Questioning profit inflation as an explanation of the post-Pandemic inflation

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ARE PROFIT MARGINS THE CULPRIT?

- Several left-wing and heterodox economists argued early on that, besides the initial supply chain issues, increases in profit margins by businesses are a key culprit of rising inflation (but not all, see Vernengo and Pérez Caldentey 2023).
- Besides politicians, the possibility of profit inflation has also been discussed or studied by mainstream authors, even from official sources such: IMF, ECB, Fed KC, Bank of Canada, Statistics Canada
- My own interest follows from being on the advisory committee and reading the first draft of a thesis chapter written by Guillermo Matamos, a doctoral student of Mario Seccareccia, in November 2022 (defense in September 2023).

The main claim …

- [ ]*Publicly reported supply-chain bottlenecks and cost shocks can also serve to create legitimacy for price hikes and create acceptance on the part of consumers to pay higher prices, thus rendering demand less elastic…. Firms facing input shortages due to a supply-side bottleneck can be more aggressive about raising prices and thus may not only protect profit margins but expand them.*
- Weber and Wasner, ROKE 2023

Profit inflation in past PK theory

- *Firms will increase prices in response to cost increases only if they reasonably expect that their competitors will follow them. Publicity attached to cost increases this probability. Large cost increases attract more publicity than small cost changes…. The mark-up of price on cost depends upon its public and political acceptability; less opprobrium attaches to price increases for which there is an obvious exogenous explanation.* ***Consequently, large publicised cost increases provide an opportunity for firms to increase their mark-ups, or to restore the effects of previous erosion.***
- P.J.W.N. Bird, CJE 1983

Outline

- The omission of overhead (labour) costs
- The omission of (imported) intermediate goods
- Other features that complexify the issue
- Two concluding remarks

THE OMISSION OF OVERHEAD COSTS

The profit view of inflation (in its simple version), based on a macroeconomic (vertically-integrated) quasi-identity

- $p = (1 + m)w/\lambda = (1 + m)ULC$ (1)
- where *w* is the nominal wage rate, λ is overall labour productivity and *m* is the percentage markup over unit labour costs (*ULC*). In growth terms, and with the carret signifying the growth rate of a variable, we can determine that the rate of price inflation is equal to the sum of three terms, denoting in order to simplify the computations that
- $\kappa = (1 + m)$
- The rate of price inflation is thus equal to :
- $\hat{p} = \hat{\kappa} + \hat{w} - \hat{\lambda}$ (2)
- And the profit share is calculated as: $m = (p - ULC)/p$
- Or some markup proxy, $M = (1+m) = p/ULC$

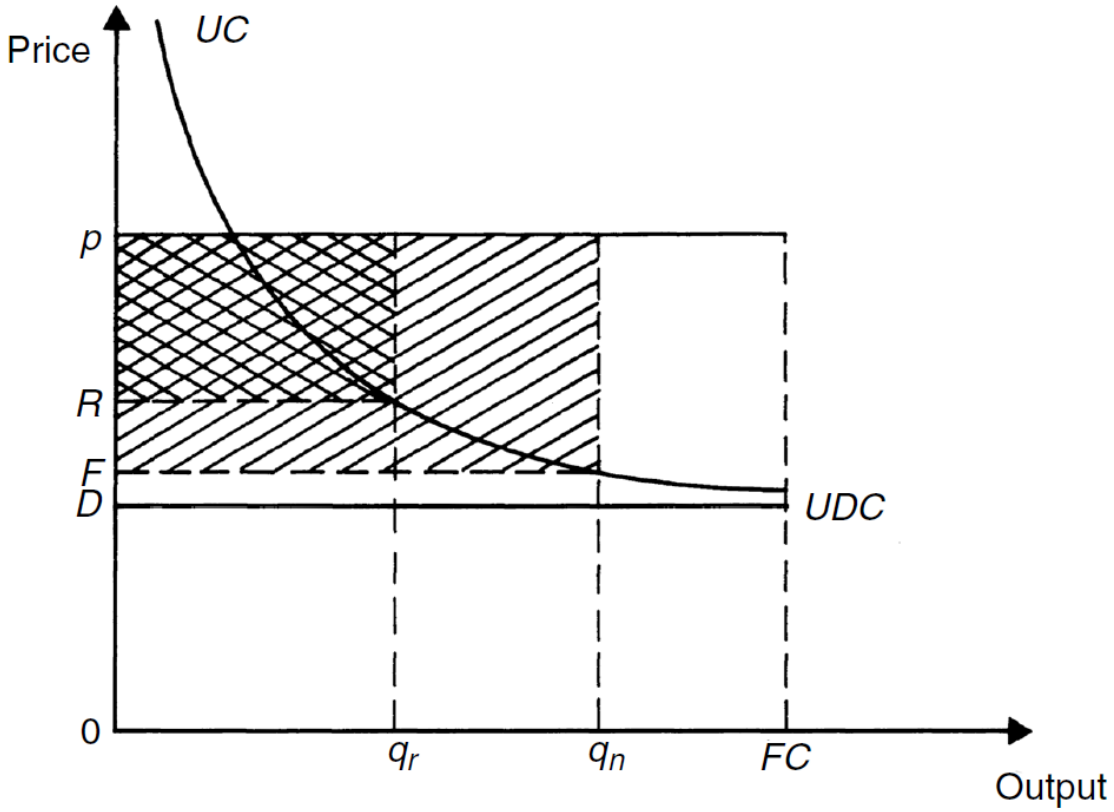
Some confusions…

- Overall profits
- Profit margin
- Profit share
- Price to unit labour cost
- Markup
- **Percentage markup or costing margin**
- Unit labour costs
- Unit direct labour costs
- Unit direct costs

