Profit-Price Inflation:

Theory, International Evidence, and Policy Implications

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Summary

In the two years since global inflation started to accelerate after the COVID pandemic and subsequent economic reopening, a significant body of original research has been published by economists around the industrial word investigating the causes and distributional consequences of this inflation. Most of this research has noted that wages and labour costs have not been a leading cause of this inflation, contrary to the conventional assumptions of orthodox monetary theory and policy. Instead, unit labour costs have been muted compared to previous inflationary episodes, and real wages have fallen significantly in most industrial countries. In contrast, corporate profits increased coincident with this inflation to historic highs in many industrial countries (including Australia). Much of this new research used empirical techniques to decompose increases in economy-wide prices into factor incomes (on the basis of standard national income accounting practices).

The implications for macroeconomic and monetary policy of these findings are important: if labour costs were not the source of inflationary pressure, then conventional anti-inflation policy (typically aimed at weakening labour demand and thus wage growth through monetary tightening) might be misplaced. Instead, measures to more directly control price increases, foster more competition in key industries, limit the growth of unit profits, and/or redistribute unusually high profits might be more relevant.

In Australia, several reports regarding the causes of inflation, with methodology and findings consistent with this growing body of international literature, were published by the Australia Institute and its Centre for Future Work. The reaction to this research from certain segments of the business media, orthodox economics, and federal macroeconomic officialdom was hostile. Whereas in other countries these findings have sparked dialogue and further inquiry, in Australia some critics suggested these reports were illegitimate, flawed, and should even be retracted. These critics identified no quantitative errors in our research. Rather, they simply denied the relevance of our methodology and findings to the Australian situation.

This briefing paper presents a comprehensive bibliography of recent international research (and a few other Australian reports) on the role of elevated profits in post-pandemic inflation. We review over 35 different published works which have decomposed inflation (most using methodology similar to that used in our reports), and found that historically high profits have played an important role in recent inflation. This paper also describes theoretical approaches that help to illuminate the role of profits in determining inflation. The methodology of our

research on profit-led inflation is founded on conventional national income accounting, and has been widely used by international economists (including several overseas central banks, and international organizations such as the OECD, the IMF, the Bank for International Settlements, and the European Commission). The global literature on profit-led inflation is growing rapidly, as other researchers further investigate the impact of distributional shifts between wages and profits on evolving macroeconomic and inflation conditions.

Our general finding that record-high profits in Australia (like many other industrial countries) account for the lion's share of the surge in economy-wide price levels in the first years after the COVID pandemic is undeniable. Research continues to further elucidate and understand the specific channels and mechanisms linking record profits (in Australia and elsewhere) to inflation, and considering how these distributional issues are likely to evolve in coming years (in particular, as workers struggle to repair real wages deeply damaged by higher prices). Exploring these important questions theoretically and empirically is an important priority for open-minded macroeconomists to pursue. Others, with vested interests in a status-quo policy orientation that accepts record profits as natural and inevitable, and triers to shift the burden of disinflation onto those who did not cause the problem, will continue to deny the legitimacy of this research agenda.

The policy implications of this growing international body of research for anti-inflation policy are immediate and important. First, the analysis throws into question the wisdom, efficiency, and fairness of using continued monetary tightening to suppress domestic demand, employment, and wages. This strategy, even though it misses the true sources of post-pandemic inflation, might eventually succeed in bringing inflation down – but only at great cost to the economy, and to working households in particular. It would be more effective to seek other ways of short-circuiting or reversing the chain of profit-led inflation that corresponds so tightly to recent inflation. Policy options in this regard, explored further in this paper, include:

- Price regulations on strategically important commodities to forestall the initial price shocks that set the inflationary cascade in motion in the first place (including in key sectors like energy, housing, and transportation).
- Redistributive fiscal measures to offset the economic and distributional consequences of profit-led inflation where it has occurred. A combination of incremental profit taxes in sectors which particularly benefited from profit-led inflation, with transfers to households hardest-hit by that inflation, can ameliorate the maldistribution resulting from profit-led inflation. If designed thoughtfully, these measures can also directly reduce recorded inflation.

- Competition policy reforms to immediately prohibit especially exploitive pricing practices, and also improve the level of competition in the long run (by preventing further corporate concentration, or breaking up current monopolistic or oligopolistic business structures). The ACTU's Price-Gouging Inquiry, by documenting the extent and consequences of abusive pricing, will make a constructive contribution to this thread of policy development.
- Real wages in Australia have fallen, on average, by 6% since the advent of this post-pandemic inflationary surge. To repair that damage to mass living standards, wages in future will need to grow significantly faster than inflation, for a sustained period of time. The RBA's efforts to prevent this (by raising interest rates and deliberately in order to undermine workers' bargaining position and suppress wage growth) are misguided and unfair.
- The recovery of real wages (followed by subsequent real wage progress in line with productivity growth) is possible coincident with moderating inflation, but only if current historically high profit margins are reduced. Some progress in this regard has already been achieved: gross corporate profits in Australia declined 7% in the most recent quarter, coincident with a noted moderation of inflation. Both on the way up, and on the way down, the close link between corporate profits and domestic inflation is clear. This normalisation of profits must continue, and companies must be prevented from passing on costs associated with the recovery of real wages to consumers (through a flexible mix of the policies noted above).

The rest of this paper is organised as follows. First, a detailed review of recent international and Australian research on profit-led inflation is provided, confirming that researchers around the world (including with numerous established national and international organisations) have similarly identified record corporate profits as a dominant contributor to post-pandemic inflation. Some additional detail is then provided on the use of standard national income accounting metrics as an analytical tool in this research. The paper then reviews a range of theoretical perspectives in economics which can help to explain how and why profit-led inflation might occur.

The next section provides a summary of our own previous research on profit-led inflation, and responds to certain critics of that research. We confirm that our research was transparent and methodologically legitimate; both our approach and our findings are fully consistent with the growing international body of research on profit-led inflation. Our critics disagree forcefully with the policy implications of our analysis (namely, that conventional monetary austerity is not the appropriate response to post-COVID inflation), but they have identified no factual or quantitative errors in our research.

The next section of the report reviews the most recent data on prices, factor incomes, and GDP growth in Australia, describing the evolving composition of inflation. With the partial retrenchment in corporate profits, a steeper decline in small business income, and a modest acceleration of wage growth, the composition of unit price increases is shifting, with labour costs playing more of a role than in earlier stages of this inflationary cycle. This is to be expected: it reflects a catch-up process, whereby workers strive to repair real wages badly damaged in the initial stages of post-COVID inflation. This does not mean that workers are now 'the source' of inflation: it confirms, rather, that the initial profit-led surges in prices have sparked a long and conflictual process of adjustment that will continue to roil macroeconomic conditions for years to come. The fastest way to stabilise both prices and income distribution will be to reduce profits back to historic norms, and repair real wages quickly; that combination is consistent with a gradual decline in inflation to target levels.

Finally, the report considers in more detail the policy implications of this research on profit-led inflation. It identifies several of the major policy responses to post-pandemic inflation that would be more appropriate, fair, and effective than trying to suppress wages and purchasing power through deliberately engineered unemployment.

International Research on Profit-Led Inflation

The unique nature of inflation in the wake of the global COVID pandemic has sparked an energetic and productive new body of research among global economists and policy-makers, aimed at understanding the specific causes, consequences, and appropriate policy responses to the surge in inflation that occurred in most countries beginning in mid-2021 (as the global economy re-opened after COVID restrictions were relaxed). A key methodological tool used in most of this research has been analysing and 'unpacking' inflation into its various factor income components, on the basis of national income accounting data.[1]

This technique has been commonly used for years by researchers in various countries. More recently, numerous central banks (including the European Central Bank, the Bank of England, the U.S. Federal Reserve, and the Norges Bank) and international organizations (such as the OECD, the IMF, the European Commission, and the Bank for International Settlements) have published research using similar methodology. Since the basic structure of national income accounting (including measures of real and nominal output, income and expenditure, and expenditure deflators) is largely similar across industrial countries, it is not surprising that this approach has been utilised globally – particularly in light of renewed interest in the causes and distributional consequences of inflation topics since the upsurge in inflation after the pandemic.

For example, many years ago (in the mid-1980s), researchers at the OECD used a deflator decomposition approach to analyse the causes of, and inform policy responses to, inflation in Australia and other OECD countries.[2]

After the turn of the century, researchers at the European Central Bank used this method to disaggregate inflation into its factor cost components. For example, in a detailed sidebar to its 2006 *Monthly Bulletin*,[3] the ECB decomposed the growth over time in economy-wide inflation (measured by the GDP deflator) into its respective factor income components. In the ECB's view, this factor price

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[1] More detail on these national income accounting measures and methodologies Is provided in the next section.

[2] See, for example, Economic Surveys: Australia (Paris: OECD, June 1985), p. 34.

[3] See "Using National Accounts Data to Gauge Price Pressures in the Euro Area," *Monthly Bulletin* (Frankfurt: European Central Bank), December 2006, pp. 52-55, https://www.ecb.europa.eu/pub/pdf/other/mb200612_focus06.en.pdf.

disaggregation is an informative and data-driven method for understanding the causes of inflation, and appropriate policy responses. Based on this research, the ECB expressed concern even at that time (long before the COVID pandemic) over the impact of corporate price-setting strategies and rising profit margins on overall inflation trends in Europe:

> "All in all, national accounts indicators provide useful information on euro area price and cost developments, both at the level of the whole economy and at more disaggregated levels. At the current juncture, analysis of domestic cost pressures illustrates that, although unit labour cost growth is low, domestic price pressures are held up by government measures and profit developments." (p. 55)

ECB staff and officials have continued to wield this methodology to understand and respond to inflation in the wake of the pandemic. For example, staff recently used the GDP deflator decomposition approach to trace the impact on inflation of higher imported energy costs in Europe. The authors noted that nominal unit profits have increased despite higher firm expenses for energy, and have made a disproportionate contribution to economy-wide inflation:

> "Unit profits increased by 9.4% in the fourth quarter of 2022, year-on-year, and contributed more than half the domestic price pressures in that quarter."[4]

On the basis of this research, ECB leaders have made strong policy statements about the role of profits in lifting inflation, and the importance of reducing profit margins as a precondition for reducing inflation. For example, Isabel Schnabel, a member of the board of directors of the European Central Bank, noted that profits have accounted for a majority of inflation in the Euro zone (and elsewhere) since the pandemic:[5]

> "These data do imply that, on average, profits have recently been a key contributor to total domestic inflation, above their historical contribution.
>
> "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

[4] See Oscar Arce, Elke Hahn and Gerrit Koester, "How tit-for-tat inflation can make everyone poorer," *ECB Blog*, 30 March 2023, https://www.ecb.europa.eu/press/blog/date/2023/html/ecb.blog.230330~00e522ecb5.en.html.

[5] See "The globalisation of inflation," Speech by Isabel Schnabel, Member of the Executive Board of the ECB, to the Österreichische Vereinigung für Finanzanalyse und Asset Management, 11 May 2022, https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220511_1~e9ba02e127.en.html.

> 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."

The President of the European Central Bank, Christine Lagarde, has also stressed the role of rising profit margins in sustaining inflation in Europe, noting that many firms were not just passing on higher costs – they were lifting prices even higher:

> "Those sectors have taken advantage to push costs through entirely without squeezing on margins, and for some of them to push prices higher than just the cost push."[6]

She called on government and banking authorities to gather more data on corporate profit and pricing strategies, and consider strengthening competition policies to restrain profit-led inflationary impacts. More recently, she stated that higher corporate profits accounted for about two-thirds of inflation in the Euro zone in 2022.[7] She also stressed that profit margins need to shrink, or else interest rates will have to stay higher, for longer, to reduce inflation back to target.

Similarly, researchers at the European Commission have also used the factor income disaggregation approach to analyse inflation in Europe. In its Spring 2023 *Economic Forecast*, the EC provided a factor price disaggregation of continental inflation, using an identical methodology based on decomposition of the GDP deflator.[8] The Commission concluded:

> "In 2022, unit profits increased steadily, growing at a record 9.3% (year-on-year) in the final quarter. This increase contributed 3.2 percentage points to the total GDP deflator growth of 5.8%, thus contributing more to domestic inflation than unit labour costs." (p. 30)

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[6] János Allenbach-Ammann, "ECB-Lagarde says corporate profits contributed to inflation," *Euractiv*, 5 June 2023, https://www.euractiv.com/section/economy-jobs/news/ecb-lagarde-says-corporate-profits-contributed-to-inflation/.

[7] Phillip Inman, "Corporate profits drove up prices last year, says ECB president," *The Guardian*, 27 June 2023, https://www.theguardian.com/business/2023/jun/27/corporate-profits-driving-up-prices-ecb-president-christine-lagarde#:~:text=Corporate%20profits%20were%20the%20biggest,European%20Central%20Bank%20has%20said.

[8] See *European Economic Forecast Spring 2023* (Brussels: European Commission), pp. 29-31, https://economy-finance.ec.europa.eu/system/files/2023-05/ip200_en_1.pdf.

The Commission suggested that a combination of supply shortages which increased firms' pricing power, and reduced resistance from consumers to price increases in the wake of more frequent and widespread price changes, facilitated this rise in profit margins. Looking forward, the Commission concluded:

> "The contribution of unit profits to domestic price pressures in the euro area (and other EU countries) is expected to remain high in 2023 but to decline notably in 2024." (p. 31)

Another central bank to adopt a similar methodological approach for analysing inflation is the Bank of England. Prof Jonathan Haskel, a member of the Bank of England Monetary Policy Committee, recently used this method to decompose British inflation into its factor income components.[9] First Prof Haskel described the accounting identity which requires that aggregate nominal GDP must equal the sum of component flows of factor incomes:

> "This is an accounting identity, which conveniently summarises the claims of various parties in the economy on real resources. We can use it to work through what are called "first" and "second" round effects." (p. 16)

He then disaggregated the contribution of capital income (a measure of profit) to inflation in a manner precisely analogous to other studies (including ours):

> "Capital income contributes to inflation across the board. The contribution of capital income to cumulative inflation in this period is 5 percentage points in the euro area and US, and less than 4 percentage points in the UK. Differences between countries will reflect differences in the capital share of GDP, as well as differences in the 'price' change of capital." (p. 23)

Haskel's review of this data led him to conclude that in the UK profits have not been the largest driver of inflation, although he acknowledges that rising nominal unit profit costs have contributed to UK inflation:

> "The data shows little evidence of UK inflation being disproportionately due to firms raising prices. The share of national income going to capital is lower than its pre-pandemic average." (p. 26.)

[9] See Bank of England, "What's driving inflation: wages, profits, or energy prices?", Speech by Jonathan Haskel to Peterson Institute for International Economics, 25 May 2023, https://www.bankofengland.co.uk/-/media/boe/files/speech/2023/may/whats-driving-inflation-wages-profits-or-energy-prices-speech-by-jonathan-haskel.

Elsewhere, however, his analysis confirmed that profits were the largest single driver of post-pandemic inflation in the euro area (consistent with the ECB findings). Parallel to Hasken's analysis, Bank of England Governor Andrew Bailey explicitly urged companies to exercise restraint in setting prices, seeming to accept at least the possibility that profit-led inflation is a relevant concern.[10]

Officials at the U.S. Federal Reserve have also explicitly acknowledged the role of higher profit margins in explaining post-COVID inflation, and shaping appropriate policy responses to that inflation. In January, then-Fed Vice Chair (and now Chair of the U.S. Council of Economic Advisors) Lael Brainard explicitly noted the role of historically high profit margins and retail mark-ups in explaining U.S. inflation.[11] He also acknowledged that the labour share of GDP income had declined (once again, using an analysis of factor income shares to evaluate various factors' contributions to inflation).

Other Federal Reserve officials and researchers have also affirmed the relevance of historically high margins in understanding and responding to post-pandemic inflation. For example, research by staff at the Federal Reserve Bank of Boston has linked excess profit and pass-through of costs to corporate concentration in selected industries.[12]

Meanwhile, research from the Reserve Bank of Kansas City also noted the role of profits in explaining initial post-pandemic inflation, once again based on a factor income decomposition technique. This research found that higher profit mark-ups accounted for over half of inflation in 2021:

> "Corporate profits rose quickly in 2021 along with inflation, raising concerns about corporations driving up prices to increase profits. Although corporate profits indeed contributed to inflation in 2021, their contribution fell in 2022. This pattern is not unusual: in previous economic recoveries, corporate profits were the main

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[10] See Phillip Inman, "Bank of England boss urges firms to hold back price rises or risk higher rates," *The Guardian*, 24 March 2023, https://www.theguardian.com/business/2023/mar/24/bank-of-england-boss-urges-firms-to-hold-back-price-rises-or-risk-higher-interest-rates.

[11] See "Staying the Course to Bring Inflation Down," Speech by Lael Brainard, University of Chicago Booth School of Business, January 2023, https://www.federalreserve.gov/newsevents/speech/brainard20230119a.htm?utm_source=substack&utm_medium=email.

[12] See "Cost-Price Relationships in a Concentrated Economy," by Falk Bräuning, Jose L. Fillat, and Gustavo Joaquim (Boston: Federal Reserve Bank of Boston), May 2022, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4118181.

> contributor to inflation in the first year and displaced by costs in the second year."[13]

Federal Reserve Chair Jerome Powell has also acknowledged the importance of reducing profit margins in order to achieve future reductions in U.S. inflation.[14] Even U.S. President Joe Biden emphasised this link, in his own statements welcoming recent declines in corporate profits in U.S., which he indicated were supporting the deceleration of inflation and the beginning of recovery in real wages:

> "Remember the experts said… to get inflation under control, you need to lower wages, you need higher unemployment… The answer was to lay people off and pay them less. But I never thought the problem was too many people working or working people making too much money. And one reason we've seen inflation fall by two thirds without losing jobs is that we're seeing corporate profits come back… down to earth."[15]

In its most recent *OECD Economic Outlook*, the Organization for Economic Cooperation and Development also highlighted the extent of rising profits in most OECD countries since the pandemic. It confirmed that gross corporate profits grew as a share of GDP in 25 of 29 OECD countries with comparable data.[16] Both the level of the profit share, and its increase since the pandemic, were higher for Australia than for other countries – with Australia recording the 4th highest share of gross corporate profits (at 41% of GDP, six percentage points higher than the median of the 29 countries), and the 5th biggest increase from 2019 through 2022 (rising 3.5 percentage points over the three-year period, more than twice the median rise of 1.4 percentage points).

