

Inflation in Canada – the role of labour costs, profits and import prices

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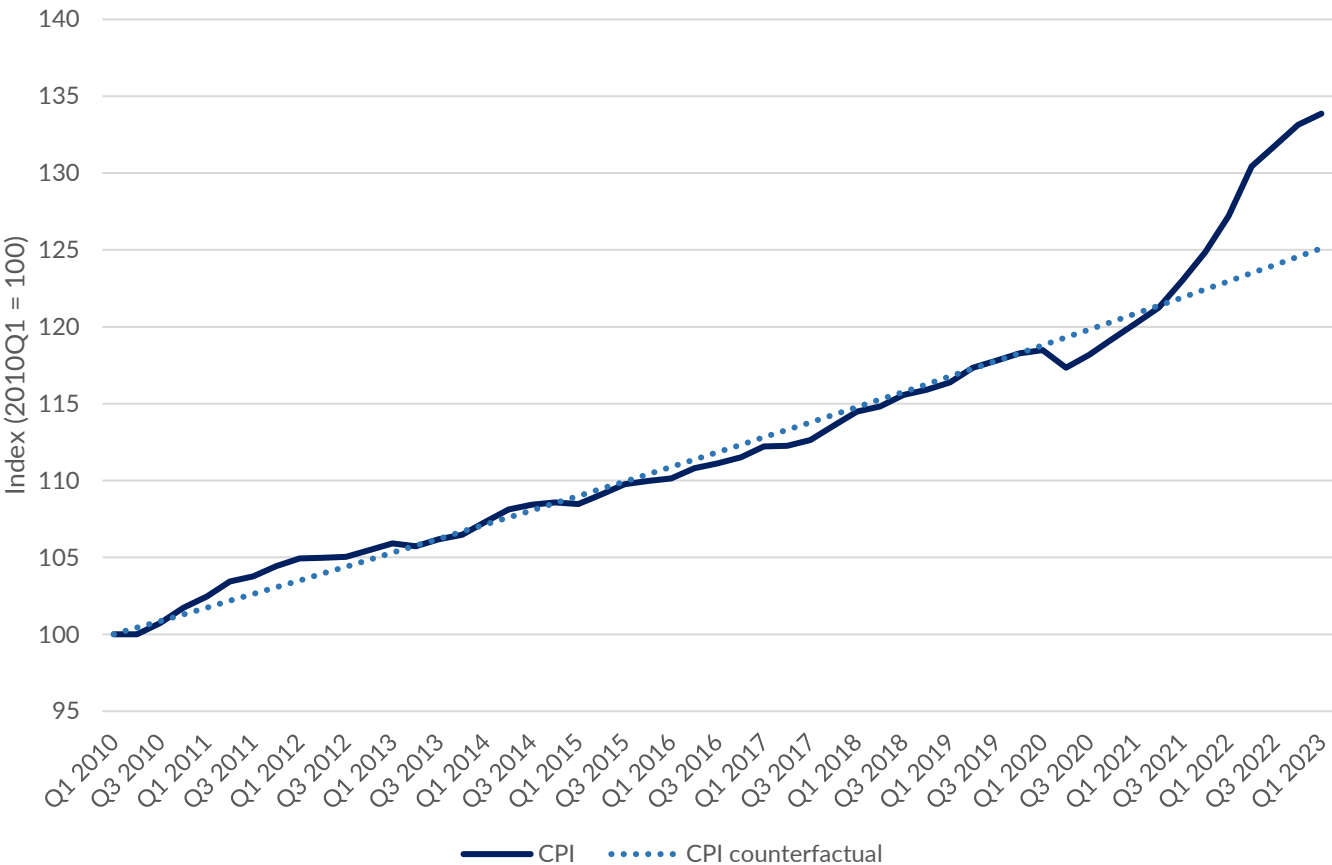


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Consumer price inflation has been higher than in recent decades



- If consumer prices had continued to rise at the rate before the pandemic, they would be 7% lower than they are today.

Sources: Tables 18-10-0006-01



What has been the role of labour costs, profits and import prices in accounting for the rise?

