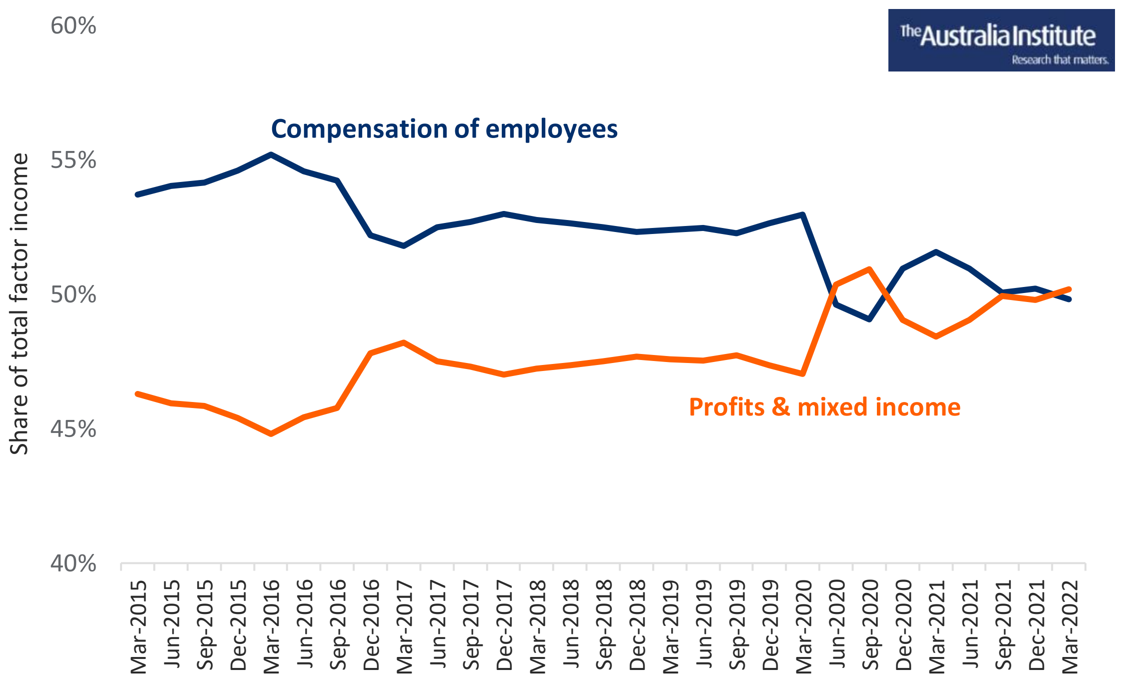
**Figure 1: Falling nominal and real wage growth, March 2005 to March 2022**




Source: Australian Bureau of Statistics Wage Price Index and Consumer Price Index

Figure 2 shows that the wages share of GDP is also near its recent record low and the profit share remains close to its recent record high.

**Figure 2: Declining wages share in total factor income, 2015 to 2022**




Source: Australian Bureau of Statistics National Accounts

While wage growth clearly has not been the driving force of recent increases in Australian inflation, or indeed inflation around the world, the continuing impact of COVID 19 and the sharp increase in global energy prices associated with Russia's invasion of the Ukraine clearly have.

# What causes inflation?

Inflation refers to an overall increase in the level of prices in an economy. According to the International Monetary Fund:

> Inflation is the rate of increase in prices over a given period of time. Inflation is typically a broad measure, such as the overall increase in prices or the increase in the cost of living in a country.[4]

While much is made of the link between increases in the costs of inputs (such as the price of oil) and increases in prices (such as the price of petrol) in fact many firms have a high degree of discretion about how much, if any, of an increase in costs they will pass on in the form of higher prices.

In short, if firms choose to absorb all of an increase in cost rather than  increase prices then cost increases will lead to a reduction in profit not an increase in prices. Similarly,  if firms pass on price increases that are more than enough to cover an increase in their production costs then profits will rise.In turn, macroeconomic data on economy-wide changes in prices and the share of GDP flowing to workers and profits can shed light on both the underlying sources of inflation and the distributional consequences of firms' responses to rising production costs.

While spokespeople for large companies often suggest they have 'no choice' but to increase their prices when their costs increase not only do they have the choice to accept lower profits, a closer examination of their language makes clear that they face a range of choices.