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[13] See Andrew Glover, José Mustre-del-Río and Alice von Ende-Becker, "How Much Have Record Corporate Profits Contributed to Recent Inflation?" (Kansas City: Federal Reserve Bank of Kansas City), January 2023, https://www.kansascityfed.org/research/economic-bulletin/corporate-profits-contributed-a-lot-to-inflation-in-2021-but-little-in-2022/

[14] See Howard Schneider, "Fed's Powell acknowledges slimmer corporate profits could help curb inflation," *Reuters*, 7 March 2023, https://www.reuters.com/markets/us/feds-powell-acknowledges-slimmer-corporate-profits-could-help-curb-inflation-2023-03-07/.

[15] Joe Biden, "Remarks by President Biden on the Inflation Reduction Act and Bidenomics," (Washington: The White House, 15 August 2023), https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/08/15/remarks-by-president-biden-on-the-inflation-reduction-act-and-bidenomics-milwaukee-wi/#:~:text=And%20one%20reason%20we've,to%20go%20lower%20than%20that..

[16] Figure 1.13, *OECD Economic Outlook* (Paris: OECD), 2023(1), https://www.oecd-ilibrary.org/sites/ce188438-en/1/3/1/index.html?itemId=/content/publication/ce188438-en&_csp_=f8e326092da6dbbbef8fbfa1b8ad3d52&itemIGO=oecd&itemContentType=book.

The OECD then undertook a factor income decomposition of inflation in selected OECD countries, to better understand the driving forces of post-pandemic inflation, and how the current inflation differs from previous episodes.[17] The OECD applied a decomposition of GDP inflation into its labour, profits, and other major components, similar to that adopted in our reports and by other researchers. It showed that the contribution of unit labour costs to overall inflation was much smaller than in the 1970s, and that higher unit profits have been the leading component of recent inflation in several of those countries (including Australia, Canada, and the Euro zone). Inflation in the U.S. has been more evenly divided between labour costs and unit profits, although even there unit profits contributed disproportionately to overall inflation (accounting for a larger proportion of inflation than the profit share of national income, and thus driving an increase in the profit share of GDP).

In Australia's case, the OECD data suggests that over the 5 quarters to end-2022, higher unit profits accounted for an average of 51% of the year-over-year increase in the GDP deflator, while higher unit labour costs only 21%. Labour's share of total price rises has grown more recently, reaching 37% by the last quarter of 2022 – but was still smaller than the 48% added in that quarter by higher profits. This OECD work on Australian inflation is strikingly consistent with both the methodology and the findings of the Australia Institute and Centre for Future Work reports surveyed below.

The International Monetary Fund has also published research based on a decomposition of GDP deflators in the Euro zone, to highlight the differing contributions of wages and profits to inflation after the pandemic. In a Working Paper prepared by staff economists,[18] the IMF decomposed post-pandemic inflation in the Euro area into its factor price components – using a methodology similar to the approach taken by other research (including ours). The disaggregation of economy-wide inflation into factor income shares on a unit basis "confirm[s] that unit profits in the euro area have increased sharply and are the main counterpart to the increase in the GDP deflator." (p. 5). The authors note that the profit increase was largest in mining and energy utilities, but significant growth in profit margins was also recorded in other strategic sectors: including

[17] "Box 1.2: The contribution of unit profits to domestic inflationary pressures," *OECD Economic Outlook* (Paris: OECD), 2023(1), https://www.oecd-ilibrary.org/sites/ce188438-en/1/3/1/index.html?itemId=/content/publication/ce188438-en&_csp_=f8e326092da6dbbbef8fbfa1b8ad3d52&itemIGO=oecd&itemContentType=book.

[18] Niels-Jakob H Hansen, Frederik G Toscani, and Jing Zhou, "Euro Area Inflation after the Pandemic and Energy Shock: Import Prices, Profits and Wages," IMF Working Paper WP/23/131 (Washington: International Monetary Fund), June 2023, https://www.imf.org/-/media/Files/Publications/WP/2023/English/wpiea2023131-print-pdf.ashx.

agriculture, construction, manufacturing, and contact-intensive services. The IMF paper elaborated the approach used by other studies, to explicitly consider the impact of higher import prices.[19] Even after accounting for the impact of import prices, however, the report found that higher domestic profits still accounted for more of the rise in prices than any other factor – and almost twice as much as unit labour costs.

Looking forward, the authors conclude:

> "A compression in the profit share to the historic average will be necessary to achieve the disinflationary process under plausible wage growth assumptions." (p. 17)

The authors note that coordinated efforts to restore real wages in a gradual way, coincident with moderation in unit profits, would be the most effective strategy for reducing inflation fairly, and without sparking ongoing 'tit-for-tat' distributional conflict. In the European context, this could include coordinated sector-wide or economy-wide collective bargaining systems. That approach could play a role in Australia, as well, depending on reforms to the industrial relations system.

In other work, the same authors state their conclusion more bluntly. The authors pin the blame squarely on companies increasing prices faster than their costs (including higher import costs):

> "Rising corporate profits account for almost half the increase in Europe's inflation over the past two years as companies increased prices by more than spiking costs of imported energy."[20]

Acknowledging the resulting redistribution from wages to profits, and then implementing explicit strategies to reverse it while achieving a gradual reduction in inflation, will be essential to successful restoration of pre-pandemic inflation norms. Simply denying any role for profits in post-pandemic inflation (as some Australian commentators and officials have done) leaves policy-makers blind to this vital dimension of the anti-inflation effort.

Another international institution to consider the varying roles of profits and wages in explaining post-pandemic inflation, using a methodology similar to other research (including ours), is the Bank for International Settlements (BIS), based in

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[19] As discussed below, import prices themselves incorporate profit-led inflation experienced in the source countries, so separately specifying import costs will have the effect of underestimating the total effect of global profits on inflation.

[20] Niels-Jakob H Hansen, Frederik G Toscani, and Jing Zhou , "Europe's Inflation Outlook Depends on How Corporate Profits Absorb Wage Gains," *IMF Blog*, 26 June 2023, https://www.imf.org/en/Blogs/Articles/2023/06/26/europes-inflation-outlook-depends-on-how-corporate-profits-absorb-wage-gains.

Basel. In a recent research bulletin,[21] BIS economists decomposed changes in the GDP deflator into factor income components, in order to consider the varying roles of wages and profits in explaining the acceleration of inflation after post-pandemic re-opening, and also to model the prospective reduction in inflation in future years. First, the authors affirmed the value of the decomposition approach to understanding the role of factor prices in inflation:

> "Insights into how the incomes of workers and firms absorb the disinflation burden in the euro area and the United States can be gained by decomposing changes in the GDP deflator into its underlying components." (p. 1).

They also noted that while the GDP deflator and the CPI are measured differently, they tend to track closely in the long-run.[22] The authors used this decomposition method to forecast potential distributional scenarios associated with a reduction in inflation over coming years. They concluded that a narrowing of elevated profit margins will be necessary to allow for a return to target 2% inflation coincident with a gradual restoration of real purchasing power for working households.

This research was cited, and developed further, in the BIS's 2023 *Annual Economic Report*.[23] First the BIS compared the behaviour of wages and profits during the upsurge of recent inflation, to past inflationary episodes. It concluded that the decline in real wages in the current inflation was much steeper than in the past, while profits grew throughout the episode (whereas in previous inflationary upswings, profit growth was mostly non-existent). This confirms that the stronger profit conditions of the current economy are important for understanding the nature of post-pandemic inflation. Looking forward, the BIS concluded that a moderation of profit margins will be essential to achieving lower inflation while facilitating at least a partial, gradual recovery in real wages:

> "Some catch-up in wages would be compatible with inflation returning to target, but only as long as firms accept a reduction in profits." (p. 17)

The BIS analysis indicates the importance of understanding the shifts in factor income shares not only to analysing the causes of the initial post-pandemic surge in inflation, but also to designing effective and fair strategies for achieving lower inflation in the future. Again, it is clear that analysts who dismiss, on the basis of

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[21] Benoît Mojon, Gabriela Nodari and Stefano Siviero, "Disinflation milestones," *BIS Bulletin* #75 (Basel: BIS), May 2023, https://www.bis.org/publ/bisbull75.pdf.

[22] Evidence to this effect in the Australian context is provided below.

[23] Bank for International Settlements, *Annual Economic Report* (Basel: BIS), June 2023, https://www.bis.org/publ/arpdf/ar2023e.pdf.

prior assumptions or ideological preferences, the role of record profits in driving recent inflation are thus circumscribing their ability to design effective anti-inflation policies.

In addition to this research from central banks and international institutions, other researchers in universities and think tanks around the world have also investigated the role of higher unit profits in driving inflation since the pandemic. Several used the now-familiar factor income decomposition approach, and arrived at similar conclusions about the causes and effects of post-pandemic inflation. Several of these international reports were cited in our earlier publications, but the catalogue of global research confirming the importance of profit-price inflation is growing steadily. Below we review just some of the other international research documenting the role of rising unit profit costs and profit margins in recent inflation.

One of the earliest efforts to decompose post-pandemic inflation into its factor price components was undertaken by Josh Bivens at the Economic Policy Institute in Washington, D.C.[24] He decomposed the growth of unit prices (based on quarterly national income data[25]) into three major components: labour, non-labour inputs, and a measure of profit mark-ups (over and above the cost of those two broad classes of inputs). From the second quarter of 2020 (the trough of the COVID recession) to the last quarter of 2021 (most recent data when he published this report), higher unit corporate profits accounted for 54% of the rise in unit prices, non-labour inputs 38%, and labour costs just 8%.

A report by Mike Konczal and Niko Lusiani for the Roosevelt Institute in the U.S. provided a very detailed accounting of corporate price mark-ups in the current inflation, and found they increased faster in 2022 (the year of peak post-COVID inflation) than any year since the 1950s.[26] The authors concluded:

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[24] See “Corporate profits have contributed disproportionately to inflation. How should policymakers respond?”, by Josh Bivens (Washington: Economic Policy Institute), June 2022, https://www.epi.org/blog/corporate-profits-have-contributed-disproportionately-to-inflation-how-should-policymakers-respond/.

[25] The U.S. Bureau of Economic Analysis publishes a unique companion table to its quarterly national income accounts, titled “Price Costs and Profit Per Unit of Real Gross Value Added of Nonfinancial Domestic Corporate Business,” which provides more detail on the impact of intermediate inputs prices (in addition to the factor cost measures reported in standard national income accounts, such as GDP by income and the GDP deflator).

[26] See “Prices, Profits, and Power: An Analysis of 2021 Firm-Level Markups,” by Mike Konczal and Niko Lusiani (New York: Roosevelt Institute), June 2022, https://rooseveltinstitute.org/wp-content/uploads/2022/06/RI_PricesProfitsPower_202206.pdf.

> “Adjusting for size, pre-pandemic markups are a strong predictor of the increase in markups during 2021, suggesting a role for market power as an explanatory driver of inflation.”[27]

The implications for inflation control strategies are clear:

> “Since markups are unusually and suddenly so high, there is room for reversing them with little economic harm and likely societal benefit, including lower prices in the short term, and less inequality and potentially more innovation in the medium term.”[28]

Findings published by Michalis Nikiforus and Simon Grothe for the Institute for New Economic Thinking also confirmed that corporate mark-ups increased rapidly in 2021, and further in 2022, coincident with accelerating inflation.[29] However, the rise in mark-ups in 2022 was not as broadly-based as was the case in 2021, and resulted in part from growing market share for firms with higher-than-average mark-ups. They find that conditions for rising mark-ups to contribute to post-pandemic inflation were reinforced by the long secular increase in corporate concentration and average mark-ups that preceded the pandemic.

Work by Nobel Prize economist Joseph Stiglitz and co-author Ira Regmi sheds further light on the distribution and impact of higher mark-ups during the current inflation.[30] They conclude that post-pandemic inflation was not caused by generalised excess demand; rather, supply-side shocks and sudden sectoral shifts in consumer demand (from services to goods, as a result of pandemic restrictions on many services industries) were the underlying drivers of higher prices. Those shocks facilitated increased profits by companies in many sectors of the economy, exacerbated, the authors suggest, by corporation concentration:

> “The increase in market concentration… has generated greater market power; the current circumstances have provided a prime opportunity for a greater exercise of that market power.”[31]

A landmark report by Isabella Weber[32] and Evan Wasner (economists at the University of Massachusetts) has provided a detailed sectoral decomposition of

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[27] Konczal and Lusiani, ibid.

[28] Konczal and Lusiani, ibid.

[29] See “Markups, Profit Shares, and Cost-Push-Profit-Led Inflation,” by Michalis Nikiforos and Simon Grothe (New York: Institute for New Economic Thinking), June 2023, https://www.ineteconomics.org/perspectives/blog/markups-profit-shares-and-cost-push-profit-led-inflation.

[30] See “The Causes of and Responses to Today’s Inflation,” by Joseph E. Stiglitz and Ira Regmi (New York: Roosevelt Institute), December 2022, https://rooseveltinstitute.org/wp-content/uploads/2022/12/RI_CausesofandResponsestoTodaysInflation_Report_202212.pdf.

[31] Stiglitz and Regmi, ibid.

rising prices and rising profit margins, tracing through the initial inflationary impact of higher energy and other input costs into economy-wide inflationary pressures. This flow-through effect is sectorally heterogeneous: some industries, by virtue of their "systemically significant" position in the overall economic supply chain, were able to enhance profit margins even as input costs rose after the initial shocks of the pandemic.[33] Firms in other sectors did not possess such strategic power, and experienced stable or even falling profit margins. The authors confirm that record U.S. corporate profits (as a share of total GDP) closely paralleled the rise of post-COVID inflation there.

Similar research has been undertaken in other industrial countries, most often utilising quantitative categories and methodologies based on the decomposition of factor incomes and economy-wide price indices. In Britain, an exhaustive analysis of profit margins for the largest U.K. listed companies indicated that average margins grew 89% from the first half of 2019 through the first half of 2022.[34] Sectoral decomposition of these results confirms that profit-led price hikes in the energy sector were the most important initial contributor to inflation. But supply chains running through other sectors (including shipping, food retail, and auto sales) also were marked by record-high profit margins, that contributed significantly to British inflation.

In Canada, David Macdonald has replicated the unit cost decomposition of higher prices reported by Josh Bivens for the U.S., although this was more difficult because national statistical agencies in most countries (including Canada) do not report the same level of detail on unit costs of intermediate inputs as does the U.S. BEA. Nevertheless, Macdonald developed an innovative method to estimate the cost impacts of produced inputs.[35] By his measure, 42% of the increase in unit selling prices in the two years ending in the third quarter of 2022 resulted from higher profit margins. One-third was due to higher unit labour costs, and one-quarter due to higher costs for produced inputs.

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[32] Dr Weber recently featured in a special webinar on "The Economics and Politics of Sellers' Inflation," hosted by the Australia Institute and the Centre for Future Work; a recording of the webinar can be accessed at https://www.youtube.com/watch?v=yZxWc6biPMc.

[33] See Isabella Weber and Evan Wasner, "Sellers' Inflation, Profits and Conflict: Why can Large Firms Hike Prices in an Emergency" (Amherst: University of Massachusetts Economics Working Paper), 2023, https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1348&context=econ_workingpaper.

[34] See Unite the Union, *Profiteering Across the Economy*: It's Systemic (London: Unite the Union), March 2023, https://www.unitetheunion.org/media/5442/profiteering-across-the-economy-march-2023.pdf.

[35] See "Where are your inflation dollars going? Inflation broken down by profit, wages and industry," by David Macdonald (Ottawa: Canadian Centre for Policy Alternatives), January 2023, https://policyalternatives.ca/publications/reports/where-are-your-inflation-dollars-going.

Another Canadian report (published by the Centre for Future Work's Canadian office) provided a sectoral breakdown of the rise in corporate profits, confirming the broad heterogeneity of profit experience across different industries. The report found that 15 particularly profitable sectors (out of 52 disaggregated in official data) accounted for over 100% of the total increase in after-tax profits across the broader economy (which reached a record share of Canadian GDP by mid-2022).[36] Not surprisingly, the oil and gas industry experienced the biggest surge in profitability (up 1000% from 2019). Other industries located at "pressure points" in the economy (including mining, building supplies, new cars, machinery and equipment, and food retail) also experienced large increases in profitability thanks to the disruptions of the pandemic. This heterogeneity of inter-industry profitability is consistent with the conclusion Weber and Wasner that industries' ability to not just pass on higher costs, but raise profit margins in the process, depended on their strategic location in the broader economic supply chain.

More recently, Statistics Canada (the national statistical agency) has published its own decomposition of growth in the GDP deflator, comparing the role of labour costs and other factor incomes.[37] This decomposition showed that higher gross profit margins accounted for 52% of the cumulative increase in the GDP deflator from 2019 through 2022. This is much larger than the starting share of profits in total GDP, and hence drove the rise in the profit share over this period (which reached an all-time record high in Canada in 2022).

All told, this growing body of international research has caught the attention of journalists as well as policy-makers, even in established business-oriented outlets and platforms. These media platforms take seriously the task of trying to understand macroeconomic developments using all information available – even if that information might suggest policy conclusions at odds with some business preferences. Here are a few examples of informed coverage of research on profit-led inflation published in major international business publications:

Bloomberg: "How 'Excuseflation' is Keeping Prices – and Corporate Profits – High," by Tracy Alloway and Joe Weisenthal, 9 March 2023, https://www.bloomberg.com/news/articles/2023-03-09/how-excuseflation-is-keeping-prices-and-corporate-profits-high#xj4y7vzkg.

[36] See "15 Super-Profitable Industries Fuel Canada's Inflation," by Jim Stanford (Vancouver: Centre for Future Work), November 2022, https://centreforfuturework.ca/wp-content/uploads/2022/12/Fifteen-SuperProfitable-Industries.pdf.

[37] Hassan Faryaar and Danny Leung, "Inflationary pressures, wages and profits," *Economic and Social Reports* (Ottawa: Statistics Canada), 28 June 2023, https://www150.statcan.gc.ca/n1/pub/36-28-0001/2023006/article/00005-eng.htm.

Wall Street Journal: “Why Is Inflation So Sticky? It Could Be Corporate Profits,” by Paul Hannon, 2 May 2023, https://www.wsj.com/articles/why-is-inflation-so-sticky-it-could-be-corporate-profits-b78d90b7.

Fortune: “One of the world’s oldest and largest investment banks warns ‘Greedflation’ has gone too far,” by Will Daniel, 5 April 2023, https://fortune.com/2023/04/05/end-of-capitalism-inflation-greedflation-societe-generale-corporate-profits/.

New York Times: “Companies push prices higher, protecting profits but adding to inflation,” by Talmon Joseph Smith and Joe Rennison, 30 May 2023, https://www.nytimes.com/2023/05/30/business/economy/inflation-companies-profits-higher-prices.html.

Axios: “Once a fringe theory, ‘greedflation’ gets its due,” by Emily Peck, 18 May 2023, https://www.axios.com/2023/05/18/once-a-fringe-theory-greedflation-gets-its-due.