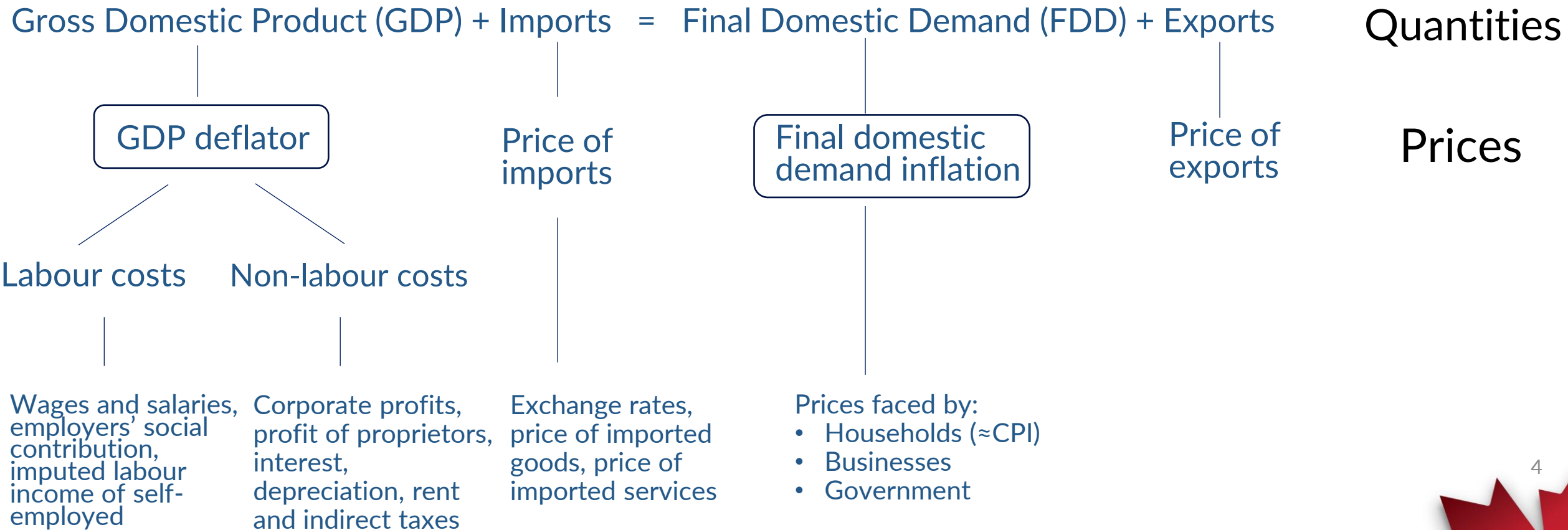
- [Profits, Not Wages, Have Driven Canadian Inflation - Centre for Future Work](#)
- [Rising wages could thwart Bank of Canada's plans for low inflation | CBC News](#)
- [Inflation : it's always easier to blame the workers \(irpp.org\)](#)
- [Your paycheque has finally closed the gap with inflation | The Star](#)
- [Canada's wages grow faster than inflation for first time in 2 years | Financial Post](#)
- [Record-high corporate profits behind inflation | Canadian Union of Public Employees \(cupe.ca\)](#)
- [Where are your inflation dollars going? | Canadian Centre for Policy Alternatives](#)
- [As COVID-19 wanes and recession lurks, corporate profits boom - The Globe and Mail](#)
- [Canada's elite are making workers pick up the bill for inflation ★ The Breach \(breachmedia.ca\)](#)
- [Are rising profits fueling inflation? - The Hub](#)
- [The Rise \(and Fall?\) of Inflation in Canada
<https://www.utpjournals.press/doi/full/10.3138/cpp.2022-068>](#)



To shed light on this question, we decompose the GDP deflator and the price of final domestic demand