For example, in attempting to explain how he had 'no choice' but to increase prices in his stores in early 2002, Gerry Harvey, the Executive Chairman of the retail chain Harvey Norman, actually made clear the range of choices he did face:

> If a guy down the road drops the price, we drop the price,
>
> If we drop the price, they drop the price.
>
> But if it's costing you all 10 per cent more than it was yesterday, they're all going to put up their prices (because) they've got no choice.[5]

[4] International Monetary Fund, *Inflation: Prices on the rise*, Back to Basics Compilation, Finance & Development, available at <https://www.imf.org/external/pubs/ft/fandd/basics/30-inflation.htm>

[5] 3AW (2002) *Harvey Norman left with 'no choice' but to raise prices on some consumer goods*, Interview with Gerry Harvey, 25 February, available at <https://www.3aw.com.au/harvey-norman-left-with-no-choice-but-to-raise-prices-on-some-consumer-goods/>

Mr Harvey makes clear that his company is willing and able to choose to lower prices to match his competitors pricing, even in the absence of a change in cost. He also makes clear that he expects other firms not to absorb any increase in costs and that his firm and his competitors are all likely to increase their prices if costs increase by 10 percent, but it is not clear by how much his firm, or others, would chooses to increase their prices by. Intriguingly, he ends this explanation by saying firms have no choice, even though all firms have different costs structures and his opening statement is that he would lower his price to match a cheaper offer by a competitor.

As all firms have slightly different cost structures, contract terms for inputs, bottoming costs and exposures to market rents it is inconceivable that all firms in any industry would experience identical changes in price and, in turn, the choices firms make about their price setting in response to changes in cost reflect both their current rates of profit and their willingness to gain or lose market share.

Other reasons why changes in cost and changes in price are rarely equal include:

- Price stickiness (changing prices takes time and money).
- Convenient price points, round number prices, or desire to maintain price below certain thresholds.
- Previous responses to previous cost increases.
- Pre-emptive moves to cover future expected cost increases.
- Response to a competitor’s expected future pricing.
- An opportunity to increase profit.

In short, while in the long run firms must set prices sufficient to cover their costs of production, there is no direct link between costs of production and prices beyond the desire of firms to maintain, or increase, their profits. While firms in new industries seeking rapid growth often  deliberately set their prices below their costs in, companies like Santos are currently enjoying a significant increase in price that is entirely unrelated to their cost of production.

Given that profits currently account for a record share of GDP there is simply no truth behind the assertion that the Australian corporate sector has ‘no choice’ but to pass on cost increases in full in the form of higher prices. Indeed, the rising profit share of GDP suggests that Australian firms have, for some time, been choosing to increase their prices faster than their costs have been rising. By definition this causes higher inflation.

# How is inflation measured?

While the concept of inflation is easily expressed, there are a myriad of ways to measure it.

In Australia inflation is most commonly measured as the change in the consumer price index (CPI) collected by the Australian Bureau of Statistics (ABS). The CPI is based on a 'basket' of consumer goods and services selected by the ABS on the basis of the Household Expenditure Survey. The consumer price index, as the name suggests, includes only consumer goods (for example it excludes the price of export commodities) but it is not a 'cost of living index' as, for example, it specifically excludes items such as mortgage interest rates.

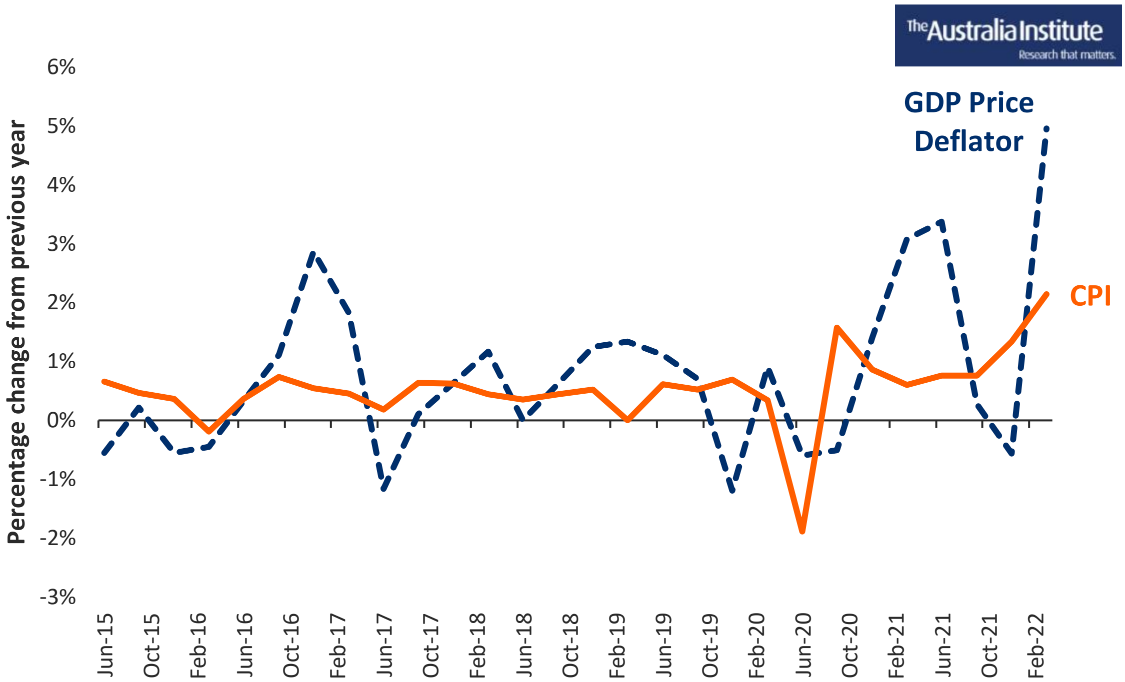
The Reserve Bank of Australia (RBA) uses a number of different indicators in its efforts to understand inflationary pressures including both the seasonally adjusted measure and the non-seasonally adjusted CPI, the CPI excluding volatile items and the 'trimmed mean' CPI which excludes large irregular price movements to estimate the underlying trend inflation.[6]