Even some researchers working for corporations and banks in other countries have also engaged honestly with the issue of profit-led inflation, how to measure it, and what to do about it. For example, the Chief Economist for the large Swiss bank UBS, Paul Donovan, has published several briefing notes discussing historically high profit margins, their link to inflation, and implications for monetary policy. In a research analysis entitled “What is profit-led inflation?”,[38] Donovan concluded bluntly that “recent inflation has been driven by an unusual expansion of profit margins.” Donovan theorized that consumers may have been influenced by media reports of rising input costs, shortages, and growing inflation, to be convinced that these prices increases are somehow ‘fair’:

> “Other stories that are being spun to present price increases as ‘fair’ include supply chain disruption (in fact global trade is at a record high), labor shortages (in fact wage costs are rising far less than prices), and in the most circular of arguments ‘general inflation.’ While large companies are often (rightly) criticized for this profit-led inflation, it can just as easily be small businesses. The family-run shop is just as capable of ramping up its profit margin as is the national chain.” (p. 3)

[38] See Paul Donovan, “What is Profit-Led Inflation,” Chief Economist’s Comment (London: UBS), 16 March 2023, https://www.ubs.com/global/en/wealth-management/insights/chief-investment-office/market-insights/paul-donovan/_jcr_content/mainpar/toplevelgrid_1847870123/col1/teaser_826301810_cop/linklist/link.0905296706.file/PS9jb250ZW50L2RhbS9hc3NldHMvd20vZ2xvYmFsL2Npby9tYXJrZXQtaW5zaWdodHMvZG9jL3doYXQtaXMtcHJvZml0LWxlZC1pbmZsYXRpb24tbWFyY2gtMjAyMy5wZGY=/what-is-profit-led-inflation-march-2023.pdf.

In subsequent client notes, Donovan also considered the reluctance of business lobbyists and orthodox economists to acknowledge any connection between inflation and widening profit margins. He quipped, "The first rule of profit-led inflation is not to talk about profit-led inflation."[39] That rule seems to be followed religiously in Australian business circles.

Other business analysts are similarly open to acknowledging at least the possibility that rising unit profits could be contributing to recent inflation – if for no other reason than to inform investment decisions (so that investors can select assets for their portfolios most likely to benefit from profit-led inflation). For example, in a recent paid infomercial (published in the *Australian Financial Review*),[40] Australian investment advisors ASR Wealth advised clients as follows:

> "Investors need to find companies that can extract pricing power – the ability to offset higher costs by increasing prices to within the tolerance levels of consumers – from their businesses."

Potential clients, ASR advised, should pick stocks of companies with above-average ability to increase prices:

> "Pricing power will always be strongest in industries such as food producers, supermarkets or other essential infrastructure sectors where consumers are prepared to take the hit. As a hedge against inflation…, there is nothing to match them in the current environment."

Another Australian financial advisor (and former Chief Economist for Barclay's Bank), Kieran Davies, used the now-familiar factor income accounting disaggregation of inflation to decompose GDP inflation in Australia based on national income data for March 2023.[41] His analysis suggested that over the most recent 12 months of data available when he wrote the report,[42] unit profit costs accounted for 41% of the increase in the GDP deflator, unit labour costs accounted

[39] Paul Donovan, "The first rule of profit-led inflation," *UBS Insights*, 30 May 2023, https://www.ubs.com/global/en/wealth-management/insights/chief-investment-office/market-insights/paul-donovan/2023/the-first-rule-of-profit-led-inflation.html.

[40] See ASR Wealth, "We're living in the 70s: Inflation puts pricing power to the test," Australian Financial Review, 9 June 2023, https://www.afr.com/policy/economy/we-re-living-in-the-70s-inflation-puts-pricing-power-to-the-test-20230523-p5dao2.

[41] See Kieran Davies, "Strong unit labour costs continue to drive high domestic inflation," *LiveWire*, 7 June 2023, https://www.livewiremarkets.com/wires/strong-unit-labour-costs-continue-to-drive-high-domestic-inflation.

[42] This is a different time period than was covered in previous Australia Institute and Centre for Future Work analyses; the changing evolution of factor components of recent inflation in Australia is considered in more detail below.

for 54%, and net indirect taxes 4%. Even in his analysis, unit profits accounted for a disproportionate share of total GDP inflation (higher than its share of total GDP, thus leading to another increase in the profit share of GDP).

In sum, we have surveyed over 35 publications in this rich and growing international literature on post-pandemic inflation. Most of these researchers and institutions, reflecting a wide range of perspectives, have routinely utilised national income accounts data to analyse recent inflation, its causes and distributional effects, and inform potential remedies – just as did previous reports from the Australia Institute and the Centre for Future Work. And more often than not, this research arrived at a common conclusion: namely, that the surge in inflation following the initial post-lockdown reopening of the global economy was closely associated with unusually high profit margins and a rising profit share of national output.

National Income Accounting and Inflation Decomposition

Most of the international research surveyed above on analysing the composition and causes of post-pandemic inflation relied on the factor price decomposition of standard national income accounting data.[43] This section of the report will provide some additional background on the meaning and use of that data.

Statistical agencies in Australia and other countries produce quarterly data on macroeconomic activity, including the growth of real output, the nominal value of that output, changes in average prices of various categories of output, and the payment of incomes arising from production to the various stakeholders (or "factors") engaged in that production (including wages and salaries;[44] corporate profits;[45] small business mixed income; indirect taxes collected by government, net of subsidies; and some other smaller categories of income).

Quarterly GDP statistics are typically presented in two formats: one based on expenditure (including categories of spending such as household consumption, government consumption, investment by business and government, and exports and imports), and one based on income (labour compensation, corporate profits, mixed income, indirect taxes, etc.). GDP by expenditure is reported in both nominal and real terms (the latter deflated by price indices corresponding to the different categories of expenditure). GDP by income is presented only in nominal terms: since it is not known what various stakeholders will ultimately spend their income on, no single price index can be selected to deflate any factor's income flow into real terms.

By accounting definition and convention, nominal GDP must be perfectly decomposed into the sum of factor incomes paid in its production, and the parallel sum of the flow of nominal expenditures that account for all produced output. The latter include changes in the stock of inventories in the economy (which are treated in these accounts as a form of investment). Both the income and

[43] For an overview of the structure and methodology of national income accounting in Australia, please see Australian Bureau of Statistics, "Australian System of National Accounts: Concepts, Sources and Methods," 9 July 2021. For a textbook introduction to national income accounting methodology, see François Lequiller and Derek W. Blades, *Understanding National Accounts* (Paris: Organisation for Economic Co-operation and Development), 2006.

[44] Including employer social contributions, primarily superannuation contributions.

[45] National income statements report corporate profits as "gross operating surplus" of corporations, which calculates profits before income tax and depreciation.

expenditure accounts include a small statistical error term, to offset measurement issues or other inaccuracies, and to ensure that total nominal GDP is equal across the two modes of reporting.

In order to disaggregate changes in real output from changes in prices, the national accounts system generates price indices corresponding to the various categories of expenditure. These indices (called "deflators") represent the ratio of nominal to real expenditure flows in each category. A price index for the whole economy (called the GDP deflator) represents the weighted average level of nominal prices across all production in the economy. The GDP deflator is the ratio of nominal GDP to real GDP, benchmarked to some arbitrary index year.

The GDP deflator is a broader measure of inflation than the commonly-reported consumer price index (CPI). The latter is a weighted index representing average prices for most of the various goods and services purchased by households in Australia's eight capital cities.[46] But consumer spending only represents about half of total final expenditure in the economy, so other important changes in prices are not captured in the CPI (including changes in the prices of investment goods, government programs and services,[47] exports and imports, and other smaller categories of expenditure). The GDP deflator is thus a broader and more complete measure of inflation in the economy, proportionately reflecting all those other components of spending. The national income accounts also report category-specific deflators for various forms of expenditure (investment, household consumption, exports, imports, etc.). Keep in mind that since GDP, by definition, deducts the value of expenditure on imported goods and services (since they are not produced in Australia), increases in the cost of imports are also excluded from the GDP deflator. So the GDP deflator does not capture this component of inflation experienced by Australians.[48]

In Australia's case, the GDP deflator is a more volatile measure of inflation than the CPI, because it is quickly affected by changes in international commodities prices – including those for Australia's main exports (minerals and other primary products). Over time, however, the GDP deflator and the CPI are closely correlated (as illustrated in Figure 1). The links between CPI inflation and broader GDP inflation flow in both directions: higher prices for minerals (especially energy) are eventually reflected in domestic inflation, even if much Australian production of

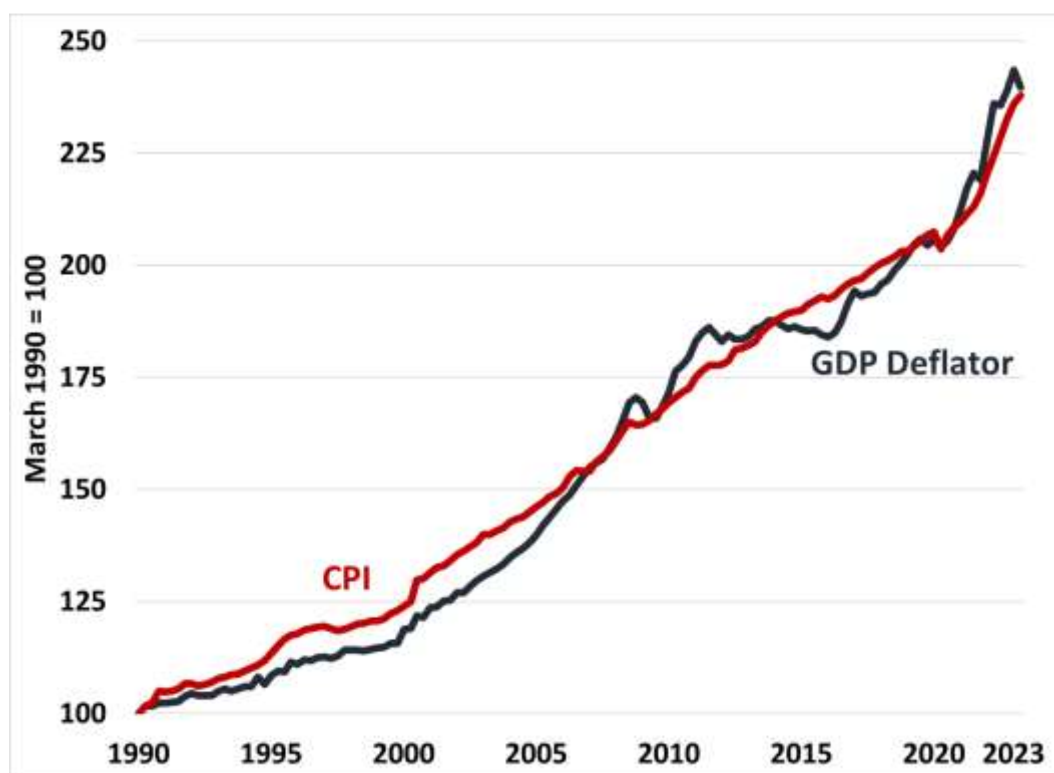
[46] Some important consumer expenses, such as interest payments on mortgages, are not included in the CPI.

[47] User fees for government services such as public transit are counted in the CPI, but not the overall price levels reflected in government consumption or investment.

[48] Since much of the increase in prices paid for imports to Australia in the last two years stemmed from profit-led inflation dynamics in our trading partners, in this manner the decomposition of the overall GDP deflator will underestimate the true impact of profit-led inflation on Australian nominal values.

those minerals is exported – for the obvious reason that Australians consume those products, too. Meanwhile, international commodity prices typically reflect changes in global macroeconomic conditions that are also correlated with domestic employment, output, and inflation. Long waves of inflation and disinflation thus tend to be visible and correlated in both these broad indicators of inflation.

Figure 1. CPI and GDP Price Indices, 1990-2023



Source: Authors' calculations from ABS Consumer Price Index (Table 1) and Australian National Accounts (Table 5).

There are many other measures of inflation, in addition to the CPI and the deflators calculated through the national accounts system (including various cost of living indices also published by the ABS[49]). Ultimately, the choice of specific inflation indicator most appropriate for an economic analysis depends on the purposes for which it is being used. None of these indices is "perfect", and analysts should always be cognizant of the nature and composition of various choices for measuring inflation.

In sum, GDP price indices (including the GDP deflator) are a core and universally accepted component of the national income accounting systems used in all

[49] See ABS, "Selected Living Cost Indexes, Australia," https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/selected-living-cost-indexes-australia/latest-release.

industrial countries. It is not possible to measure changes in real output without using these indices. And they provide a comprehensive measure of inflation in the economy, tied directly and by definition to economic production and income distribution.[50] It is thus not surprising that most of the international research surveyed above on the composition and distributional consequences of higher inflation since the COVID pandemic has relied centrally on this vital source of data. Our own previous research has been consistent with both the methodology and the general conclusions of that international literature.

[50] The CPI, in contrast, includes some components (such as used cars and apartment rents) which do not correspond to current production.

Economic Theories of Profit-Led Inflation

Conventional neoclassical economic theory is founded on a model of competitive market clearing, in which competition in both factor markets and product markets ensures that all productive resources are fully employed in production, all factors of production are paid according to their marginal productivity, and final consumer prices reflect their competitive cost of production. In this orthodox model, individual firms have no power to influence the prices for the products they sell: they have no choice but to sell their output at a market-clearing price dictated by anonymous market forces.

For economists working within this framework, therefore, the very notion that firms somehow "set" prices for their output is foreign. It is not surprising, then, that many orthodox economists are puzzled by the concept of profit-led inflation: in their idealised world, the phenomenon would be literally impossible. This market-centric framework helps to explain the discomfort of orthodox economists at the idea that profits and price-setting strategies of firms could play an independent role in explaining inflation. Economics textbooks acknowledge the possibility that firms may have the ability to influence prices in certain special cases of imperfect competition (such as monopoly, oligopoly, or monopsony) – but these cases are treated as exceptions, relevant only to industry-specific or microeconomic analysis. In macroeconomic and monetary policy, the dominant approach is shaped by the belief that prices are set by competitive market forces, not by the pro-active pricing strategies of corporations.

In alternative theoretical approaches, however, the autonomy and leeway of corporations in setting prices is not treated as an anomaly or exception: it is, rather, a normal feature of modern economies. Few industries exhibit the sort of anonymous, all-powerful competition assumed in neoclassical theory. A range of real-world structures and processes explain why prices cannot normally be understood as the automatic result of anonymous competition. Factors such as corporate concentration (many industries are dominated by a small number of large companies which exert price-setting power, sometimes through outright collusion), government regulation (of both factor and output prices), distributional conflict, imperfect information or limited rationality on the part of consumers (who can be convinced to pay more than cost for products), product differentiation or other proprietary advantages wielded by firms, and many other non-market phenomena all influence the determination of prices for both factors of production

and final products. These are not 'special cases' or 'market failures': rather, this is how real-world economies function.

With prices determined by this rich set of structural, institutional, regulatory, social and business forces, the 'price-taking' assumption underpinning theories of competitive equilibrium cannot generally apply. Most firms can influence their prices, and their proactive price and marketing strategies are a central feature of business behaviour. To capture this reality, heterodox economic theories (such as post-Keynesian or structural macroeconomic theories) often utilise a 'mark-up pricing' model to explain prices, inflation, and income distribution.[51] In this theory, firms are not passive price-takers (as assumed in conventional neoclassical theory), but instead have active agency to influence prices for both their produced goods and services (output) and, in many cases, their purchased inputs. The latter includes the price of labour, since large (oligopsonistic) employers have power to influence wage determination, rather than just accepting a wage set by a supposedly competitive labour market. Firms target a desired mark-up over their direct costs of production, which then translates (if their business is successful) into a return on invested capital. The size of that mark-up in turn depends on many factors: including the level of competition in an industry, whether the firm possesses some unique or proprietary technology or product advantage, capacity utilisation and the scale of production, institutional factors affecting factor prices (like unions and collective bargaining, in the case of labour), price regulations, and other factors. In this understanding, profit is not a market-determined return to the real 'productivity' of physical capital (since factor markets do not normally clear, and factor prices are determined by structural forces in the economy not by market-clearing and productivity). Rather, profit is a surplus collected by firms, dependent on their dominant structural position in the economy (since they are the organisations which initiate and coordinate production, invest capital, and employ labour).

If the mark-up is an independent variable reflecting this wide range of structural and behavioural determinants, then it is obviously possible that mark-ups and profit margins may change over time (on the basis of changes in one or more of those determinants). This approach lends itself readily to understanding why inflation could accelerate or decelerate in different places and times, and allows consideration of a wider array of determinants beyond those emphasised in orthodox macroeconomics (generally obsessed with excessive monetary expansion or overheated labour markets as causes of inflation). Clearly, in a theoretical understanding in which prices and profits are independent variables (not the automatic outcomes of market forces), changes in pricing behaviour will

[51] For a textbook exposition of mark-up models, see Marc Lavoie, *Post-Keynesian Economics: New Foundations* (Cheltenham: Edward Elgar, 2014), Ch. 3.

cause (for a while, anyway) changes in price levels, inflation, and factor shares of final income.

Moreover, longer-run trends in the evolution of those broader institutional and structural factors could also shape how mark-ups and profit margins respond to shocks – such as the unprecedented disruptions of the pandemic. As Nikiforus and Gothe suggest,[52] the long erosion of labour's institutional power during the neoliberal era, and the corresponding strengthening of business power (including its power to influence prices for both inputs and outputs), gave companies more ability to respond to pandemic shocks in ways that protected and even enhanced their profits. This also explains why the current inflation is so different from inflation in the 1970s (in which the structural power of labour was much stronger, real wages were growing not falling, and profit rates were historically low), hence requiring different policy responses:

> "[An] exogenous markup does not mean that markups and profit shares are overall constant, but rather that they are determined by institutions and social norms outside of the economy along the lines of classical political economy. The increase in the markup and the profit share has been the result of a change in these institutions and social norms against labor.
>
> "These secular trends (increase in the profit share and markups) are important to consider in the current context for several reasons. First, firms being able to pass through the increase in material cost without much reaction of wages is another manifestation of the weakening position of labor. Second, the weak position of labor also casts doubt on the possibility of conflict inflation with wage and price increases compensating for each other. Finally, an increase in the markups that would amplify price shocks (on top of the protection of the markups) would be consistent with these trends."[53]

Distributional conflict introduces another dimension of variability in profit mark-ups, income distribution, and hence inflation. Many heterodox explanations of high inflation in the 1970s emphasised the consequences of ongoing struggle between workers and employers over real wages and work rules as a spark for inflation; employers tried to protect their profit margins against the rising labour share of

[52] Michalis Nikiforos and Simon Grothe, "Markups, Profit Shares, and Cost-Push-Profit-Led Inflation" (New York: Institute for New Economic Thinking), June 2023, https://www.ineteconomics.org/perspectives/blog/markups-profit-shares-and-cost-push-profit-led-inflation.