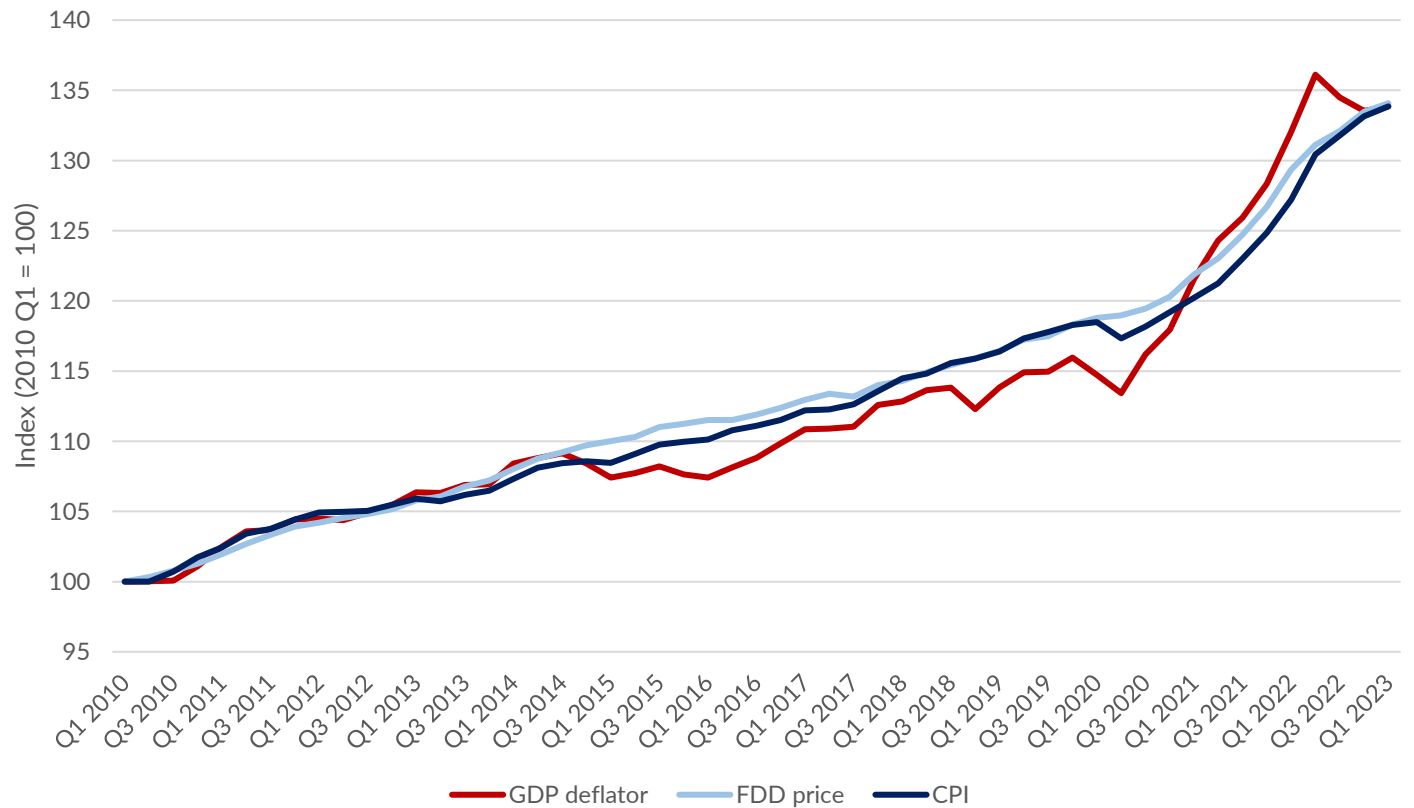
Supply

Demand



These other measures also capture the inflationary pressures occurring broadly across the economy

- FDD inflation is broader in scope than CPI, but they move together over the time
- The GDP deflator, the price of goods and services produced domestically, does not track CPI as closely, as it is affected by export prices