A broader measure of the movement in prices is the GDP deflator which includes all prices that affect nominal GDP including commodity prices. The GDP deflator is a significantly broader measure of price movements than the CPI but the drivers of changes in each measure are broadly comparable with the prices included in the CPI. For example, an economy-wide increase in wages will likely increase both the CPI and the GDP deflator and a price increase in any product included in the CPI will also drive up the GDP deflator. Likewise, many prices that are included in the GDP deflator, but not in the CPI, can indirectly affect the CPI as prices of intermediate and imported goods and services will be passed through to the prices of the final consumer products.

Importantly, the GDP deflator includes price impacts for Australia's exports. Since many of Australia's exports are not consumed by households, large swings in export prices can have significant impacts on the GDP deflator but not the CPI. A final important difference is that, unlike the CPI, the effective GDP deflator basket of products changes each period as composition of the economy's output changes over time. Figure 3 shows the difference in the measures over time.

[6] Reserve Bank of Australia (2022) *Measures of Consumer Price Inflation*, 27 April, available at https://www.rba.gov.au/inflation/measures-cpi.html; Australian Bureau of Statistics (2011) *Trimmed mean and weighted median measures of inflation*, 6401.0.55.003 - Seasonal Adjustment of Consumer Price Indexes, 2011, 14 September, available at <https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/6401.0.55.003Main+Features62011>

**Figure 1: Similar trends in the GDP deflator growth and the CPI growth**

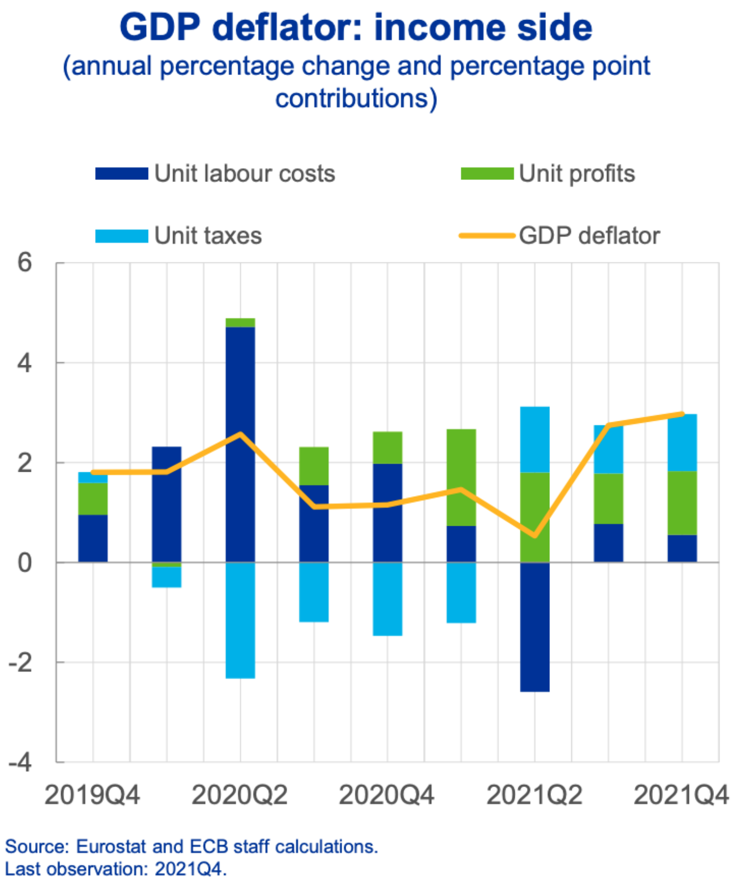



Source: ABS National Accounts and ABS Consumer Price Index

# The European Central Bank's analysis of the role of profits in driving inflation

In a recent speech, Isabel Schnabel, a member of the board of the European Central Bank, said "profits have recently been a key contributor to total domestic inflation"[7] and backed that assertion with the data in Figure 4.[8]