[53] Nikiforus and Grothe, ibid.

value-added (equivalent to a reduction in relative mark-ups) by raising prices.[54] The rise of neoliberal monetary policies (founded on assumption that a minimum or 'natural' cushion of unemployment was necessary to constrain labour's bargaining power[55]) was aimed at resolving that distributional conflict in a business-friendly manner.

Olivier Blanchflower (former Chief Economist at the IMF), among others, has proposed that distributional conflict can also help to explain post-pandemic inflation. Blanchard wrote:

> "Inflation is fundamentally the outcome of the distributional conflict between firms, workers, and taxpayers. It stops only when the various players are forced to accept the outcome."[56]

Blanchard noted a range of factors that could conceivably spark such a distributional conflict, one of which is pricing power by firms allowing them to increase product prices for any given level of wage costs. He suggested that a process of macroeconomic negotiation and regulation (perhaps similar to the sectoral bargaining systems common in many European countries) could be a better way than bare-knuckled distributional conflict to resolve distributional tensions unleashed by the disruptions of the pandemic and its aftermath. In this framework, the erosion of workers' organized bargaining power since the 1970s, and the growth of corporate concentration in many industries, certainly helps to explain why – so far, at least – corporations have had the upper hand in the distributional struggle underlying post-pandemic inflation.

Researchers at the U.S. Federal Reserve have explored these changing power balances in the economy, to shed light on the apparent disappearance of the traditional 'Phillips curve' relationship between unemployment and wage growth.[57] These writers provide cross-sectional and time series data suggesting that "a collapse of workers' bargaining power … has in turn left the slope of the

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[54] For classic statements of the theory of conflict inflation, see Robert E. Rowthorn, "Conflict, inflation and money," *Cambridge Journal of Economics* 1(3), 1977, pp. 215-239; and Sam Rosenberg and Thomas E. Weisskopf, "A Conflict Theory Approach to Inflation in the Postwar U.S. Economy," *American Economic Review* 71(2), 1981, pp. 42-47.

[55] For a critique of the theory, empirics, and policy practice of NAIRU models in Australia, see David Richardson, *Tolerate Unemployment, but Blame the Unemployed: The Contradictions of NAIRU Policy-Making in Australia* (Canberra: Centre for Future Work, 2019), https://futurework.org.au/report/tolerate-unemployment-but-blame-the-unemployed/.

[56] See Olivier Blanchard Twitter post, 30 December 2022, https://twitter.com/ojblanchard1/status/1608967176232525824?lang=en.

[57] David Ratner and Jae Sim, "Who Killed the Phillips Curve? A Murder Mystery," U.S. Federal Reserve Board, Finance and Economics Discussion Series, September 2021, https://www.federalreserve.gov/econres/feds/files/2022028pap.pdf.

Phillips curve nearly flat" (p. 2). The weakness of workers' structural position, after a generation of deunionisation, globalisation, and corporate concentration, helps to explain why corporate profits have not just held their own during the post-pandemic outbreak of inflation, but in fact widened as corporations capitalised on (and thus exacerbated) that inflation.

All these heterodox theories of mark-up pricing allow for the existence of profit-price interactions that help to explain both the surge in inflation after the pandemic, and its lopsided distributional consequences. Together, these approaches offer a fundamental contrast to models of competitive equilibrium: in which firms have no independent power to influence prices, and income distribution is presumed to reflect market-clearing pressures and the productivity of respective factors of production. The next question to then consider is what are the specific factors which explain *why* profit margins could change in the wake of the pandemic. After all, while evidence strongly suggests that profits have captured the lion's share of the run-up in nominal values since the pandemic, this cannot be blamed simplistically on "greed" – since greed obviously predates the pandemic. Companies' ability to increase prices and boost profits is normally and ultimately balanced by various countervailing forces (such as competition, regulation, trade unions and collective bargaining, and others). So the rise in profit margins (and hence inflation) since the pandemic must reflect the supply-side disruptions, pent-up consumer demand, uncertainty, and global energy shocks that shaped the global economic re-opening after the pandemic. Moreover, these immediate shocks were all experienced in the context of the historic, long-run rise in corporate power that long predated the pandemic. Various economists have proposed behavioural theories to help understand the rise in profit margins over the past two years.

Some theories of profit-led inflation have considered variability in firms' strategic positions within the broader input-output structure of the economy. This positioning shapes the varying extents to which firms could take advantage of initial market disruptions, and also helps to explain subsequent second-order price increases (via which firms partially, fully, or more-than-fully pass along higher costs to their own customers). One leading exponent of this approach is Isabella Weber of the University of Massachusetts. Using detailed input-output analysis, she has stressed the strategic location of some firms at vulnerable pressure points in the overall economic supply chain, which allowed them to pass on higher costs for energy and other inputs, and then some. Initial price hikes in these "systemically significant upstream sectors" (such as energy, logistics, and transport) can spread into other sectors as a result of corporate concentration, pricing power, and supply bottlenecks. This in turn sparks a distributional conflict, as workers attempt to defend their real wages, which can fuel further inflation:

> "Price shocks in upstream sectors function as an impulse which propagates through supply chains, as downstream firms react to higher costs by raising prices to protect their profit margins. In addition to this propagation of cost shocks, firms in some sectors – in particular, ones facing supply-side bottlenecks or product-specific demand shocks – can raise prices by enough to enhance profit margins, resulting in an amplification of cost shocks. Labor eventually reacts in the conflict stage, attempting to protect real wages. However, in the context of a sellers' inflation kicked off by commodity price shocks, windfall profits and profit protection, this conflict is not the origin but the consequence of inflation." (p. 3)

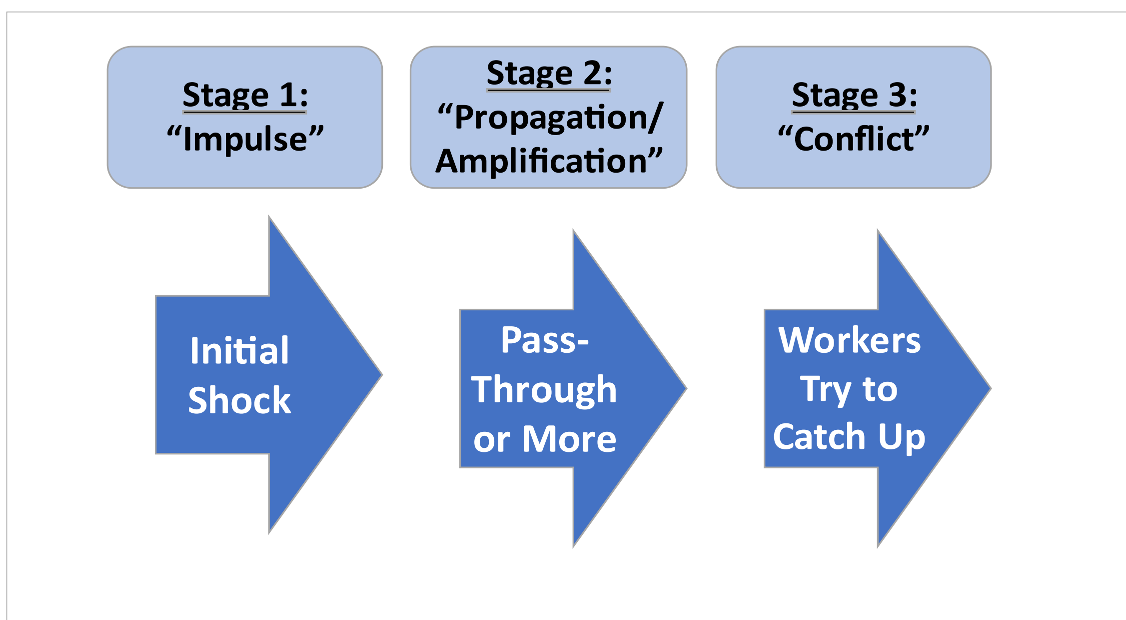
Weber and co-author Wasner propose a three-stage model of what they call 'sellers' inflation'. In the first, 'impulse', stage, some exogenous shock allows firms in certain strategically important (upstream) sectors to increase prices above costs, without experiencing the loss of market share that might otherwise occur. In the post-pandemic global economy, plenty of such impulses were apparent: shortages of key commodities arising from supply chain disruptions, a surge in demand for specific products both during and after the COVID lockdowns as desperate consumers sought scarce or postponed purchases, and then the oil and gas price shocks following the invasion of Ukraine. Those shocks generate initial impulses of inflationary pressure into the economy-wide supply chain.

In a second stage ('propogation and amplification'), those initial impulses are transmitted and, in some cases, amplified through other (downstream) sectors of the economy. Depending on structural, competitive, and demand conditions, business in some sectors can fully pass on the input costs arising from the upstream (profit-led) price impulses – protecting or even widening their profit margins. In this stage, profit-led inflation becomes a broader phenomenon, reaching through more of the economy's overall input-out system.

In a third stage, which they name the 'conflict' stage, other stakeholders in the economy (most importantly labour) attempt to protect themselves by regaining real income losses that occurred during the first two stages. Depending on institutional structures and the balance of bargaining power, workers and other constituencies may be able to demand and win faster nominal income growth to regain previous losses, and keep up with future inflation. In the first two stages of this process, inflation would be largely reflected in higher profits. In the latter 'conflict' stage, the decomposition of inflation would shift to a more diverse factor composition – including, if workers are able to win faster wage growth, a larger share ascribed to rising labour costs. Even in this stage, however, it would be a mistake to conclude that labour is 'causing' the inflation: the conflict stage clearly represents an effort by labour to protect itself against an inflationary cycle that

originated with corporate pricing power. Efforts by central banks to suppress this reaction by workers amount to cementing real wage losses that occurred earlier in the chain of causation – and accepting as permanent the unusual increases in profit margins that sparked the whole inflationary episode in the first place. These three stages of sellers' inflation theorised by Weber and Wasner are illustrated in Figure 2.

Figure 2. Three Stages of Sellers Inflation



Source: Adapted from Weber and Wasner (2022).

In a related vein, other economists have emphasised the importance of economic concentration and oligopolistic power in explaining undue price hikes and recent inflation. Recent examples in Australia include economist Ross Garnaut, who in his recent Bannerman Lecture targeted excessive corporate 'rents' (meaning above-normal profits) as a culprit in inflation and resulting high interest costs.[58] Similarly, Rod Sims (former ACCC chair) highlighted the oligopolistic power of Australia's major supermarket chains in explaining their recent record profits (and associated high food price inflation) in the food retail sector.[59] Economist John Quiggin has also emphasised the lack of competition in Australia's food retail

[58] Gareth Hutchens, "RBA's rate hikes creating inflation, Ross Garnaut says, calling for radical overhaul of economic policy," *ABC News*, 4 May 2023, https://www.abc.net.au/news/2023-05-05/ross-garnaut-rate-hikes-feed-inflation-urges-policy-overhaul/102302152.

[59] Jonathan Barrett, "Australia should increase competition to fight 'excessive pricing' by supermarkets, Rod Sims says," *The Guardian*, 25 May, 2023, https://www.theguardian.com/australia-news/2023/may/26/australia-should-increase-competition-to-fight-excessive-pricing-by-supermarkets-rod-sims-says.

sector as a determinant of unusually fast inflation in food prices.[60] Those firms did not 'start' the post-pandemic inflation, but their concentrated market power has allowed them to propagate, amplify and profit from it.

Some explanations of the rise of profit margins after the pandemic emphasise changes in customers' willingness to accept higher prices in the wake of the disruptions and volatility of the post-pandemic economy. Nobel Prize Economist Paul Krugman has highlighted the possibility that initial disruptions in normal pricing could be propagated and sustained as a result of consumer confusion or uncertainty, which reduces consumer resistance to higher prices:

> "There will be less backlash if lots of other prices are also going up, so it's not at all crazy to suggest that some [firms] are feeling freer than usual to exploit their market power, adding to inflation."[61]

Elsewhere, Krugman elaborated:

> "At least some of this [inflation] may have involved firms believing that they could get away with exceptional price hikes because customers wouldn't notice in a time of widespread price hikes."[62]

This line of reasoning is similar to the hypothesis advanced by Lael Brainard, former Vice Chair of the U.S. Federal Reserve, and now Chair of the U.S. Council of Economic Advisors. Brainard noted the shift in national income from wages to corporate profits:

> "Overall, the labor share of income has declined over the past two years and appears to be at or below pre-pandemic levels, while corporate profits as a share of GDP remain near postwar highs."[63]

He hypothesized that this reflected a "price-price spiral," in which some firms are able to raise prices by more than their costs go up. He noted that retail margins in some sectors have grown during the post-pandemic inflation, and that narrowing those margins would play an important role in reducing future inflation.

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[60] John Quiggin, "Australia's supermarket duopoly didn't start the inflation crisis, but it is making it worse", *The Guardian*, 14 June 2023, https://www.theguardian.com/commentisfree/2023/jun/14/australias-supermarket-duopoly-didnt-start-the-inflation-crisis-but-it-is-making-it-worse.

[61] See Paul Krugman, https://twitter.com/paulkrugman/status/1525838399491477511, xxx (date).

[62] See Paul Krugman, "On Inflation, Wages, and Tough-Guy Economics", *New York Times*, April 28, 2023, https://www.nytimes.com/2023/04/28/opinion/inflation-wages-unemployment.html.

[63] See "Staying the Course to Bring Inflation Down," Speech by Lael Brainard, University of Chicago Booth School of Business, January 2023, https://www.federalreserve.gov/newsevents/speech/brainard20230119a.htm?utm_source=substack&utm_medium=email.

Decades ago, another Nobel Prize Economist, Daniel Kahneman, explored how consumer psychology could help explain 'price-price' inflation, when he wrote (with co-authors Jack Knetsch and Richard Thaler) about implicit values of fairness in market transactions.[64] When price changes are rare, consumers carefully consider and often resist price increases which they believe to be unjustified (perhaps shifting demand to other suppliers). But when price changes are frequent and pervasive, consumers' ability to make such judgments is undermined – and firms thus face less competitive restraint in their price-setting behaviour.

All of these theories aim to elaborate specific behavioural mechanisms through which companies had power in the immediate post-pandemic environment to increase profit margins and hence output prices. Ongoing research will be required to better understand the particular ways in which companies took advantage of post-pandemic disruptions to lift prices further and faster than their costs. What is undeniable from routine macroeconomic data is that corporate profits increased dramatically in the wake of post-pandemic re-opening, and that those profits account for a large and disproportionate share of the initial expansion in nominal price levels and incomes during this inflationary upsurge. Whether based in oligopolistic power, strategic input-output positioning, or consumer psychology, the end result is the same: companies had the power and freedom to charge more for their products, above and beyond the costs of production, and they exercised this power willingly (leading to both inflation and record profits). Heterodox criticisms of conventional neoclassical models of competitive equilibrium, and heterodox theories of price determination in real-world capitalism, open intellectual space within which the dynamics of profit-led inflation can be legitimately explored and evaluated.

However, for those wedded to the notion that competition constantly disciplines companies to simply accept going market prices, leaving them with no autonomous ability to influence those prices, then the possibility of profit-led inflation will remain a mystery. Their complaints that there is no "theory" to explain this quantitative evidence of profit-led inflation merely expose the narrowness of their economic training and research agendas. In reality, theories in which profit-led inflation is not just possible, but normal, have been advanced and developed for a century or more. And there is now a large and growing body of international empirical research applying those perspective to the urgent challenges of post-COVID inflation.

[64] See Daniel Kahneman, Jack L. Knetsch and Richard Thaler, "Fairness as a Constraint on Profit Seeking: Entitlements in the Market," *American Economic Review* 76(4), 1984, pp. 728-741.

Our Previous Profit-Price Research

Over the last year, economists at the Centre for Future Work and the Australia Institute have published several research reports highlighting the leading role of corporate profits in the post-pandemic acceleration of inflation in Australia. These reports include:

Wage price spiral or price wage spiral? The role of profits in causing inflation, by Richard Denniss and Matt Saunders (May 2022): https://australiainstitute.org.au/report/wage-price-spiral-or-price-wage-spiral/

Are wages or profits driving Australia's inflation? An analysis of the National Accounts, by David Richardson, Matt Grudnoff and Richard Denniss (July 2022): https://australiainstitute.org.au/wp-content/uploads/2022/07/Are-wages-or-profits-driving-Australias-inflation-WEB.pdf

Profit-Price Spiral: The Truth Behind Australia's Inflation, by Jim Stanford (Feb. 2023): https://australiainstitute.org.au/wp-content/uploads/2023/02/Profit-Price-Spiral-Research-Report-WEB.pdf

Profits and Inflation in Mining and Non-Mining Sectors, by Greg Jericho and Jim Stanford (April 2023): https://australiainstitute.org.au/wp-content/uploads/2023/04/Profits-and-Prices-Mining-and-NonMining.pdf

"It's not just mining: Non-mining profits have also driven inflation," ***Off the Charts*** blog, by Jim Stanford and Greg Jericho (May 2023): https://australiainstitute.org.au/post/its-not-just-mining-non-mining-profits-have-also-driven-inflation/.

This research documented the surge in corporate profits that occurred in Australia coincident with the acceleration of inflation after the post-lockdown reopening of the domestic and global economies. Gross corporate profits swelled to their highest share of national GDP ever (29%) in 2022. Our research debunked the oft-heard concern that inflation in Australia is primarily caused, or could soon be caused, by increases in wages and labour costs (arising, it is commonly suggested, from labour markets that are "too tight"). Correspondingly, our research also challenged orthodox policy prescriptions that the best way to fight post-COVID inflation is to chill domestic labour markets and purchasing power by raising interest rates, suppressing wage growth, and deliberately lifting unemployment. This research on what we dubbed the 'profit-price spiral' has been widely covered in the mass media, on social media, and cited by trade unionists and social justice advocates in their arguments for a fairer policy response to inflation.

Like the extensive international research surveyed above (including reports from the OECD, IMF, BIS, EC, central banks, and other established institutions), our analysis of the distributional aspects of inflation was based on national income accounting and a decomposition of the GDP deflator. There is no other comprehensive and complete data source describing the aggregate flow of production incomes to the various factors of production. Changes in the consumer price index cannot be directly decomposed into domestic factor income flows, for many reasons: the CPI includes products that are not currently produced, or that are produced in other countries (and imported to Australia). It is weighted by consumer spending, not by production. In contrast, as explained above, the GDP deflator is analytically linked to the main categories of factor income; this is why the international research reviewed above most often used it as the starting point for the decomposition of inflation. Since incomes are generated from many parts of the economy (not just consumer spending), measuring the impact and distributional effects of changes in prices for all categories of production and spending (including investment, government services, and exports, not just consumer spending) is clearly relevant and appropriate.