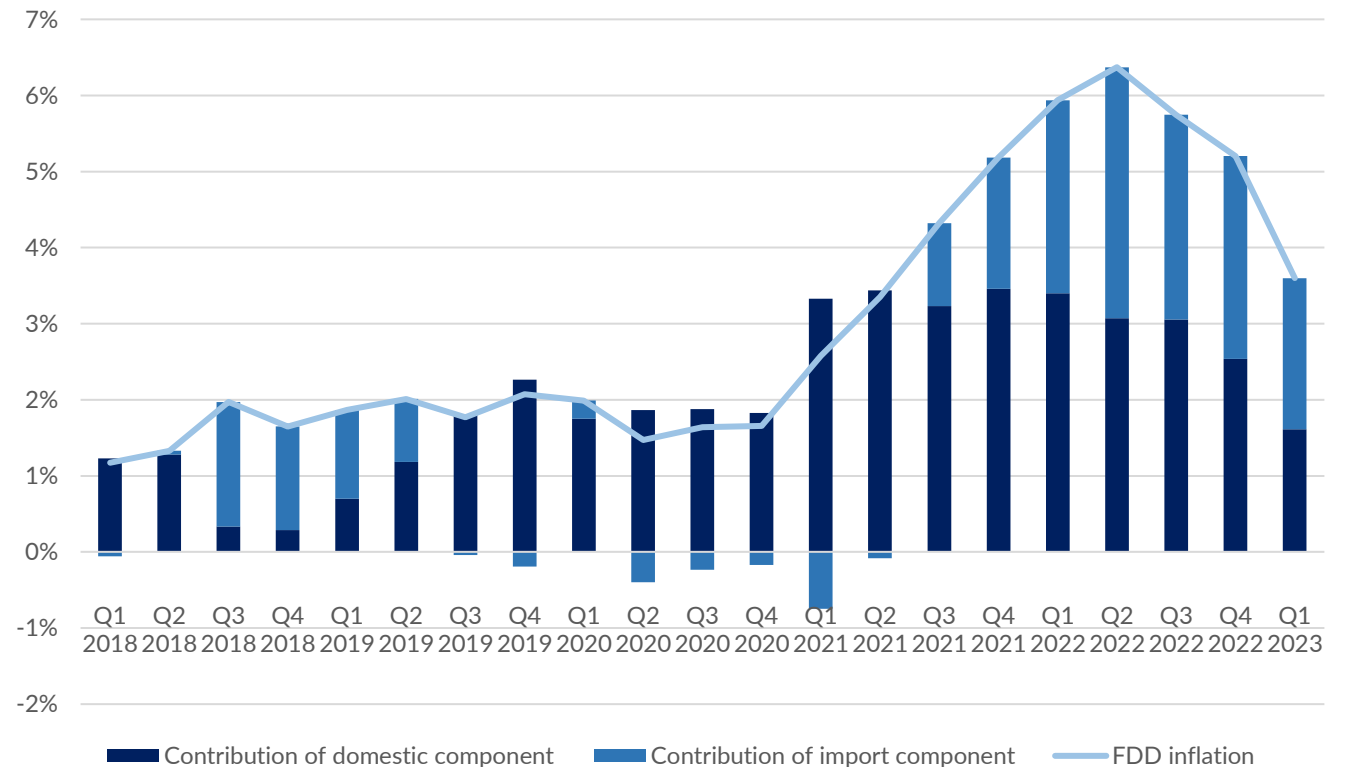


Sources: Tables 18-10-0006-01 and 36-10-0104-01

Import prices playing a significant role in FDD inflation since 2021 Q3

- Since 2021 Q3, import prices accounted 25% to 55% of quarterly year-over-year FDD inflation.
- Contribution of domestic component has been declining since 2021 Q4 and was 1.6pp in 2023 Q1
- Assumptions:
 - Rise in import prices fully passed through to households, businesses and government
 - Price of imports in FDD and price of imports in exports are the same
- Implications:
 - Domestic behavior and policies have limited impact on a factor responsible for much of the elevated inflation

Decomposition of final domestic demand inflation



Contributing factors to higher import prices

Import price index and exchange rate



Source: Author's calculation based on data from Statistics Canada table 36-10-0104-01 and the Federal Reserve Bank of St. Louis (<https://fred.stlouisfed.org/series/CCUSMA02CAQ618N>).

Contribution to inflation in imported goods by commodity

Imported goods by commodity group

Second quarter of 2021 to fourth quarter of 2022

Imported goods by commodity group	Log price growth	Contribution
	percent	
Total imported goods (excluding special trade transactions)	17.8	100.0
Consumer goods	17.8	20.8
Energy products	59.7	19.0
Industrial machinery, equipment and parts	20.0	12.8
Basic and industrial chemical, plastic and rubber products	21.7	10.1
Motor vehicles and parts	11.8	9.9
Forestry products and building and packaging materials	25.2	6.6
Metal and non-metallic mineral products	13.9	6.4
Farm, fishing and intermediate food products	28.2	5.7
Electronic and electrical equipment and parts	9.0	5.6
Aircraft and other transportation equipment and parts	13.2	2.4
Metal ores and non-metallic minerals	4.8	0.6

Source: Author's calculation based on Statistics Canada tables [12-10-0122-01](#) and [12-10-0125-01](#).