**Figure 4: ECB decomposition of GDP deflator by wages, profits and net taxes**




Source: European Central Bank

[7] Schnabel (2022) *The globalisation of inflation*, European Central Bank, 11 May, available at <https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220511_1~e9ba02e127.en.html>

[8] The same approach was used in European Central Bank (2006) *Using National Accounts data to gauge price pressures in the Euro area*, Monthly Bulletin, December 2006, p.52-55, available at <https://www.ecb.europa.eu/pub/pdf/other/mb200612_focus06.en.pdf>

Ms Schnabel went on to state that:

> many firms have been able to expand their unit profits in an environment of global excess demand despite rising energy prices… The resilience of profits is particularly evident in those sectors most heavily exposed to global conditions, such as the industry and agricultural sector.

And:

> To put it more provocatively, many euro area firms, though by no means all, have gained from the recent surge in inflation. The fortunes of businesses and households have diverged outside of the euro area, too, with corporate profits in many advanced economies surging over the past few quarters.
>
> Poorer households are often hit particularly hard – not only do they suffer from historically high inflation reducing their real incomes, they also do not benefit from higher profits through stock holdings or other types of participation.[9]

# THE ECB METHOD

In order to shed light on the underlying drivers of inflation in Europe the ECB identifies the various price components of the income measurement of GDP that contribute to the GDP price deflator.

The starting point is the published GDP deflator data, which is then broken down into its income side components using other national accounts data. In effect, the GDP deflator on the income side can be thought of as the weighted average of the price of labour, the 'price' of profits, and the 'price' of taxes less subsidies on production, all expressed per unit of nominal GDP output. The weights used are the shares of each component in nominal GDP.

The most straightforward component to estimate is the contribution of changes in labour costs to the GDP deflator as nominal unit labour costs are included in the national accounts and simply need to be weighted by the labour share of GDP to estimate the impact of wages costs on the GDP deflator.

The remainder of the GDP deflator then needs to be decomposed into the contribution of profits and the contribution of taxes minus subsidies. In order to estimate the impact of changes in net taxes on the GDP deflator the ECB used a similar approach as for unit labour costs.[10]

[9] Schnabel (2022) *The globalisation of inflation*, European Central Bank, 11 May, available at <https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220511_1~e9ba02e127.en.html>

[10] It is not clear exactly which 'prices' and weights the ECB used to attribute the GDP deflator to net taxes but the impacts of these choices are likely not large and, significantly for this analysis, have no impact on the

Finally, once the wage and net tax components have been calculated the contribution of profit to the GDP deflator is calculated as the final residual where the profit figure includes mixed business income and other items in the Gross Operating Surplus as well as the small statistical error. Essentially this is a broad measure of operating profit for both incorporated and unincorporated businesses.