By design in the national accounting system, all nominal value-added aggregates produced in the economy must be paid (by accounting definition) as factor incomes to the various factors of production. Data on the growth of nominal output across the whole economy can thus be perfectly disaggregated into amounts flowing to the different factors of production (including labour, capital, small business or 'mixed income', indirect taxes collected by government, and a range of smaller categories). Those increases in factor incomes in turn can be disaggregated into amounts that reflect increases in real output, and amounts reflecting pure inflation in factor incomes paid for each unit of that real output.

This exercise is routinely done for labour costs. The ABS publishes several different measures of unit labour costs, which calculate the total labour cost (including wages, salaries, and supplementary compensation such as superannuation contributions) embodied in each unit of real output. Unit labour costs are closely monitored by the RBA, Treasury, and other policy-makers, all watching closely for sign of a "wages breakout" or "wage-price spiral." Unit labour costs are generated through the national accounts system (including the use of the GDP deflator to calculate real output), and published each quarter by the ABS without controversy. In Australia, unit labour cost data confirms that nominal unit labour costs did not lead the post-pandemic acceleration of inflation in Australia (which began in mid-2021), but rather lagged it. During that first year of accelerating post-pandemic inflation (from June 2021 to June 2022), nominal unit labour costs increased 3.4%, much slower than the Consumer Price Index (6.1%)

or the GDP deflator (8.6%).[65] Real unit labour costs (adjusted for changes in the value of output) actually declined in that same period (by almost 5%), corresponding to a decline in labour's share of national income. And despite the modest acceleration in wage growth in recent months, labour costs still lag well behind either measure of broader inflation since the pandemic struck.[66]

Curiously, none of these agencies (ABS, RBA, or Treasury) compute or discuss measures of other unit factor costs, even though the rationale for considering changes in nominal unit factor costs (incorporating both real output gains and factor price inflation) exactly parallels that for unit labour costs. In previous work, we have estimated indicators of unit profit costs in Australia.[67] And researchers in other countries have also widely measured and analysed trends in other unit factor prices (including unit profits).

One obvious reason why unit labour costs receive such attention is because labour is the largest single factor income category: accounting for 45% of total GDP in Australia in 2022.[68] However, the dominance of labour compensation in overall national income flows has been eroded in recent decades by the steady expansion of profits, especially for corporations. Gross corporate profits in 2022 equalled 29% of GDP (the highest ever, and almost twice its share in the mid-1970s), and now represent almost two-thirds of the combined compensation paid to workers. If we also include small business profits (mixed income), then total business profits equalled 37% of GDP last year – four-fifths as large as labour's share. The flow of profits is therefore too big, and has increased too quickly, to ignore in any analysis of the changing composition of factor costs in Australia and its impact on inflation. Put another way, while the RBA and others might have believed it was not necessary to consider the role of profits to understand the key drivers of inflation in the 1970s, it is clear that this is no longer the case in 2023.

Another rationale for ignoring changes in unit profit costs (and other non-labour unit cost measures) may arise from a semantic assumption that profit is not a "cost", but rather a residual or some other form of "reward" to the forces of capital and entrepreneurship. Profit is what is "left over" after other costs have been paid. This interpretation is not credible. A profit margin is embodied in the price of every privately-produced good or service sold in the economy. Businesses expect,

[65] Calculations from ABS Australian National Accounts, Tables 6 and 42, and Consumer Price Index, Table 1.

[66] From December 2019 to March 2023, unit labour costs grew at an annual average rate of 3.5%, compared to 4.1% average annual growth in the CPI and 5.5% in the GDPO deflator.

[67] For example, see Jim Stanford, "Profits push up prices too, so why is the RBA governor only talking about wages?", *The Conversation*, 26 June 2022.

[68] That labour share of GDP was the lowest in Australia's postwar history; all data in this paragraph based on calculations from ABS Australian National Accounts, Table 7.

and financial investors demand, that payment. Even traditional neoclassical microeconomic models accept that profit represents a "cost of capital." Similarly, even neoclassical models acknowledge that in conditions of oligopoly, profits may be persistently higher than what is justified by the marginal productivity of capital, and higher than required to motivate new investment. So the extent to which the cost of profits is growing, relative to changes in real production, is clearly relevant to understanding the evolution of an increasingly important component of prices – and hence for understanding the causes, manifestations, and consequences of inflation.

Our various reports adapted these uncontroversial national income accounting concepts and data sources to describe the factor income dimensions of recent inflation. By this method, it is clear in Australia (like other industrial countries) that most of the rise in price levels experienced since the pandemic corresponds to higher unit profit payments.

Our May 2022 paper reminded readers that wages account for only a portion of total production costs. Therefore, the assumption that an increase in wages of any magnitude (say, 5%) must inevitably be reflected in a similar increase in prices (5%) ignores the impact of other factor costs in overall production and pricing. At the direct industry level, wages only account for an average of 25% of production costs, so the immediate impact of a wage increase on final prices is reduced by three-quarters. Even allowing for pass-through of wage costs into the prices of intermediate inputs, the final impact on prices will still be less than half as large as the initial wage increase (since labour accounts for less than half of all value-added in Australia). The May 2022 report also listed industries best-positioned to experience a major increase in profitability, if output prices were increased even half as much as wages: these industries included the mining, energy and financial sectors. In these sectors (with very low labour intensity), profit-led inflation would be especially strong if prices were increased more than required to cover the *direct* impacts of higher labour costs.

The subsequent July 2022 paper applied more completely the decomposition of factor incomes and economy-wide price levels discussed above. Replicating earlier work published by the European Central Bank (cited in the report), this study decomposed annual increases in the GDP deflator into components corresponding to unit labour costs, unit profit costs, and unit taxes. It noted that labour costs had played very little role in explaining higher economy-wide prices in Australia even prior to the pandemic: in the period from 2013 (when wage growth in Australia sharply decelerated) to the end of 2019 (before the pandemic), unit labour costs contributed very little to higher GDP prices – and much less than profits, even in that time. The composition of GDP inflation was skewed further, however, after the pandemic. From financial year 2019-20 through the first three quarters of 2021-22

(latest data available at the time), virtually none of the increase in average prices was attributable to labour costs, with the vast majority due to higher unit profit costs. Over the first three quarters of 2021-22 (latest available data at time of writing), higher unit profit costs accounted for 61% of the 4.6% rise in the GDP deflator over those 9 months. Unit labour costs accounted for 15%, and higher net taxes (resulting from the final phase-out of emergency COVID wage subsidies) the remaining 24%.

Our February 2023 study updated this decomposition, this time analysing the cumulative rise in economy-wide price levels from end-2019 through to the September quarter of 2022 (most recent data available at that time). We also distinguished 'normal' increases in nominal unit factor costs (consistent with the RBA's 2.5% inflation target) from excess price increases (over and above that target). The rationale for this approach is that this target 2.5% inflation rate is considered desirable, and hence changes in unit factor prices consistent with that target cannot really be considered 'inflationary'. This report concluded that 69% of unit price increases over and above the RBA's 2.5% inflation target since end-2019 were attributable to increased nominal unit profit payments. Only 18% was attributable to higher nominal unit labour costs, and the rest to increases in other nominal factor payments. The paper noted that the growth of profits was most dramatic in the energy and resources sector (lifted by surging prices for fossil fuel energy and other resource products). These findings were broadly consistent with the findings of our July 2022 paper, as well as with the similar decompositions of inflation conducted in other countries (reviewed above).

Our follow-up report in April 2023 provided more detail on the heterogeneous evolution of profits across different sectors of the economy. It confirmed the leading role played by profits in the energy and resource industries, which at that point accounted for over half of all gross corporate profits in the entire economy. It noted that products from that sector (including petrol, gas, and other fossil fuel-intensive products) were leading sources of domestic inflation in Australia. It also showed that profits in other sectors have also increased as a share of non-mining GDP since the pandemic – not as dramatically as in the broad mining sector, but significantly. This confirms that firms across those sectors have more than simply passed on higher input costs to consumers; they have also increased their own take from the rising nominal value of their output.[69] Using Weber's language, they

[69] Mathematically, if a company merely passed on higher costs to consumers, the aggregate mass of its profits would not grow. Even if it simply maintained a constant profit margin (relative to total costs or total revenues) as higher costs were passed on, its profits would not grow as a share of total output or value added. Since profits in both mining and (less dramatically) non-mining sectors have grown as a share of value added, this is inconsistent with either conception of merely "passing on higher costs."

not only propagated the initial inflationary impulses that arose from strategic upstream sectors, they amplified them.

Consistent with Weber's model, we confirmed great variability across non-resource sectors in profitability performance since the pandemic. Industries with strategic leverage[70] in the national economic supply chain (including energy, food, manufacturing, and wholesale trade) experienced especially strong increases in profitability relative to total output. In these sectors, companies were best-placed to take advantage of shortages, supply chain disruptions, consumer desperation, and other pandemic-related shocks to increase profit margins, contributing incrementally to inflation. In some other sectors (such as hospitality, arts and recreation, and information services), firms did not possess such leverage, and have also struggled to fully recover from pandemic lockdowns. In those sectors, profits have not even regained pre-pandemic levels. Across the aggregate of non-mining industries, the overall net impact was an increase in the composite profit margin:[71] more modest than the surge in resource profits, but making an additional contribution to inflation nonetheless.

Perhaps because of the high impact of this research on public discourse in Australia regarding inflation and what to do with it, our research came under fire from business peak bodies and business-friendly commentators. One business newspaper published no less than seven editorials, blogs, columns, and purported news articles citing various alleged flaws in our approach.[72] This coverage suggested our research was "silly" and should be formally "retracted."[73]

More recently, officials at the Reserve Bank and the Commonwealth Treasury department also disagreed with our analysis and policy conclusions. Their comments appeared in a number of unpublished memos released under freedom of information requests (some initiated by the newspaper referenced above). The RBA has also disputed more generally that high profits have been a factor in recent

[70] Weber and Wasner refer to these sectors as "systemically significant upstream sectors". See Isabella Weber and Evan Wasner, "Sellers' Inflation, Profits and Conflict: Why can Large Firms Hike Prices in an Emergency? (Amherst: University of Massachusetts Economics Working Paper), 2023, https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1348&context=econ_workingpaper.

[71] A time series showing the increase in overall non-mining profits as a share of non-mining GDP since the pandemic was included in our *Off the Charts* blog in May 2023, https://australiainstitute.org.au/post/its-not-just-mining-non-mining-profits-have-also-driven-inflation/.

[72] This newspaper did not report on the study when it was first released, and later refused to publish a commentary from our staff responding to its criticisms.

[73] See Michael Read, "Economists hit out at 'silly' claims of a profit-price spiral," *Australian Financial Review*, 27 February 2023, and Ronald Mizen, "Australia Institute urged to retract 'flawed' profit-inflation report", *Australian Financial Review*, 13 May 2023.

inflation: for example, in comments made by Governor Philip Lowe,[74] and in a sidebar published in a recent *Statement on Monetary Policy*.[75] RBA and Treasury officials also addressed our findings in response to questions from Senators in recent Estimates hearings.

It is important to note that none of these critics (including RBA and Treasury officials) found fault with the specific quantitative results reported in our research. To the contrary, one of the RBA memos released under FoI replicated our analysis, and confirmed that rising unit corporate profits account for the biggest share of recent increases in nominal economy-wide price levels.[76] But these officials nevertheless argued, for various reasons considered below, that high profits did not "cause" inflation in Australia, and are not relevant for anti-inflation policy.

While not identifying errors in our calculations, the RBA and Treasury documents made clear that their staff did not agree with our interpretation of those quantitative results, nor the policy conclusions arising from them. The RBA briefings made three specific points:

1. The RBA pointed out that most of the rise in profits since the pandemic was recorded in the broader mining sector (including from sale of oil, gas, and coal products). This fact was readily acknowledged in our February 2023 paper. The split between mining and non-mining profits was then explored in detail in our follow-up April 2023 paper. The significance of the fact that the mining sector has enjoyed the most dramatic increase in profits is a matter for debate (discussed further below).

2. A second point made by the RBA is that the GDP deflator measure of economy-wide inflation used in our analysis differs from the usual inflation measures commonly reported in the media (namely, the Consumer Price Index). Again, this is non-controversial; in our original and follow-up reports[77] we explained the differences between the GDP deflator and the CPI, noted that the two indices track closely over time, and stated our

[74] Jonathan Barrett, "RBA accused of 'dereliction of duty' for dismissing corporate profiteering as a cause of inflation", *The Guardian*, 13 April 2023. https://www.theguardian.com/business/2023/apr/13/rba-accused-of-dereliction-of-duty-for-dismissing-corporate-profiteering-as-a-cause-of-inflation#:~:text=%E2%80%9CRising%20profits%20are%20not%20the,higher%20input%20costs%20into%20prices.

[75] Reserve Bank of Australia, *Statement on Monetary Policy*, May 2023, pp. 37-40, https://www.rba.gov.au/publications/smp/2023/may/pdf/statement-on-monetary-policy-2023-05.pdf.

[76] See RBA Freedom of Inflation release RBAFOI-222337, p. 2, https://www.rba.gov.au/information/foi/disclosure-log/pdf/222337.pdf. The memo confirms that "it certainly looks like mining GOS is contributing significantly to GDP deflator growth."

[77] And in the discussion above on the methodology of national income accounts.

rationale for using the GDP deflator in decomposing economy-wide inflation into its factor income components. The RBA argues that since the GDP deflator includes the prices of exports (including fossil fuel exports, which increased dramatically in price in 2021 and 2022), it differs from inflation measures that include only prices paid by Australian consumers. This point is certainly true, but once again its significance is open to debate (see below). Remember that most of the global research on the factor income composition of recent inflation (including that published by central banks and international institutions, reviewed above) also used the GDP deflator as the starting point.

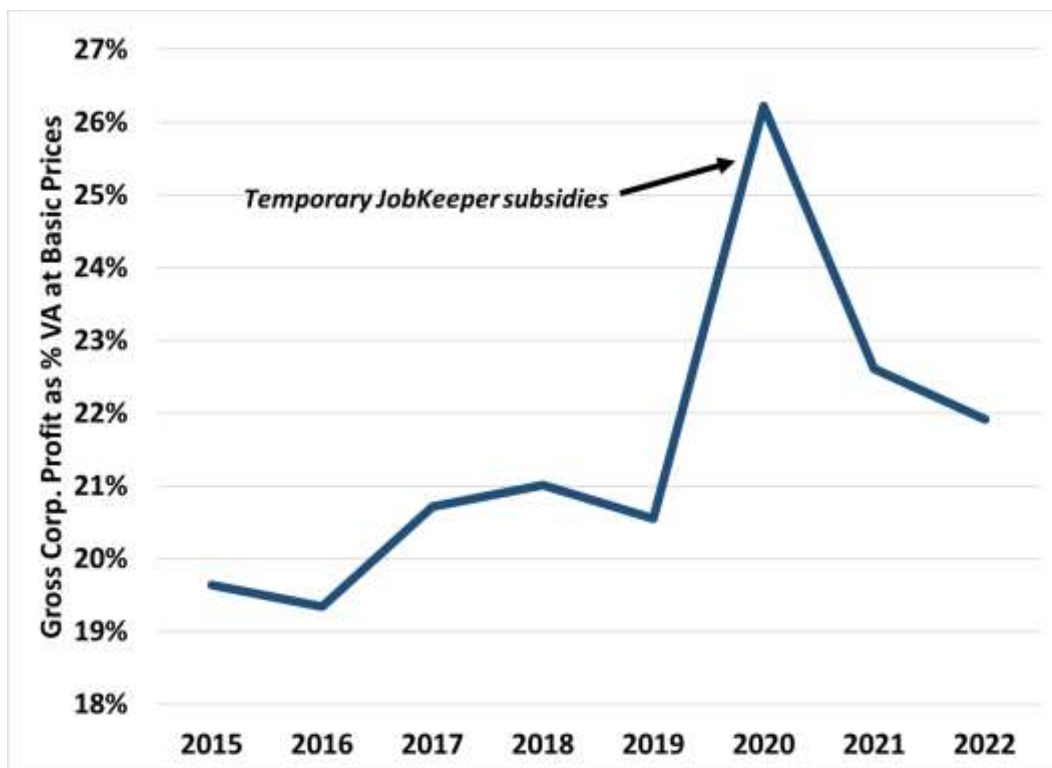
3. The RBA makes a final, minor point about the treatment of small business income in our reports. Some researchers interpret small business income as a combination of a pure return to capital and payment for the work effort of small business proprietors, and hence try to disaggregate small business income into separate capital and labour components (on the basis of assumptions about imputed 'wages' for proprietors). Others prefer to treat small business owners as a separate category of producer (behaviourally distinct from waged workers). This issue has no bearing on the general findings of our reports.

The Treasury FoI release repeated the first two of those points: namely, that most of the rise in profits was concentrated in the mining sector, and that the GDP deflator measures a different concept of inflation than the consumer price index. Comments by Treasury officials at Senate Estimates hearings focused on the second of those issues (regarding use of the GDP deflator).

Neither of these criticisms is legitimate. Regarding the role of mining profits in the overall surge in profits in Australia, our February 2023 report acknowledged and discussed the importance of mining profits, and our follow-up April 2023 report disaggregated it precisely. Profits in mining at that time accounted for over half of all corporate profits in Australia; obviously, if over half of corporate profits are excluded from consideration, then profits will seem less important. We reject the argument that mining profits somehow "don't count" – especially in regards to domestic inflation, given the critical role played by higher petrol, gas, and electricity prices in driving the initial post-pandemic surge in Australian consumer price inflation. Our April 2023 report documented the leading role of higher energy prices, as well as some other products which intensively use fossil fuel energy as an input, in the initial surge of post-pandemic inflation. Clearly, there is a strong connection between energy prices, energy industry profits, and inflation experienced by domestic consumers (not to mention inflation experienced in other sectors of the economy as an indirect result of higher energy costs).

Profits in non-mining sectors also increased as a result of widening profit margins and price increases that outstripped higher input costs (including energy input costs, which themselves are directly tied to the profits of the mining sector). Non-mining profit margins surged during 2020 and 2021 (boosted by the impact of large business subsidies paid at that time, including JobKeeper). They subsequently retreated as those subsidies were phased out, but at time of writing remain higher than pre-pandemic norms. From 2019 through 2022, gross corporate operating surpluses in non-mining private sector industries grew by 1.4 percentage points of non-mining GDP (as illustrated in Figure 3, reproduced from our May *Off the Charts* entry). Profit margins in strategically located non-mining sectors (like manufacturing, wholesale trade, and transportation) grew more strongly after the pandemic.[78]

Figure 3. Gross Corporate Profits as Share Value Added, Non-Mining Sectors



Source: Centre for Future Work from ABS National Accounts and Business Indicators. Includes 14 non-mining sectors with consistent profit and value-added data; excludes agriculture, health, education & public administration.