Increased demand for imports

- Real imports increased by 10.8% between 2021Q2 and 2022Q2

Canadian dollar depreciated by 10.6% after 2021 Q2

The increase in the price of consumer goods and energy products contributed disproportionately to the increase in import prices

Unit labour costs and unit non-labour costs

Unit labour costs (ULC) and unit non-labour costs (UKC) are related to the GDP deflator through an identity, so it is not surprising that the series are correlated.

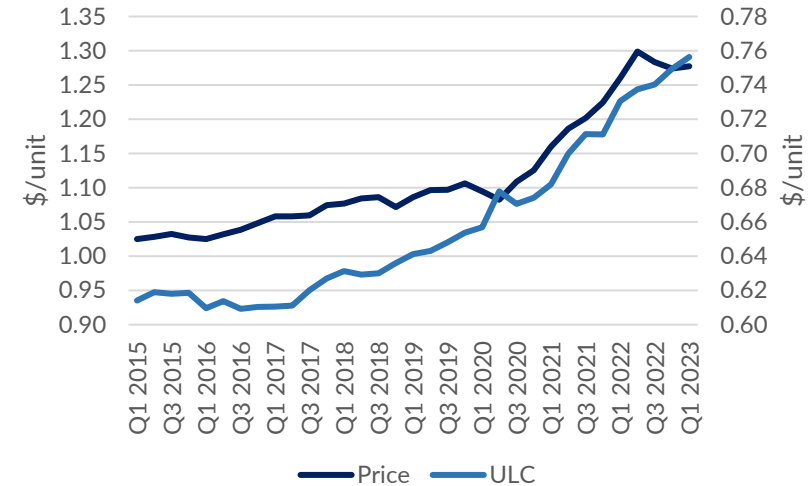
$$pY = wL + rK$$

$$\frac{p_t - p_{t-1}}{p_{t-1}} = \frac{\frac{w_t L_t}{Y_t} - \frac{w_{t-1} L_{t-1}}{Y_{t-1}}}{p_{t-1}} + \frac{\frac{r_t K_t}{Y_t} - \frac{r_{t-1} K_{t-1}}{Y_{t-1}}}{p_{t-1}}$$

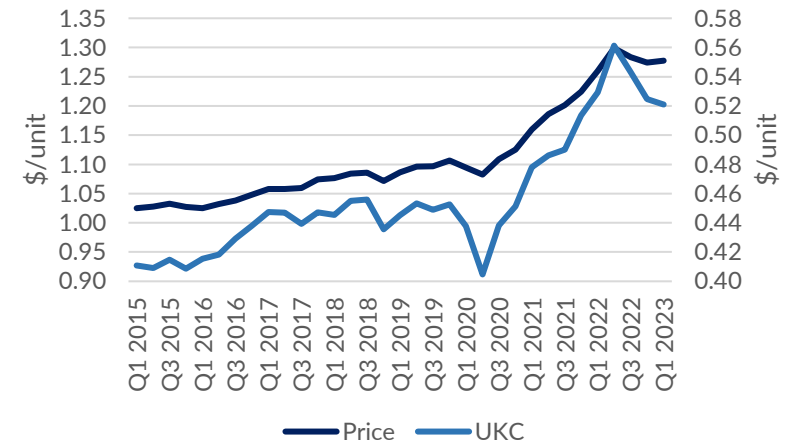
$$\ln(\text{inflation}) = \frac{\Delta ULC}{p_{t-1}} + \frac{\Delta UKC}{p_{t-1}}$$