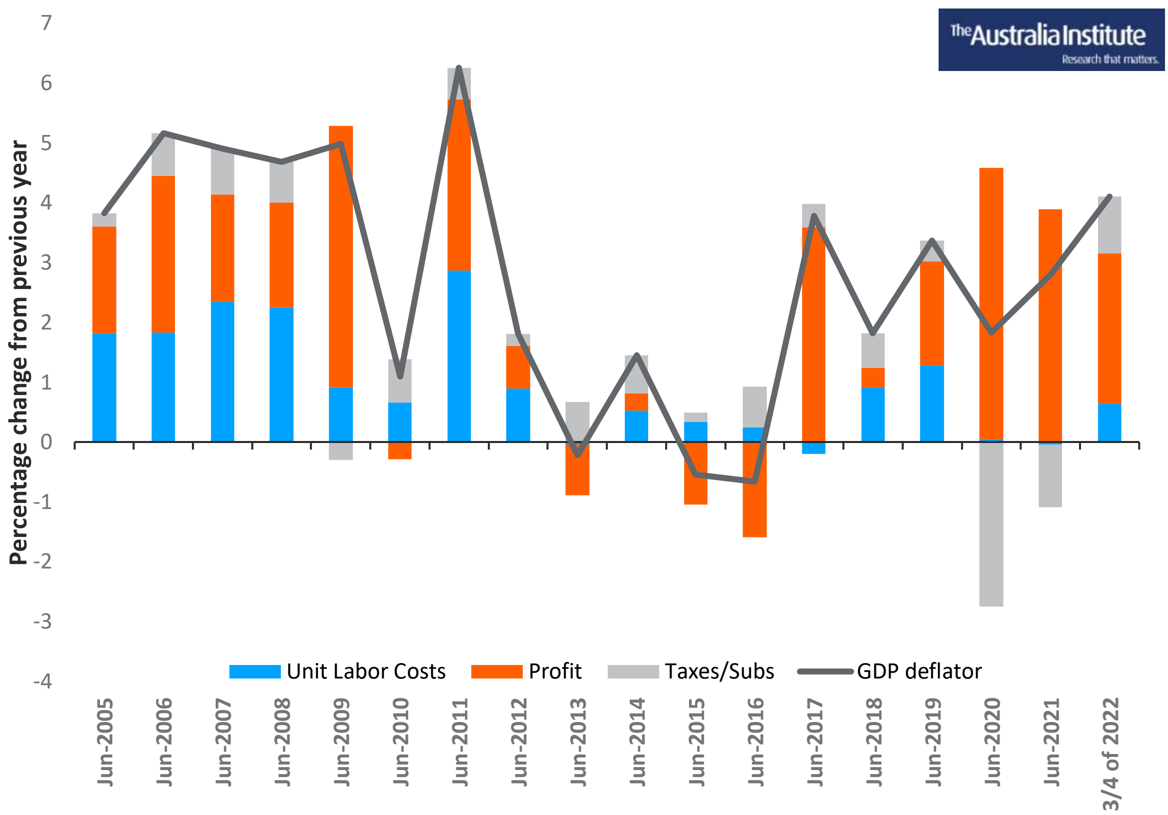
portion of the GPD deflator attributed to wage costs. To the authors' knowledge the ECB have not published a complete documentation of their methodology, but a description appears in European Central Bank (2006) *Using National Accounts data to gauge price pressures in the Euro area*, Monthly Bulletin, December 2006, p.52-55, available at <https://www.ecb.europa.eu/pub/pdf/other/mb200612_focus06.en.pdf>

# Australian results

The methodology used by the ECB to decompose recent shifts in price levels and attribute them to shifts in wages, profits and taxes can be applied to Australian data to show the contribution of each to inflation.

The Australia Institute applied the ECB method to annual data for the financial years 2005 to 2021 and quarterly data for June 2021 to March 2022 (the most recent quarter for which data is available). Annual data was used where possible to minimise the volatility in the underlying data caused by COVID-19 support payments affecting tax and subsidies.

**Figure 5: Decomposition of Australian GDP deflator by wages, profit and net taxes**




Source: Australia Institute analysis of ABS National Accounts

Note: The final column represents only the first three quarters of 2021–22 as the final quarter data will not be released until 7 September 2022.

The Australian data provides even more stark results than the ECB's. Figure 5 shows that unit labour costs played almost no role in inflation (as measured by the GDP deflator) over the period 2013 to 2021 and had typically contributed less than half of the GDP deflator prior to 2013.

For the three quarters of data available for 2021–22, encompassing the current uptick in the CPI, labour costs have played an insignificant role, accounting for only 0.6 percentage points of the 4.1 percentage point increase in the GDP deflator (15 percent of the total). Meanwhile profits have accounted for 2.5 percentage points of the increase in the GDP deflator (about 60 percent of the total).

# Conclusion

Prices in Australia have clearly been rising faster than wages and other costs of production for many years leading to a sustained increase in the share of GDP accruing to profits. The recent outbreak of inflation has exacerbated this trend.

Applying the approach developed by the European Central Bank to Australian data shows that wages have played a trivial role in driving inflation in Australia in the last three years. Higher profits have played the dominant role over that same period.

While company spokespeople, such as Gerry Harvey, often suggest that they have ‘no choice’ but to increase prices when other costs rise, this is clearly not the case. Increasing prices in line with, or in excess of, rising costs is a choice to maintain or increase profit margins in Australia even though the profit share of GDP is at a near-record high.

The distributional consequences of record high profits and record low real wage growth have been widely discussed but the data presented above suggests that rising profits are now the major driver of inflation. Given the high macroeconomic and social costs of policies designed to control this inflation, including higher unemployment and lower growth, it is clear that competition policy and other policies designed to control prices have a significant role to play in Australia.