[78] This heterogeneity is consistent with the Weber-Wasner model of heterogenous mark-ups (in which sectoral profitability depends on the intensity of supply shortages, systemic importance, and corporate pricing power across sectors). Considering only the aggregate trend in non-mining profitability (which has indeed increased) understates the impact of profit-led inflation in critical non-mining sectors.

As for the GDP deflator, as discussed above it is a well-defined and widely-used measure of economy-wide inflation that is an important component of conventional national income accounting; there is nothing unusual or 'misleading' about it. Analysts simply need to understand what it measures, and wield this data appropriately. In the longer-run there is a clear pattern of convergence between the GDP deflator and the consumer price index (as illustrated in Figure 1 above, and as discussed in our July 2022 report). In most countries (including Australia), the GDP deflator is more volatile than the CPI, reflecting rapid fluctuations in internationally traded commodities, but in the long-run the two indices track each other closely.

At any rate, our initial report was not concerned only with consumer price inflation (consumer spending accounts for only about half of total expenditure in Australia's economy). So the well-known methodological differences between the GDP deflator and the CPI do not pose any obvious challenge to the validity of our analysis (which explicitly described the factor price composition of economy-wide inflation, not just the CPI). While the CPI attracts most attention in media accounts, inflation in the prices of other products is clearly relevant for economic well-being and policy-making.

A related argument has been that since many of the record profits recorded by Australian mining and energy companies were collected from foreign customers (through their purchases of Australian energy exports), this somehow makes these profits irrelevant for domestic anti-inflation policy. This argument is narrow and unconvincing, for several reasons. Firstly, inflation in other countries resulting from elevated prices (and corresponding elevated profits) for Australian resource exports is obviously a concern for Australians: it is likely to flow back to Australia (through still-higher prices for imports[79]), as well as contributing to policy responses overseas (namely, higher interest rates) that also have repercussions for Australia. Moreover, the receipt of record profits by Australian mining firms (even if collected from foreign consumers) can still affect Australian macroeconomic performance – including inflation. For example, those profits underpin rapidly growing dividend payments and share buybacks by Australian firms, and an acceleration of corporate takeovers (as firms seek to consolidate their access to super-profitable resource assets). For those who believe that recent inflation has been caused by excess demand, those swollen flows of capital income should surely be of concern.[80]

[79] Including imports manufactured in part from more expensive Australian resource exports.

[80] Consider that annual payments of dividends by Australian non-financial corporations increased by over $60 billion between 2020 and 2022. That is 7.5 times more than the estimated $8 billion increase in annual Award wages that will result from the Fair Work Commission's recent minimum wage

Finally, if we are going to deduct profits obtained from price increases imposed on foreign customers by Australian firms, then we must adopt a symmetrical approach to measuring the impact on Australian consumers of profit-led inflation originating in other countries. As noted above, the GDP deflator does not capture increases in the prices of imports, since it measures price increases on Australian production only. Import price increases have been important in transmitting global inflationary impulses into the Australian economy (both via imported consumer goods and services, and through increases in the prices of intermediate inputs purchased by Australian firms). As confirmed by the international literature documenting the importance of post-COVID profit-led inflation in other industrial countries, higher profits played a leading role in pushing those import prices up. A full treatment of the connection between profits and inflation in Australia, therefore, would need to consider those profit-led changes in import prices. It is not self-evident that adjusting the analysis to explicitly consider profit-led price impulses on *both* exports and imports, would reduce the perceived importance of profits in recent Australian inflation. Such an analysis would require integrating the factor price decomposition of inflation in Australian-made goods and services, with corresponding data on the factor price composition of inflation in imported purchases – and then adjusting the full analysis to reflect two-way trade flows. That exercise would be a challenging empirical undertaking, worthy of further research. And while it would also be challenging to develop Australian policy responses to imported profit-led inflation, we cannot discount profits captured by Australian companies from foreign customers without considering the symmetrical flow in the other direction. In short, it is important for policy purposes to acknowledge that so much of the post-pandemic inflationary impulse has come from profits (of both Australian and foreign firms), in which case the appropriateness of suppressing domestic wages and purchasing power as the dominant response to inflation is thrown into question.

The various chains of causation linking higher profits in Australia's resource and mining industry (harvested from the surge in prices for those products beginning in mid-2021, and accelerated after the invasion of Ukraine) with domestic consumer inflation are illustrated in Figure 4. The most obvious channel is the direct impact of higher energy prices on prices for many consumer prices. Higher prices for exported minerals can be re-imported to Australia through imports of products manufactured overseas from those minerals. Capital income from record mining profits can contribute to demand-side pressures in the domestic economy.

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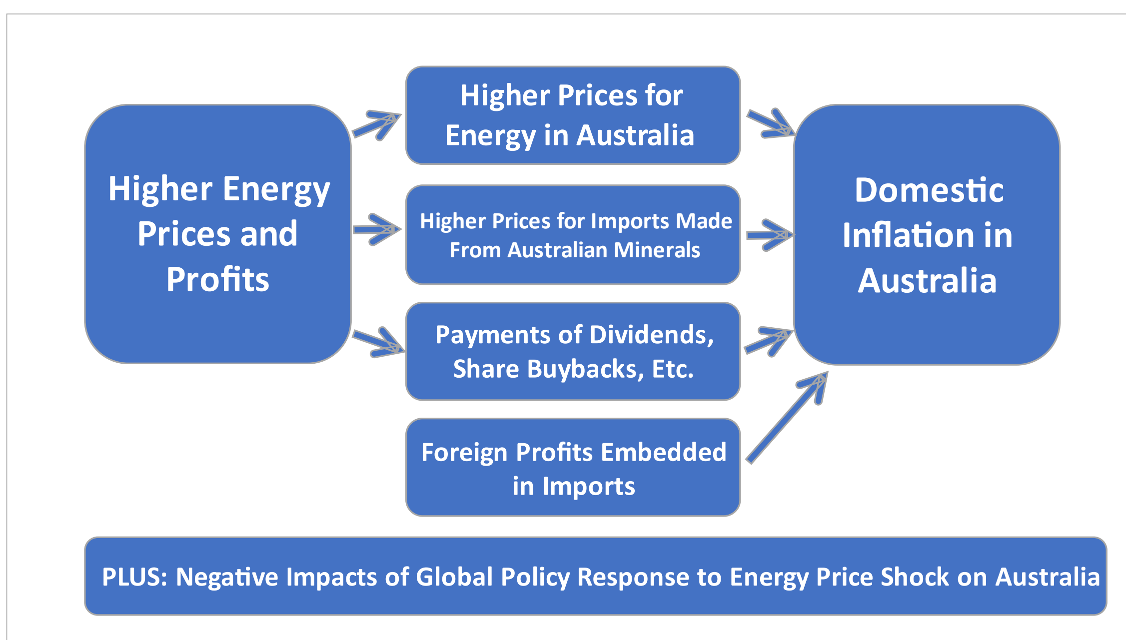
decision. The latter merited special concern in recent RBA analysis – but the former has not been discussed at all. See Greg Jericho and Jim Stanford, *Minimum Wages and Inflation* (Canberra: Centre for Future Work, April 2023), https://futurework.org.au/wp-content/uploads/sites/2/2023/04/Minimum-Wage-and-Inflation-Paper-FINAL.pdf.

And a complete analysis should consider the impact of foreign profit-led inflation on domestic consumer inflation, experienced through more expensive imports. Finally, the impact of international policy responses (including monetary tightening) to global energy price surges (to which Australian exports have significantly contributed) cannot be ignored, either. On the whole, the claim that record profits in Australia's resource sector – arising directly from post-pandemic price shocks, and coming to account for over half of all corporate profits in the entire economy – are somehow irrelevant to understanding and combatting domestic inflation is not credible.

Figure 4. Mining Profits and Domestic Consumer Inflation



Source: Authors' analysis.

Some critics have complained that merely showing that higher nominal unit profit costs account for the lion's share of increased factor incomes resulting from inflation, does not prove that higher profits *caused* that inflation. Our factor price decomposition of economy-wide price levels showed that higher unit profits accounted for the majority of excess inflation (above the RBA's 2.5% target) experienced in the first three years after COVID. Firms set the prices that allowed them to capture record profits; they were not forced to do so. Yet some critics claim that this cannot be interpreted as evidence that profits caused the higher prices.

As discussed in our review of theories of profit-led inflation above, this issue of causation is particularly vexing for economists wedded to the standard competitive neoclassical understanding of price determination and income distribution. For them, firms do not "set" prices, they "take" them as given by

anonymous market forces. So they might interpret the correlation between profits and inflation as evidence of some other economic pressures: excess aggregate demand, for example, which might automatically raise nominal price levels in order to maintain market clearing conditions in product markets. In this telling, higher profits just "happen" as a result of price increases which were ultimately caused by other factors. Policy should take aim at ameliorating those other factors, rather than responding to (or even naming) historically high profits.

However, for economists who acknowledge that price-setting power is a normal feature of modern industrial economies, this issue of causation becomes a matter of semantics: at the most immediate level, firms obviously *set* the higher prices that led to their record profits, so of course those profits can be interpreted in a causal sense. To be sure, there were changes in broader determinants of pricing power and profit margins that explain *why* profit margins could increase so substantially after the pandemic – and theories regarding changes in those mark-up determinants were reviewed above. But it is unconvincing to pretend that companies played no independent role in raising their own prices to such super-profitable levels. Furthermore, as discussed above, it is contradictory that orthodox economists require no such proof of "causation" when asserting a connection between rising unit labour costs and inflation. It's only where profits are concerned that they suddenly demand strong proof of causal direction.

Even if we accept that external factors (such as excess demand) somehow "forced" higher prices (without any pro-active behaviour by firms), there is still no reason to assume that so much of the resulting escalation of nominal values should be captured in higher profits, rather than being shared proportionately through higher nominal incomes for all factors of production. If factor prices are determined by factor market competition, then a generalised condition of excess demand should lift *all* factor prices – not just profits. Firms could have simultaneously chosen to increase wages and other factor payments in response to price increases that resulted from something else (like excess demand). In this case there would have been no rise in the profit share of GDP. Indeed, if the economy behaved as postulated in competitive general equilibrium theory, those higher factor prices would be necessary and immediate: because agents would refuse to sell their services for anything less than the competitive market-clearing price. Somehow, however, firms were able to keep most of that new nominal income as their own profits. This further attests to both the pro-active price-setting ability of firms, and to their higher level of structural power (relative to other factors of production) in pocketing such a disproportionate share of the resulting nominal flows.

Nothing forced Australian firms to raise their prices so far above their costs. Unique post-pandemic disruptions and supply constraints facilitated that excess

profit-taking, which drove the share of corporate operating profits in national GDP to its highest share in history in 2022. Those factors merit further investigation, including evaluating how long they are likely to last. Profit-led inflation cannot continue indefinitely: there are limits to how high profit margins can rise, and how low labour's share of GDP can fall. Many of the specific conditions that allowed firms to increase prices so much after the pandemic (including shortages and supply chain disruptions) have been largely ameliorated, and the energy price spike which drove much of the profit-led dynamic has moderated (but, in recent months, may have been rekindled thanks to OPEC+ supply constraints). Corporate profits in Australia have fallen from their recent record highs in recent months (discussed further below), and this has contributed to the significant moderation of inflation in the same period. Hopefully both trends will continue, although as stressed in our discussion below on policy implications of profit-led inflation, it is prudent for policy to target lower profit margins as a *goal* in trying to reduce inflation fairly and effectively.

Whatever happens in the future, however, it is undeniable that historically high profits have accounted for a disproportionate share of the initial rise of economy-wide prices in Australia (and many other countries) since the pandemic. This confirms that Australian corporations had power to drive up their prices much more than their costs – and this, by definition, constitutes inflation.

In one important sense, debate over the direction of causation between profits and prices is moot. Whatever caused it, corporate profits surged to all-time records as a share of Australian GDP amidst a severe cost-of-living crisis for most Australians. Real incomes for workers have declined faster and further in this inflationary episode (now down by a cumulative 6% since mid-2021) than anytime in Australian postwar history. The result has been a marked redistribution of income in Australia, from workers to owners, coincident with higher inflation. Even if analysts were agnostic on whether deliberate corporate actions caused that outcome, this painful redistribution should nevertheless be a central factor in designing responses to inflation. Punishing the victims of this forced redistribution, through monetary policies aimed explicitly at lifting unemployment and suppressing nominal wage growth even further below inflation, is as unfair as it is ineffective.

To sum up this review, our programme of research on the role of historically high profit margins in explaining recent inflation in Australia has been:

- Methodologically strong and transparent, and quantitatively unchallenged;
- Consistent with similar research undertaken by credible academics, think tanks, central banks, and international institutions around the world; and

- Threatening to those who want Australian workers to accept wage restraint as the only solution to a cost-of-living crisis they clearly didn't cause.

On this latter point, a particularly telling passage from one *Australian Financial Review* columnist suggested that our argument that excess business profits caused the initial surge in post-pandemic inflation could unleash dangerous political repercussions:

> 'To the public which is the ultimate audience for such research, if corporate profit-taking is the overwhelming cause of inflation (rather than it being driven by supply constraints, higher-priced imports or wages), then it follows that trying to contain inflation by smashing household spending is misguided and counter-productive, particularly in contrast to things like competition reforms and price caps. This research functions to undermine the political will to support independent monetary policy or tighter fiscal policy."[81]

For business interests, and economists held in thrall to orthodox conceptions of competitive markets and wage-price spirals, it would be dangerous indeed if the "public" were to reject punitive monetary and fiscal medicine presented as the necessary solution to inflation which they did not cause, and which has enriched so many corporations and their owners.

[81] Myriam Robin, "Australia Institute deaf to criticisms," *Australian Financial Review*, 28 May 2023, https://www.afr.com/rear-window/australia-institute-deaf-to-economists-criticisms-20230528-p5dbxu.

Recent Developments in Australian Profits, Wages, and Inflation

Since publication of our earlier research on profit-price inflation, the dynamics of post-pandemic inflation in Australia have continued to evolve. In general, that evolution has been very consistent with the analysis of profit-led inflation advanced in the international research surveyed above.

The initial surge of inflation in Australia beginning in mid-2021 (after lockdowns mostly ended and global trade re-opened) was closely associated with a surge in price pressures – reversing the temporary deflation that occurred during the worst of the pandemic. Business profits were the dominant distributional manifestation of that inflation. Supply chain, competitive, and demand conditions were shocked by the pandemic, in ways that allowed companies in some key industries (such as energy, logistics, and manufacturing) to significantly boost their profit margins, coincident with rising prices. This is consistent with the first (or 'impulse') stage of the model advanced by Weber and Wasner, illustrated above in Figure 2.

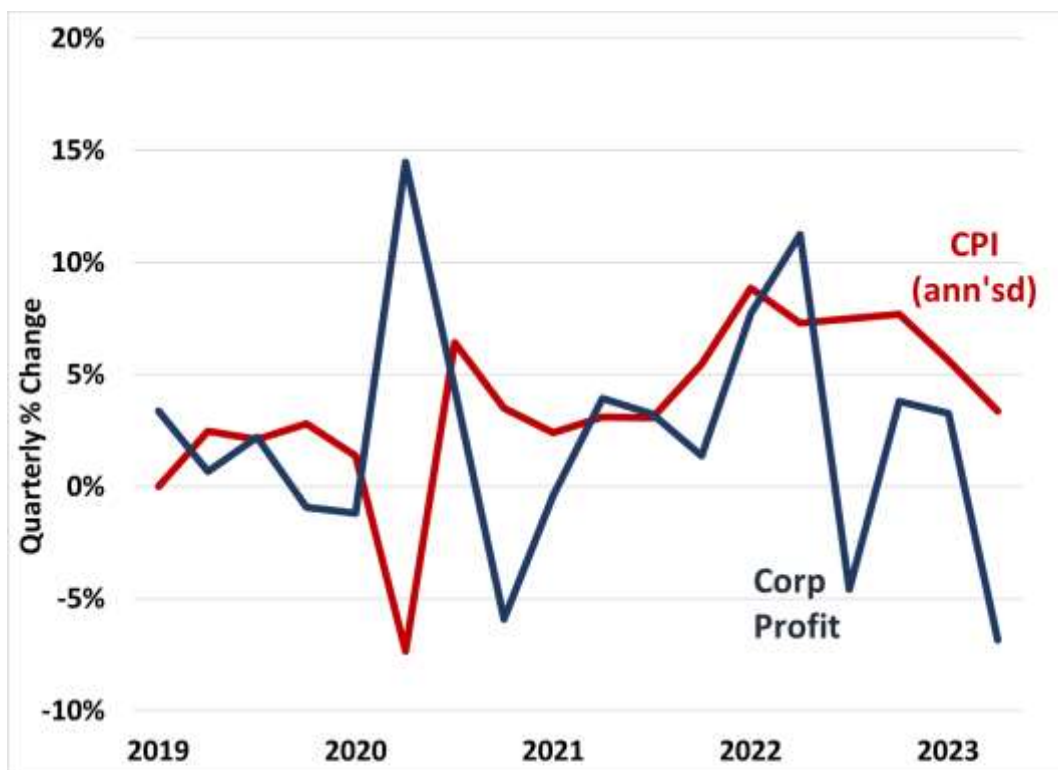
Initial price shocks in those strategic industries were then propagated through other sectors of the economy – but the completeness of that propagation varied widely. Some downstream industries could pass on their higher input costs, and then some – resulting in higher profits for themselves (although not generally as lucrative as the surges in profits enjoyed initially in strategic upstream sectors), thus amplifying overall inflation. Other sectors, however, were still negatively affected by pandemic-related shocks and restrictions, and/or faced more competitive market conditions which limited their ability to pass through higher input costs. Profits in those sectors (such as arts and recreation, hospitality, and information and telecommunications) remained weak. This is consistent with the second stage ('propagation and amplification') of the Weber-Wasner model.

Now Australia, like other industrial countries is well into a new chapter in this saga – consistent with the third, 'conflict' stage advanced by Weber and Wasner. Workers whose real incomes were significantly eroded by the initial surge of profit-led price increases are now struggling to repair that damage to their real living standards. They are demanding stronger wage increases to both offset previous real wage reductions, and keep up with anticipated future inflation – which, although moderating quickly from 2022 peaks, is still above traditional

target rates. At the same time, the unique and mostly temporary conditions which underpinned the initial surge in both profits and prices after the COVID lockdowns have largely normalised: global supply chains for strategic commodities (such as semiconductors, vehicles, and building supplies) have been repaired, wholesale inventories have been rebuilt, and international shipping costs have returned to pre-pandemic levels. Energy costs, too, have partly retreated from post-Ukraine-invasion highs – although recent efforts by OPEC+ to restrict supply and raise prices (then fully transmitted to Australian consumers by Australian energy firms) carry great potential to restart the entire profit-led chain reaction once again.