Sources: Tables 36-10-0207-01 and 36-10-0662-01

Correlation between price and unit labour costs

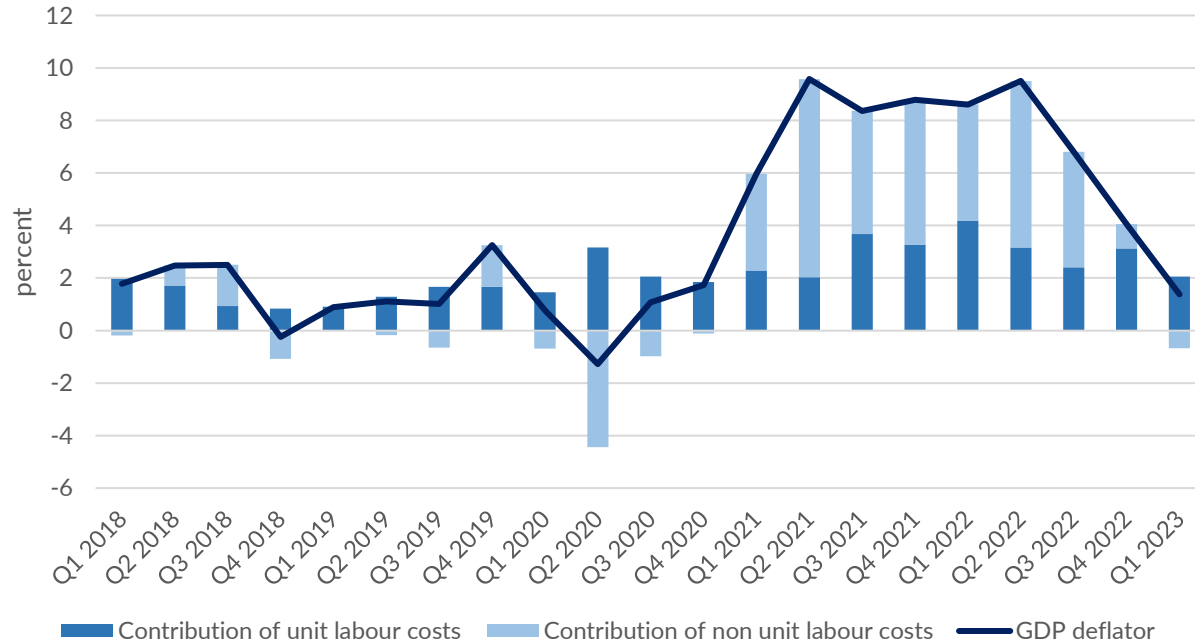


Correlation between price and unit non-labour costs



Contributions of labour and non-labour costs vary from year to year, but generally balanced over longer periods

Contribution of ULC and UKC to year-over-year growth in quarterly GDP deflator



Contribution of ULC and UKC to growth in GDP deflator over various time periods

	Growth in GDP deflator	Contribution of unit labour costs	Contribution of unit non-labour costs
	percent	percentage points	
2020	0.6	1.9	-1.3
2021	8.2	2.7	5.5
2022	7.3	3.3	4.1
Cumulative growth 2019 to 2022	16.8	8.1	8.7
Cumulative growth 2010 to 2019	13.3	7.5	5.8

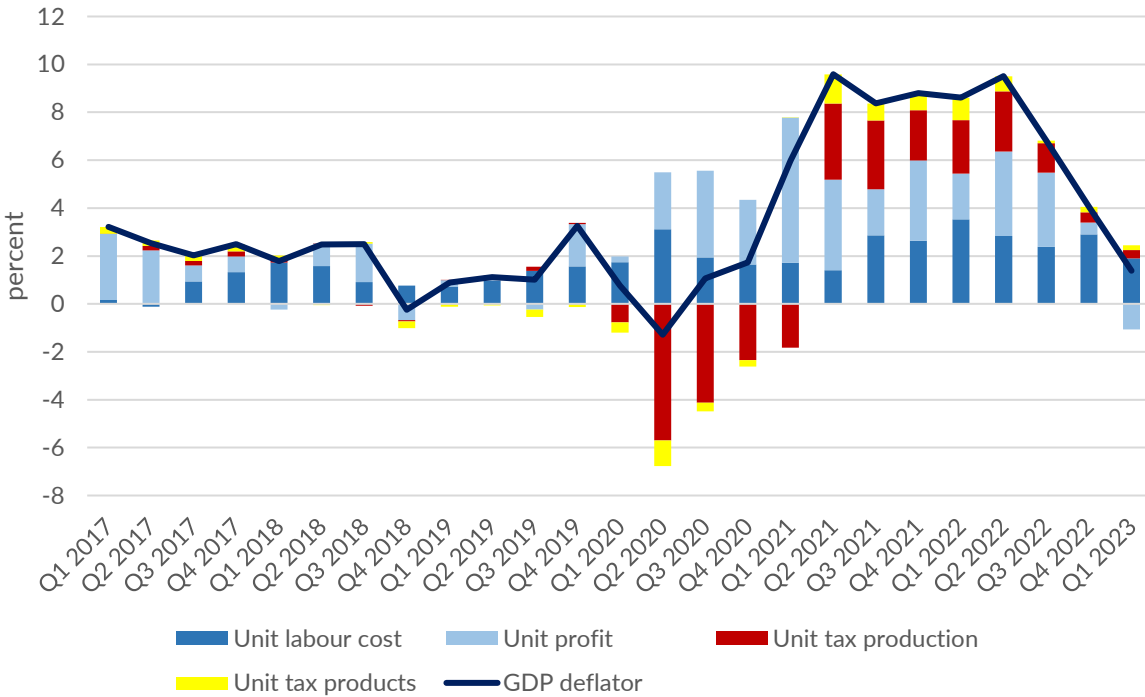
Sources: Tables 36-10-0662-01 and 36-10-0207-01

- Contributions from ULC were larger in 2020 and from 2022 Q4 onwards, while contributions from UKC were larger in 2021 and 2022
- Export prices, particularly energy prices, likely played a role in higher contributions in UKC. IMF (2023, June) suggest indirect taxes were important as well. Higher borrowing costs may also have played a role.
- “...companies will charge as high a price as people are willing to pay. Only then will they adjust wages.” Lavoie (2023, June 13)

Unit taxes are important for explaining the year-over-year movements, but not the cumulative change

Contributions to year-over-year growth in quarterly GDP deflator

Contribution to cumulative change in GDP deflator



	Growth in GDP deflator	Contribution of unit labour cost	Contribution of unit profits	Contribution of unit taxes on production	Contribution of unit taxes on products
Cumulative growth 2010Q1 to 2019Q4	16.0	9.1	5.1	0.7	1.1
	100	57.5	32	4.2	6.7
Cumulative growth 2019Q4 to 2023Q1	15.4	8.1	6.1	0.2	1.1
	100	52.4	39.3	1.2	7.1

- Changes in unit taxes accounted for a substantial contribution of the change in unit non-labour costs.
- Since the pandemic, unit profits have contributed more than in pre-pandemic period and unit labour costs less.

Markups have increased during the recovery from the pandemic

Markups – price over marginal cost (incremental cost of producing an extra unit of output)

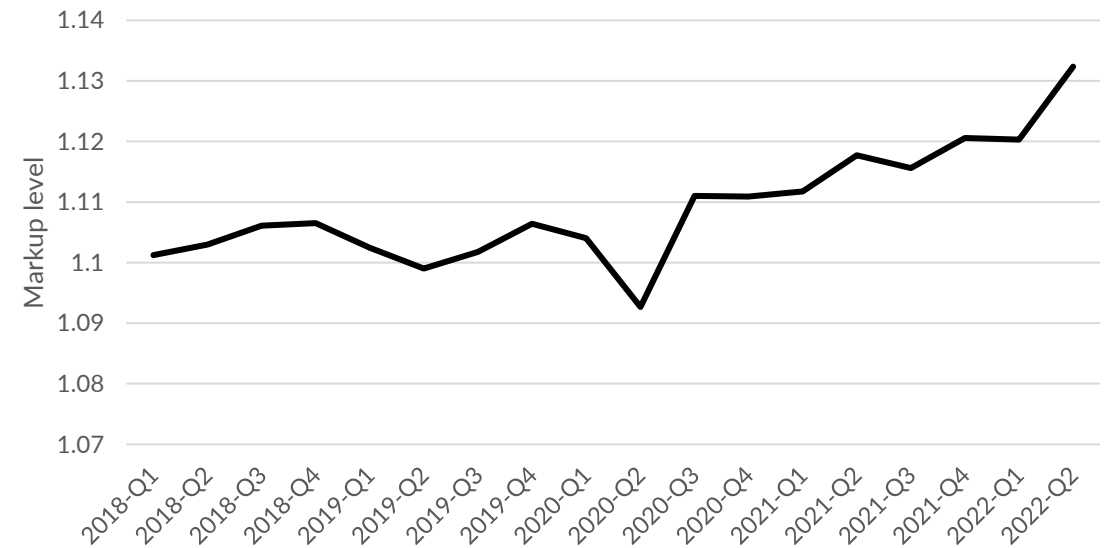
- Estimates used to examine changes in market power over longer time periods
- Economic theory does not have clear predictions on how markups respond to shocks in the short run.