The effects of these adjustments are visible in the most recent Australian macroeconomic data. The good news is that corporate profits have begun to moderate: gross corporate surpluses have declined in two of the last four quarters. They fell 7% in the most recent quarter (June 2023), falling to 5% below year-earlier levels in nominal terms. It is important to note this modest decline has still left corporate profits far above historical norms, in both absolute and relative terms. As a share of national GDP in the June 2023 quarter (27.4%), corporate profits remain well above pre-pandemic levels (which averaged 23.7% of GDP in the five years before COVID) – and even further above long-term post-war norms.

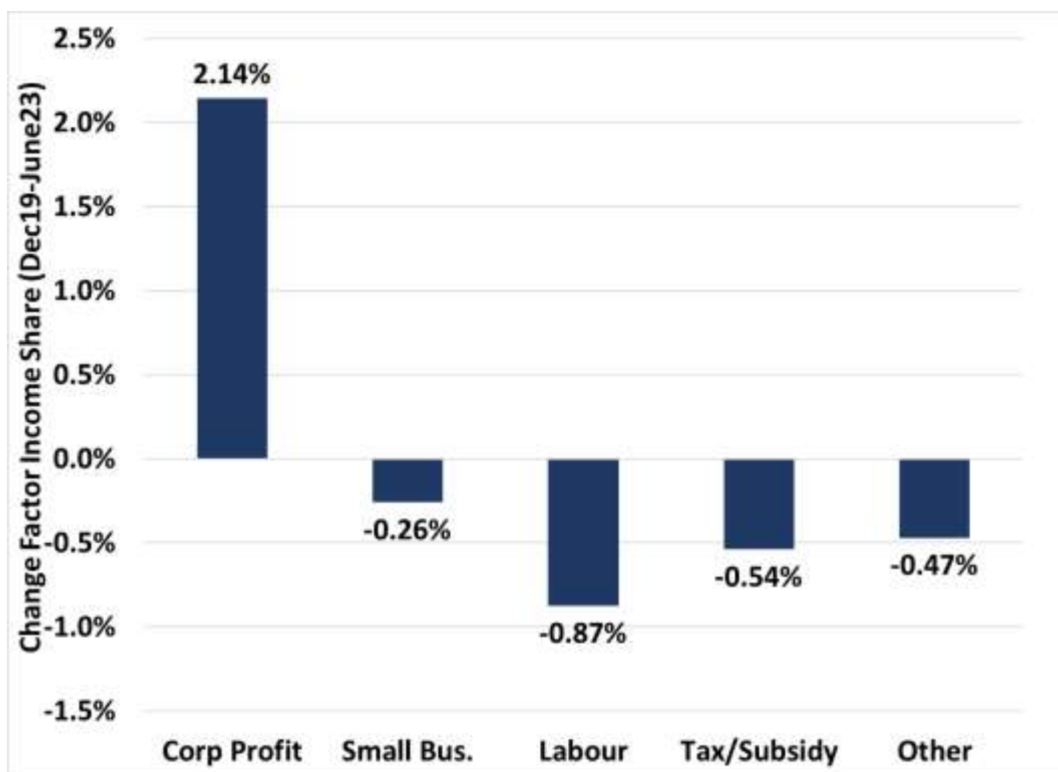
Figure 5. Corporate Profits and Consumer Price Inflation, 2019-2023



Source: Authors' calculations from ABS Consumer Price Index (Table 1) and Australian National Accounts (Table 7).

Nevertheless, even that partial moderation of record corporate profits has been associated with a significant and welcome deceleration of inflation. Consumer price inflation in Australia has slowed by over half in the last 9 months: from an annualised peak of 8.9% in the first quarter of 2022 (led by surging energy costs) to just 3.4% in the June quarter of 2023 (not much above the top of the RBA's target range). The correlation between corporate profits and domestic inflation is illustrated in Figure 5. The one clear exception to that correlation occurred during the April-June quarter of 2020, the period covered by the initial COVID lockdowns. At that time, enormous subsidies to business from the Commonwealth government (including massive JobKeeper wage subsidies) temporarily boosted corporate profits, despite the short-term decline in average prices experienced at the same time. That temporary deflation resulted from the collapse in consumer spending during the lockdowns, as well as the impact of other government measures (such as temporary subsidies for child care). Once those subsidies were withdrawn, profits initially fell, but then leaped to even higher peaks – coincident with the surge in prices after the economy re-opened.

Figure 6. Changes in Factor Income Shares, Dec.2019 to June2023



Source: Authors' calculations from ABS Australian National Accounts (Table 7).

Despite the recent moderation in corporate profits, it is clear that the corporate sector in Australia remains the only major "winner" from the inflationary cycle unleashed in the wake of the pandemic (see Figure 6). Indeed, corporate gross

profits are the only major component of factor incomes in Australia that has grown since December 2019 as a share of total GDP. The corporate profit share in GDP has increased by 2.2 percentage points over this period. Every other factor has seen its share of GDP decline since the pandemic hit. Hardest hit in aggregate has been labour: the share of total labour compensation (including supplementary compensation such as superannuation contributions) in June 2023 GDP was still about 0.9 percentage points lower than in December 2019. Other factors also saw their relative shares of national output decline – including small business, government (via lower indirect taxes net of subsidies), and smaller stakeholders (including public corporations and home-owners' surplus).

In other words, through all the disruption, dislocation, and belt-tightening associated with the COVID pandemic and its aftershocks (including the outbreak of inflation and subsequent monetary tightening), corporate Australia is the only segment of the country to come out ahead. Every other stakeholder has lost ground. Once again, the myth that "inflation hurts all Australians, and we will all benefit from getting it back down" has been exposed as naïve and misleading.

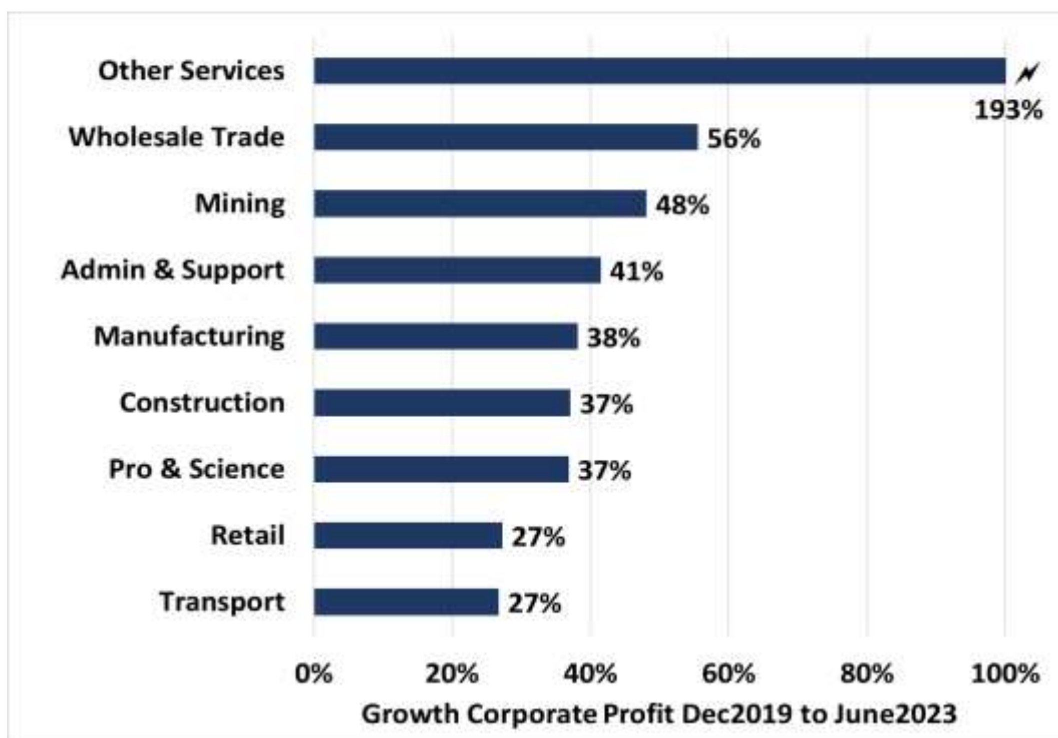
Another important change evident in recent data has been the spread of corporate profit gains through the broader economy, far beyond the mining and resources industries which were the biggest initial beneficiaries of the profit-price surge. In the 'impulse' stage of the profit-led chain reaction, energy and raw material companies were in an especially powerful position to push prices up far beyond their costs of production, and the resulting explosion of mining sector profits during the first quarters of the inflationary surge was nothing short of astounding. From December 2019 through peak in June 2022 (18 months later), mining sector gross profits doubled – at that point making up half of all corporate profit in the entire Australian economy (from a sector that employs just 2% of Australian workers[82]). The mining sector thus accounted for over three-quarters of additional corporate profits pocketed in the initial stage of post-pandemic inflation. And not surprisingly, products sold by that sector accounted for a disproportionate share of the acceleration in consumer price inflation in the same time.[83] Mining profits have partly receded since then, giving back about half of their initial post-pandemic gains. Correspondingly, Australian consumer prices for energy-related products have also moderated, but also remain well above pre-pandemic norms.

[82] Authors' calculations from ABS Labour Force, Detailed (Table 04).

[83] During the first two years of post-pandemic inflation, increases in energy-related consumer prices in Australia (including home electricity, gas and home fuels, automotive fuels, and travel) outpaced overall consumer price inflation by two or more times, and were the leading edge of accelerating domestic consumer price inflation in that time; see Stanford and Jericho (2023), Figure 4.

More recently, however, the relative importance of profits in several other sectors (but not all) has grown – even as the historic scale of mining sector profits has abated. Again, this is consistent with the propagation and amplification of profit-led inflation through other sectors of the economy. Some firms have the capacity to fully pass on higher costs from upstream suppliers, and then some – facilitated by various factors including lingering supply constraints, corporate concentration, and consumer desperation. Figure 7 illustrates the sectors which recorded the biggest increases in post-pandemic profits, relative to their December 2019 starting points. The surge in mining profits (and prices) still ranks near the top of this parade of winners, but the expansion of mining profits is no longer so extraordinary compared to other sectors which have also leveraged the pandemic and its aftershocks into large profits. Other sectors with very strong profit growth since COVID include wholesale trade (which profited mightily from shortages and depleted inventories), manufacturing (another strategic pinchpoint in the economy), professional and technological services (many of which were also in short supply), and construction. Some sub-segments of other broader sectors have also done very well – such as supermarkets (which have declared record profits amidst soaring food prices[84]).

Figure 7. Leading Sectors by Corporate Profit Growth, Dec.2019 to June 2023



Source: Authors' calculations from ABS Business Indicators (Table 11).

[84] See Savannah Meacham, "'Adding insult to injury': Supermarkets record huge profits as Australians face cost of living crisis," *Nine News*, 25 August, 2023.

The highly profitable sectors illustrated in Figure 7 account for over 100% of the total growth in corporate profits since December 2019; across all other sectors tracked by the ABS, aggregate corporate profits were lower in June 2023 than before the pandemic.[85] This is consistent with the heterogeneous nature of the propagation and amplification processes described in the literature surveyed above. The ability of companies to take advantage of the pandemic to boost prices, and their own profits, depends on varying factors including disruptions in supply, consumer demand, and corporate concentration. Even including those sectors with weak profits, and measuring across all non-mining industries, corporate profits have still grown faster than nominal output in the non-mining economy, and the profit share of value-added has increased.[86] So the claim that excess profits since the pandemic have been limited to the mining sector is clearly false. But measuring profitability in non-mining sectors as a composite dilutes the heterogeneous features of non-mining sectors that allowed some to profit strongly from post-pandemic disruptions, while others were squeezed. The strong profits captured in some (but not all) non-mining sectors now rival the historic surge in profits recorded in the mining sector; this reconfirms that the profit-price dynamic experienced in Australia since the pandemic is not a phenomenon unique to resource industries.

In contrast to the sustained profitability of the corporate sector, small business gross income has been squeezed in this latest 'conflict' stage of post-pandemic inflation. Small business profits were initially boosted by the same government subsidies and other supports that supplemented corporate profits in the early stages of the pandemic. Indeed, from June 2020 through September 2021 (when inflation began to accelerate), small business profits performed better than corporate profits. Since then, however, small businesses have been constrained by the continuing aftershocks of the pandemic: including rapid increases in interest rates, rising input costs, and competitive conditions which limit their ability to pass on costs to their customers. Small business income has declined for the last four quarters consecutively. By June 2023, it was 9% lower (in nominal terms) than a year earlier; in real terms and as a share of total GDP, the decline in small business profits has been even steeper.

[85] It should be noted that the ABS's treatment of profits in the banking industry is incomplete, covering only profits generated on real production of financial services – but excluding profits on the banks' saving and lending activities (which constitute the bulk of their profit generation). Counting all bank profits, the financial sector would certainly be considered another relatively profitable sector.

[86] ABS Business Indicators data (Table 11) indicate that corporate gross profits in the 14 non-mining sectors covered by its corporate profit statistics grew an average of 26% from December 2019 through June 2023. ABS National Accounts data indicate that nominal value added in the same 14 sectors grew by 18% in the same period.

Another important dimension of this latest 'conflict' stage of post-pandemic inflation has been a modest and incomplete rebound in labour costs. Like the mirror-image decline in corporate profits, the acceleration in wages and labour costs has been partial – offsetting only some of the decline in relative labour compensation that occurred in the earlier phases of the current inflation. Total labour compensation has accelerated in the last year, driven by both higher employment and modestly faster wage growth. Total labour compensation grew almost 10% in the last 12 months. Combined with the fall in corporate profits, this has allowed workers to regain some of the share of national GDP they lost earlier in the pandemic – but not all. Labour compensation was still almost one percentage point lower in June 2023 than when the pandemic hit. Keep in mind, too, that that pre-pandemic labour share was already reduced well below historic norms as a result of several years of unusually weak wage growth before the pandemic.

By the June quarter of 2023, the three-month increase in average wages in Australia (as measured by the ABS's Wage Price Index) was finally keeping up with the concurrent three-month rise in consumer prices (both around 3.4% on an annualised basis). That broke an unprecedented string of 12 consecutive quarters (stretching back to June 2020) during which wages grew more slowly than consumer prices. So at least, as of June 2023, the historic losses in real wages experienced by Australian workers since mid-2021 (when post-pandemic inflation took off) were not getting worse. But that hardly means the real wage crisis has been 'fixed': workers are still suffering from an accumulated real wage decline of some 6% since mid-2021 yet to be repaired.[87]

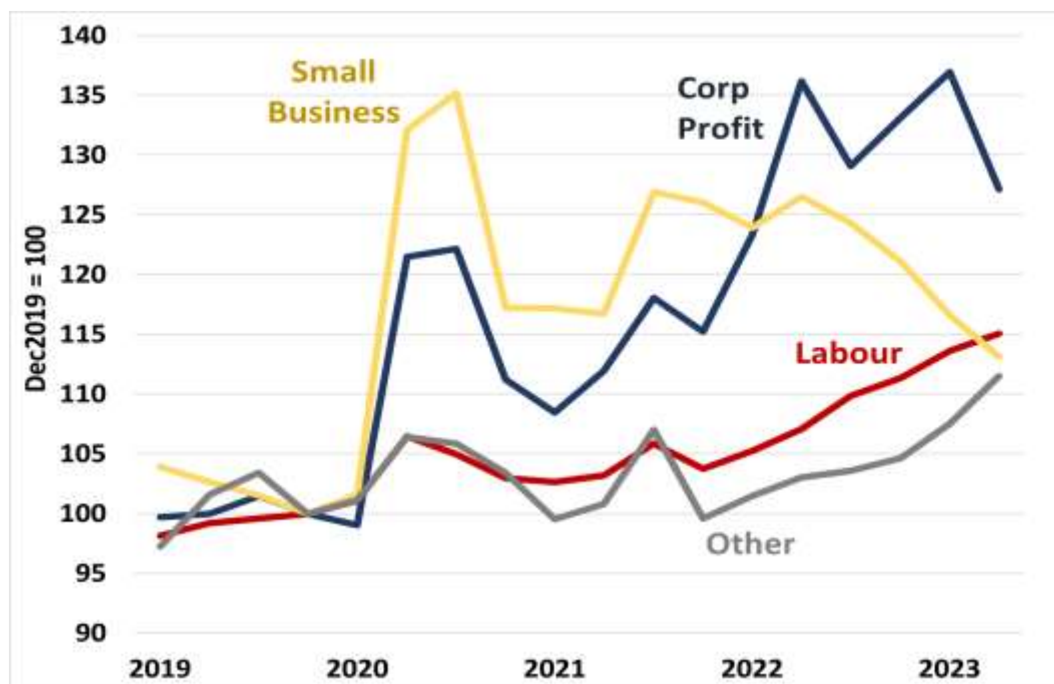
The impact of rising labour income on overall macroeconomic conditions is complicated by the unusual behaviour of labour productivity recorded since the pandemic. Large swings in apparent labour productivity occurred beginning with the initial lockdowns. At first, average productivity seemed to surge during the initial lockdowns; then it fell rapidly as industries re-opened. These initial swings were likely the result of measurement issues encountered through the pandemic (when many workers were counted as employed even if not working) and composition effects (reflecting the disproportionate impact of lockdowns on lower-productivity sectors of the economy). More recent weakness in apparent labour productivity has puzzled economists; similar trends have occurred in other

[87] This estimate of cumulative real wage decline does not include the temporary impact of COVID shutdowns on average recorded wages in the June 2020 quarter; because low-wage service workers were disproportionately impacted by unemployment at that time, the average wage of those remaining in employment temporarily surged. This was a temporary and artificial effect, however, and hance that higher number should not be used as a starting point for measuring the subsequent decline of real wages.

industrial countries since the pandemic (including North America and Europe). It will take further research to verify and understand this trend, and then to develop appropriate policy responses. In the immediate context, however, this decline in recorded productivity means that the impact of rising labour incomes on unit labour costs (which are generally more relevant for pricing decisions than hourly wages per se) is amplified. It is unlikely that this weakness in recorded productivity will be sustained. There is no evidence to suggest that Australian workplaces have somehow become inherently less productive in fundamental operations, technology, or efficiency; and labour productivity will likely recover at least to its pre-pandemic trajectory as labour markets (and labour statistics) are normalised. In this light, the current impact of labour costs on unit costs and overall inflation is likely overestimated in unit labour cost data.