$$P_t = Markup_t * MC_t$$

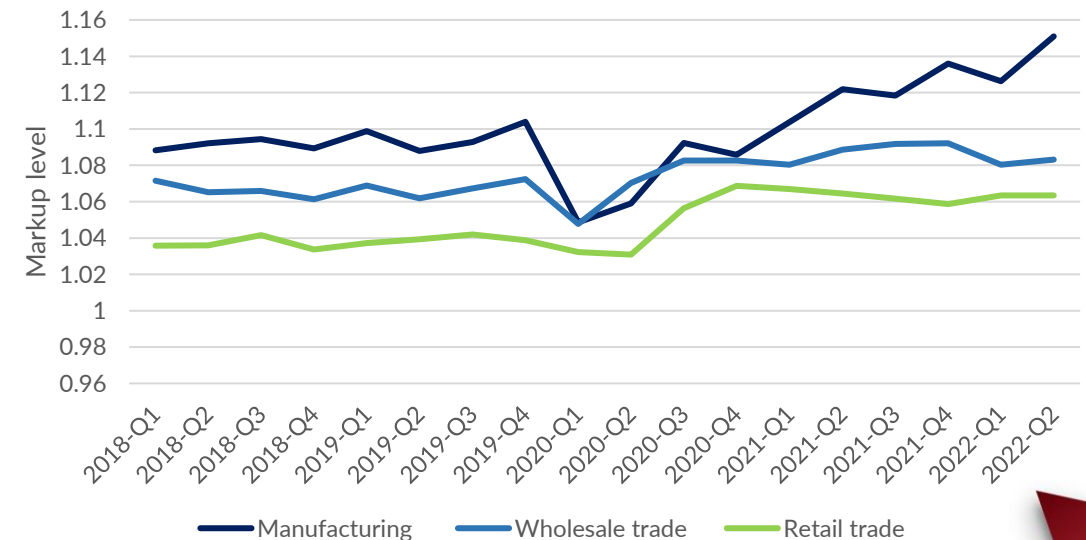
An examination of markups can shed light on whether firms' pricing decisions are amplifying inflation

- Markups estimated for non-financial corporations from the *Quarterly Survey of Financial Statements*

Markups for the non-financial corporate sector excluding mining, oil and gas



Industry-level markups



Markups do not appear to be a main driver of inflation

Markup versus price growth

	Before the pandemic (2018 to 2019)	2022 (second quarter)	Growth	Markup growth over price growth, i.e., $\Delta \ln \mu_t / \Delta \ln P_t$
				percent
Markups	1.1	1.1	2.6	...
CPI excluding energy	111.2	122.9	10.5	24.7
CPI including energy	110.4	124.2	12.5	20.8
GDP price index	108.8	130.0	19.4	13.4

... not applicable

Notes: CPI = Consumer Price Index; GDP = gross domestic product.

Source: Authors' calculation using the Quarterly Survey of Financial Statements dataset.

- Markups have increased, but it cannot be determined whether it has increased more than what “normal” profit maximizing behavior would suggest.
- Firms do not have pricing power over all goods (e.g., energy)
- The underlying price concept used in the estimation of the markup is different from CPI and GDP.



Summary

- Import prices have been an important contributor to inflation, accounting for up to 25-55% of quarterly y/y FDD inflation since 2021 Q3.
 - It remained an important contributor in 2023Q1.
 - Supply chain issues, import demand, and exchange rates linked to higher import prices.
- Overall, unit labour costs have not contributed disproportionately to increases in the GDP deflator.
 - Unit labour costs contributed more in 2020, and in 2022Q4 and 2023Q1. The contributions in the last quarters may be part of a catchup.
 - Recent work from the IMF suggest unit taxes contributed to the fluctuations in unit non-labour costs in 2020-2022.
- Markups have risen since the onset of the pandemic
 - However, the increase is small relative to the increase in inflation
 - Not clear whether the increase in the markup is part of normal profit-maximizing behavior and if it will return to pre-pandemic levels