Putting all these features of the evolving inflation outlook together, Figure 8 illustrates the course of unit factor costs since the onset of the pandemic. In each case, nominal incomes accruing to each broad factor (labour, corporations, small business, and other smaller factors[88]) are adjusted for changes in the real output of the economy, to provide consistent measures of unit factor costs. As evident in Figure 8, the initial surge in inflation was driven by very rapid growth in unit profit payments: both to corporations and, initially, to small business.

Figure 8. Unit Factor Costs, 2019 to 2023



Source: Authors' calculations from ABS Australian National Accounts (Tables 2 & 7).

[88] Such as government enterprises and home-owners' surplus. Figure 8 excludes indirect taxes net of subsidies, which fluctuated wildly during the payment due to COVID subsidies.

Since mid-2022, small business unit profits have been squeezed by cost pressures, competitive constraints, and the end of government subsidies. Corporate unit profits have remained elevated, although moderating partially in the last year. Unit labour costs began to climb in 2022, the result of both modest improvements in wage growth and the decline in apparent average productivity.

By June 2023, unit costs for labour, small business, and other factors were higher by cumulative totals of 12 to 15% compared to December 2019. Implied compound growth rates for those factors are not far out of line with the RBA's target inflation band (which would allow for cumulative increases of 7 to 11% over that same three-and-a-half year period). Corporate unit profits, on the other hand, inhabit a qualitatively different economic space. Despite recent moderation, they have increased by a cumulative total of 27% since December 2019: twice as fast as the other factors, and three times faster than would be consistent with the RBA's inflation target. In that light, it is clear that while corporate profits have moderated in recent months (coincident with the deceleration of inflation), those profits were clearly the dominant manifestation of the initial inflationary surge – and they need to come down further, both to re-establish pre-pandemic distributional norms, and to allow the further slowing of inflation coincident with a repair in real wages.

Table 1
Decomposition of Above-Target Inflation
Dec. 2019 to June 2023 ($bil. annualised)

	Labour Compen-sation	Corporate Gross Profit	Small Business Gross Inc.	Indirect Taxes Less Subsidies	Other Factor Incomes	Total Economy
Dec. 2019	$959.1	$507.9	$150.2	$198.9	$194.8	$2,011.0
June 2023	$1,192.0	$697.6	$183.6	$238.1	$234.6	$2,545.9
Growth	$232.9	$189.7	$33.3	$39.2	$39.9	$534.9
Due to Real Output	$77.1	$40.8	$12.1	$16.0	$15.7	$161.7
Due to Target Inflation	$93.5	$49.5	$14.7	$19.4	$19.0	$196.1
Incremental	$62.2	$99.3	$6.6	$3.8	$5.2	$177.1
Share of Total (%)	**35.1%**	**56.1%**	**3.7%**	**2.1%**	**2.9%**	100.0%

Source: Authors' calculations from ABS National Accounts Data

To further illustrate the combined impact of these evolving features of Australian inflation, Table 1 above recreates the initial decomposition of excess inflation in Australia that was first reported in our February 2023 paper. It reports the growth in total nominal income for five broad categories of factors: labour, corporations, small business, indirect taxes less subsidies (collected by government), and other factors (including government businesses and home-owners' surplus). Recall from Figure 6 that of these categories, only corporate profits have increased since December 2019 as a share of national GDP. And as illustrated in Figure 8, the rise

in profits paid to corporations per unit of output has been far greater than the increases in nominal unit costs of other factors (including labour). The unsurprising end result is that corporations continue to account for the majority of excess inflation (over and above the RBA's 2.5% inflation target).

Despite the recent partial decline of corporate profits, higher unit profit payouts still account for over half (56%) of the cumulative increase in nominal unit prices in the Australian economy since December 2019, above and beyond what would be expected due to normal target inflation. The role of higher unit labour costs in overall unit prices has increased in recent quarters, and now accounts for just over one-third (35%) of the cumulative above-target rise in prices since the pandemic (compared to 18% in our February 2023 report, which measured changes in unit costs up to the September 2022 quarter, most recent data available at that time). This higher share due to unit labour costs reflects both the modest acceleration in wage growth, the decline in apparent labour productivity, and the decline in business profits (modest for corporations, larger for small business).[89] The share of labour compensation in the overall increase in unit prices is still smaller than labour's share of overall GDP, as would be expected given the decline in that labour share since the pandemic started. Other factors account for smaller portions (between 2 and 4%) of the cumulative above-target increase in unit prices.

These changes in the factor decomposition of post-pandemic inflation in Australia reflect the evolution of the distributional forces at play, and once again is consistent with the stages of profit-led inflation elucidated by Weber and other international writers. Earlier in the inflationary cycle, most of the rise in unit prices was embodied in rapid increases in profits, which reached historic highs in many countries (including Australia). As initial price shocks were propagated and amplified through the broader economy, profits remained high – and spread more widely (but not universally) through other sectors with strategic power to pass on or even amplify cost shocks. Later, other factors of production – most importantly labour – mobilised to try to defend their distributional shares, and recoup losses in real incomes incurred earlier in the process. In this stage the decomposition of inflation becomes more diverse across factors – though is still disproportionately concentrated in business profits. Even in these later stages, with profits stable or even falling, and labour costs accelerating, it would be wrong to conclude that labour is now the 'source' of inflation: clearly, the rise in unit labour costs reflects efforts by workers to recoup real income losses experienced earlier in the inflationary cycle, and the whole process must still be ascribed to the initial profit-led shocks that set the inflationary chain-reaction in motion.

[89] Hence, if and when productivity patterns are normalised with the stabilisation of labour market conditions, the relative importance of unit labour costs in overall inflation will diminish.

Policy Implications

The evidence is clear that in Australia and many other industrial countries, businesses took advantage of the unique conjuncture of circumstances in the wake of the pandemic – including broken supply chains, shortages of crucial commodities, pent-up consumer demand, and a price shock in energy markets – to raise prices far above their own costs. If companies were just passing on 'higher costs,' grade school maths can confirm their profits would not grow. Yet they have, reaching historic record highs, by every metric: in absolute real dollars, as a margin on total revenues, and as a share of national output. Those profits had to come from somewhere, and the unsteady pace of real economic growth (weakened further by anti-inflation monetary policy) means they could not have been financed from new real production. In Australia's case, every other stakeholder in the economy – labour, small business, government, and other factors (like home-owners' surplus and government indirect taxes) – has seen its share of output fall. Only corporations have improved their absolute and relative incomes through the unprecedented crises of the last three-and-a-half years.

That core finding should not be surprising, since it is those companies that literally set the higher prices that constitute inflation. The efforts by orthodox economists to disguise the leading and autonomous role of companies in setting higher prices, ascribing the process instead to omnipresent and faceless market 'forces', should not distract us from acknowledging the pro-active role of large businesses in determining the evolution of prices. For example, no-one forced Australian companies to lift the prices they charge for household energy so dramatically, even though there was virtually no change in the cost of producing it. The fact that they were able to (thanks to a combination of market power and misguided energy policy) does not negate their own responsibility for doing so, nor break the logical connection between those higher prices and their own profits. The same applies to inflated, profit-boosting prices charged for other strategic products throughout Australia's economy – from building materials to housing to groceries.

The drive for profits, termed 'greed' by some, was not invented with the COVID pandemic: it is obviously a normal core feature of any capitalist economy. But the unique conditions of this multidimensional health and economic crisis allowed greed to go to town. Some of the factors that facilitated post-pandemic super-profits have abated, and will continue to do so: thanks to the repair of supply chains, the restocking of inventories, and normalisation of consumer demand patterns. The best response to those temporary factors may be to allow time for the restoration of balanced conditions – while protecting average Australians

against the effects of transitory inflation (through wage increases that keep up with prices, and strong income protections for those who cannot work). However, understanding the leading role of record profits in driving post-pandemic inflation undermines the case for monetary tightening as the dominant policy response to it. By siphoning off purchasing power from working households whose real incomes have already fallen due to inflation, higher interest rates punish the victims of inflation – while letting the true culprits go free.

Below we list several elements of a more balanced anti-inflation strategy, informed by a broader understanding about the unique nature and causes of post-pandemic inflation. Some of these measures would have been better implemented earlier in this inflationary episode (before the dynamics of propagation, amplification, and catch-up were set in motion). Nevertheless, we can learn from this experience and be better prepared for the next episode.

Indeed, at time of writing, there are signs of a rebound in global inflationary pressures led by efforts of major oil producers (including OPEC and Russia) to restrict supply and drive up prices. Current energy policy settings in Australia allow those interventions to be directly reflected in higher energy prices for domestic customers (even for energy that is produced, transported, and consumed in Australia), driving another disruptive surge in inflation – and another surge in mining sector profits. Moreover, in an era of 'polycrisis', there is little doubt that future shocks (arising from epidemiological, climatic, or geopolitical emergencies) will occur, each with potential to kick-start the profit-led inflationary cycle all over again. In this regard, having a more nuanced and multi-dimensional understanding of the causes, mechanisms, and consequences of inflation (rather than assuming it always stems from excess demand and overheated labour markets), and a better-stocked toolkit with which to respond (supplementing the one big hammer, higher interest rates, in the current toolkit), will be essential.

Policy implications of the analysis of profit-led inflation include the following:[90]

- Price regulations should be used where feasible in strategic sectors to prevent the initial price impulses that spark broader inflationary dynamics. Obvious cases where price regulations or price caps could play this pre-emptive role include energy, housing, and transportation. Many countries successfully used price regulations on strategic commodities to reduce inflation after the pandemic.[91] Australia has implemented some partial price caps (such as the

[90] For more discussion of alternatives to higher interest rates in controlling inflation, see *An Economy That Works for People*, Jobs Summit Series Paper #1 (Melbourne: Australian Council of Trade Unions, August 2022), pp. 19-22.

[91] For examples, see Ian Johnston and Martin Dunai, "Europe's politicians impose price caps to address soaring food costs," *Financial Times*, 20 May 2023; Eyk Henning, "Germany's Ruling SPD to Push for

price ceiling on natural gas). Of course, regular price regulation is a normal feature in many parts of the economy, and this has also helped to stabilise prices. Price caps should be explored further as a potential means of averting future outbreaks of profit-led inflation.

- Where higher prices have already produced excess profits, the consequences of the resulting inflation can be mitigated through redistributive measures. A combination of taxes on super-profitable companies (including, where appropriate, progressive, escalating or excess profit taxes) together with cost-of-living relief transfers for hard-hit consumers, can ease the redistribution arising from profit-led inflation. In some cases, that support can be designed in ways that explicitly reduce recorded inflation rates (the electricity bill support package in the recent Commonwealth budget, designed to reduce prices at the wholesale level, is one example). Advocates of continued monetary tightening complain that these measures will fuel further inflation by partly relieving the impact of higher interest rates on the purchasing power of average households;[92] this argument is not relevant, however, once we reject the prior assumption that inflation was caused in the first place by excess domestic purchasing power.
- Competition policy reforms, in some industries, could reduce the extent to which corporate concentration facilitates profit-led inflation. Sectors where this approach would seem especially relevant in Australia include airlines, supermarkets, and banking. Competition reforms could include restrictions or bans on particularly offensive or manipulative practices,[93] as well as structural measures to prevent mergers or break-up overly concentrated firms. The work of the ACTU's Price-Gouging Inquiry, headed by Prof Allan Fels, will inform further policy innovation aimed at preventing exploitive pricing practices and thus preventing future profit-led inflation.[94]

Stricter Rent Caps, Bild Says," *Bloomberg News*, 27 August 2023; Jorge Uxo, "Inflation and Counter-Inflationary Policy Measures: The Case of Spain" (Dusseldorf: Macroeconomic Policy Institute of Hans-Böckler-Foundation, December 2022).

[92] See Ronald Mizen, "Energy bill relief plan will fan inflation: economists," *Australian Financial Review*, 12 December 2022. It seems especially bizarre that a measure that directly reduces prices of a major component of the CPI bundle should be criticized for "fanning inflation." This confirms that in this excess demand narrative, nothing other than financial pain experienced by domestic consumers can solve inflation; any action taken to support those households makes the problem worse.

[93] A timely example is Qantas' practice of selling tickets on flights it had already cancelled; see Elias Visontay, "Qantas cancellations: ACCC taking airline to court alleging it sold tickets for planes that would never fly," *The Guardian*, 31 August 2023.

[94] See Australian Council of Trade Unions, "Inquiry into price gouging and unfair pricing practices," August 2023, https://pricegouginginquiry.actu.org.au/.

- Further support for wage growth in Australia will be required to ensure the eventual recovery of real wages after the initial outbreak of post-pandemic inflation, and to then allow real wages to begin to rise further over time. On average, real wages in Australia have declined 6% since mid-2021. To repair that damage will require nominal wages to grow significantly faster than inflation for an extended period of time. Even after that recovery is attained, nominal wages should *normally* grow faster than inflation by an increment reflecting ongoing productivity growth.[95] The RBA seems intent on preventing this real wage recovery, claiming that wage growth any faster than present would lock in inflationary expectations and delay disinflation. The implication of this approach is that the recent cut in real wages should be made permanent; this is unfair and unnecessary.
- The way to achieve real wage recovery coincident with a deceleration in inflation is to reverse the profit-led price pressures that sparked this inflationary episode in the first place. As noted above, policy-makers around the world – from ECB head Christine Lagarde, to U.S. President Joe Biden – have acknowledged that profit margins must narrow in coming years, to allow both the necessary recovery in real wages coincident with a further reduction in inflation. Many countries (including Australia) have already seen the benefits of recent moderation in inflation associated with reductions in corporate profits. However, profits remain unusually high by historical standards, and need to fall further. Orthodox economists assume that any increases in labour costs (necessary to repair real wages) will be fully and automatically passed on to consumers, thus entrenching or even accelerating inflation. This view thus accepts both current historically high profits, and the painful recent fall in real wages, as natural and permanent outcomes. Needless to say, Australian workers will not settle for a permanent 6% reduction in their living standards. Their struggle to repair that damage, supported by positive reforms in labour policy from government (including recent increases in minimum and Award wages, and important reforms to collective bargaining), will continue. If profit margins are restrained at the same time, inflation can continue to moderate even as real wages are repaired. In this regard, measures aimed at restraining profits, and curtailing the ability of large firms to increase prices further, will be an important element of future anti-inflation strategy. These can include all of the measures noted above, including price regulations, excess profit taxes and redistribution, and competition policy reforms. Even public attention and

[95] For more detail on the recent history of wage stagnation in Australia, and the disconnection between productivity growth and real wage progress, see Andrew Stewart, Jim Stanford and Tess Hardy, *The Wages Crisis: Revisited* (Canberra: Centre for Future Work, May 2022), https://futurework.org.au/report/the-wages-crisis-revisited/.

moral suasion, with government and civic leaders forcefully challenging large companies to restrain prices, can be helpful, as has been shown in some European countries.[96] Once again, the ACTU's Price-Gouging Inquiry, by reinforcing public focus on corporations and the role they have played in leading recent inflation, is making an important and positive contribution.

- A final important element in achieving the virtuous combination of restored real wages, steady progress in living standards, and moderate inflation will be efforts to pro-actively regulate labour markets and wage growth on the basis of fair and sustainable benchmarks. Current monetary policy assumes that unemployment must be deliberately lifted in order to suppress wage growth and control inflation.[97] This approach is wrong on multiple counts: it is likely to misdiagnose the original sources of inflation (especially in the wake of the unique supply-side disruptions that clearly sparked the post-pandemic inflationary outbreak), it punishes innocent stakeholders who did not cause that inflation, and it risks locking in unduly high unemployment in the long-term through a process of self-fulfilling hysteresis.[98] A more sensible, fair, and productive approach is to implement sector-wide or economy-wide processes to protect wages against inflation, but in ways that do not lock in further inflation – including multi-employer collective bargaining systems, strengthening and broadening the coverage of the Awards system, and developing cost-of-living protection formulae that compensate workers for inflation without propagating it. These forms of explicit wage regulation can play a vital role in achieving sustained low unemployment and steady, sustainable real wage gains alongside stable inflation. This is better than assuming that a million or more Australians must be kept permanently unemployed in order to suppress wages for those who are allowed to work.

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[96] An example is France, where the national government negotiated with both food manufacturers and food retailers to make clear commitments to reducing food inflation; these efforts are now forecast to help in reducing food price inflation to 4% by end-2023. See Reuters, "French inflation to decline as pressure from food eases, statistics agency says," 7 September 2023, https://www.reuters.com/world/europe/french-inflation-decline-pressure-food-eases-insee-2023-09-07/.

[97] This approach was recently explicitly affirmed by the new RBA Governor, Michele Bullock; see Swati Pandey, "Australia's Jobless Rate Needs to Rise Toward 4.5%, Bullock Says," *Bloomberg News*, 19 June 2023, https://www.bnnbloomberg.ca/australia-s-jobless-rate-needs-to-rise-toward-4-5-bullock-says-1.1935287.

[98] Long-standing theoretical and empirical weaknesses with this theory of the 'Non-Accelerating Inflation Rate of Unemployment' (NAIRU) are compiled in the Australian context by David Richardson, *Tolerate Unemployment, but Blame the Unemployed: The Contradictions of NAIRU Policy-Making in Australia* (Canberra: Centre for Future Work, November 2019), https://futurework.org.au/wp-content/uploads/sites/2/2022/11/Tolerate_Unemployment_but_Blame_the_Unemployed-WEB.pdf.

Conclusion

The claim that “all Australians are hurt by inflation” has been disproven by exhaustive data on the accumulation of record profits by Australian business, coincident with accelerating prices and falling real incomes for workers. This maldistribution alone should force a rethink of conventional anti-inflation policies. And it sheds light on why business interests are so determined to reject any alternative to standard, wage-suppressing responses to the current inflation problem.

There has been an ideologically-motivated effort to deny the relevance of record-high profits in Australia for understanding recent macroeconomic outcomes (including inflation and income distribution). Business groups, echoed by some orthodox policy-makers at the RBA and Treasury, would prefer to keep the spotlight on wages and labour costs as the main culprits for inflation. Despite a deep and (so far) sustained reduction in real wages, they continue to argue that wage growth must continue to be suppressed (via an engineered increase in unemployment) as the central strategy for reducing future inflation.

Our research suggests that focus is misplaced, and will be both ineffective and unfair. A more open-minded understanding of the causes of post-pandemic inflation is required, in order to inform more balanced and effective strategies for controlling it. In particular, the role of undue increases in prices, far above costs of production, implemented pro-actively by companies taking advantage of the unique and painful disruptions caused by the COVID pandemic, must be acknowledged. This casts doubt on the necessity and effectiveness of conventional monetary tightening as the sole response to inflation. It also invites policy-makers to consider other responses, aimed more logically and effectively at the true underlying sources of post-pandemic inflation.