Two problems with *p/ULC* or *the profit share* as variables to measure profit inflation

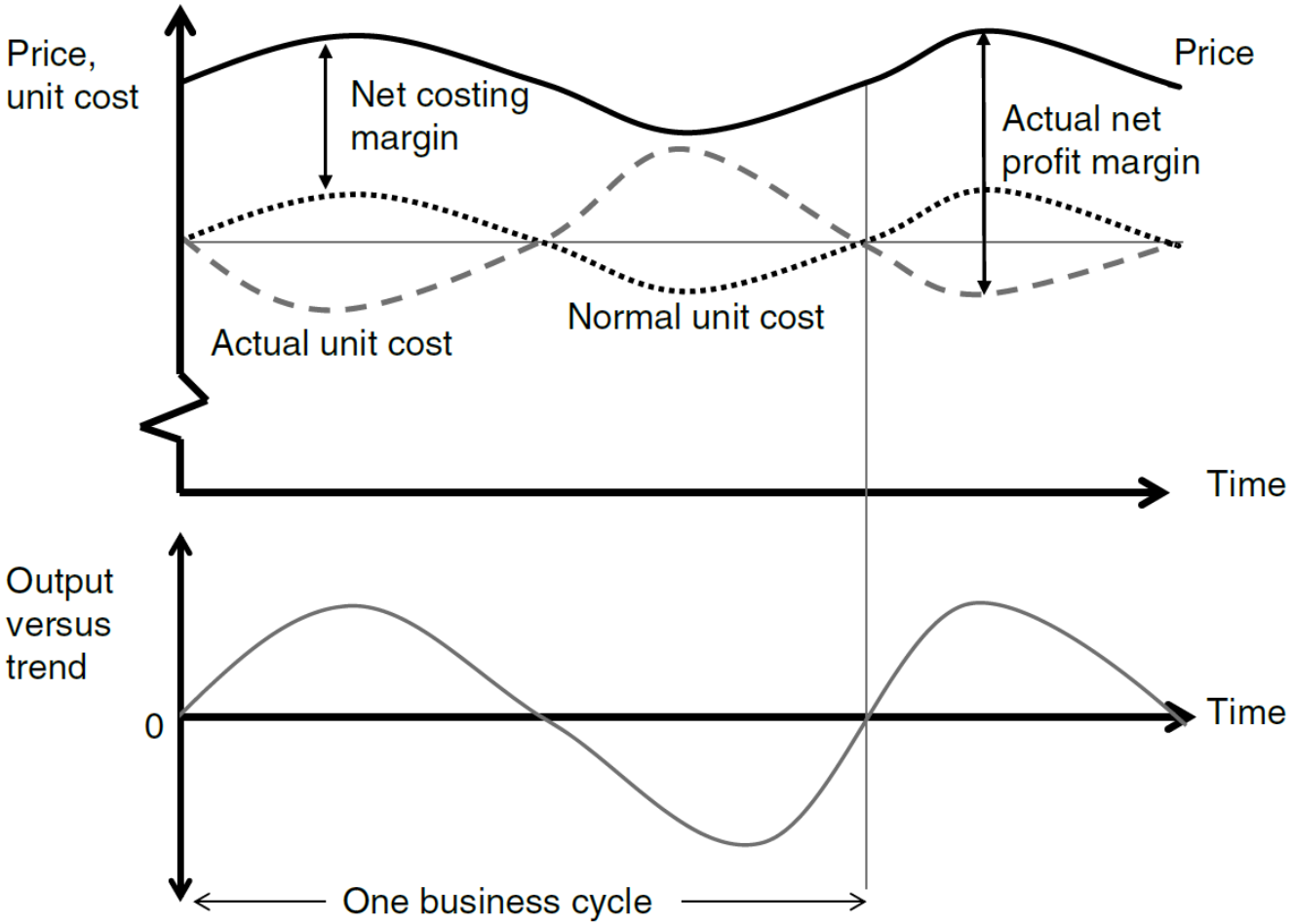
- **The first problem** is that, because of the presence of **overhead labour costs**, the *ULC* varies endogenously with the level of output and the rate of capacity utilization.
  - All other things being equal, *ULC* falls with a rise in the rate of utilization, and hence the profit share rises while the wage share goes down, giving the illusion that the percentage markup has risen.
  - Firms do not set prices on the basis of the unit cost, they set them as a function of the unit direct cost *UDC*, or as a function of the ***normal*** unit cost *NUC*

Profits and the profit share rise with higher output, at a constant markup

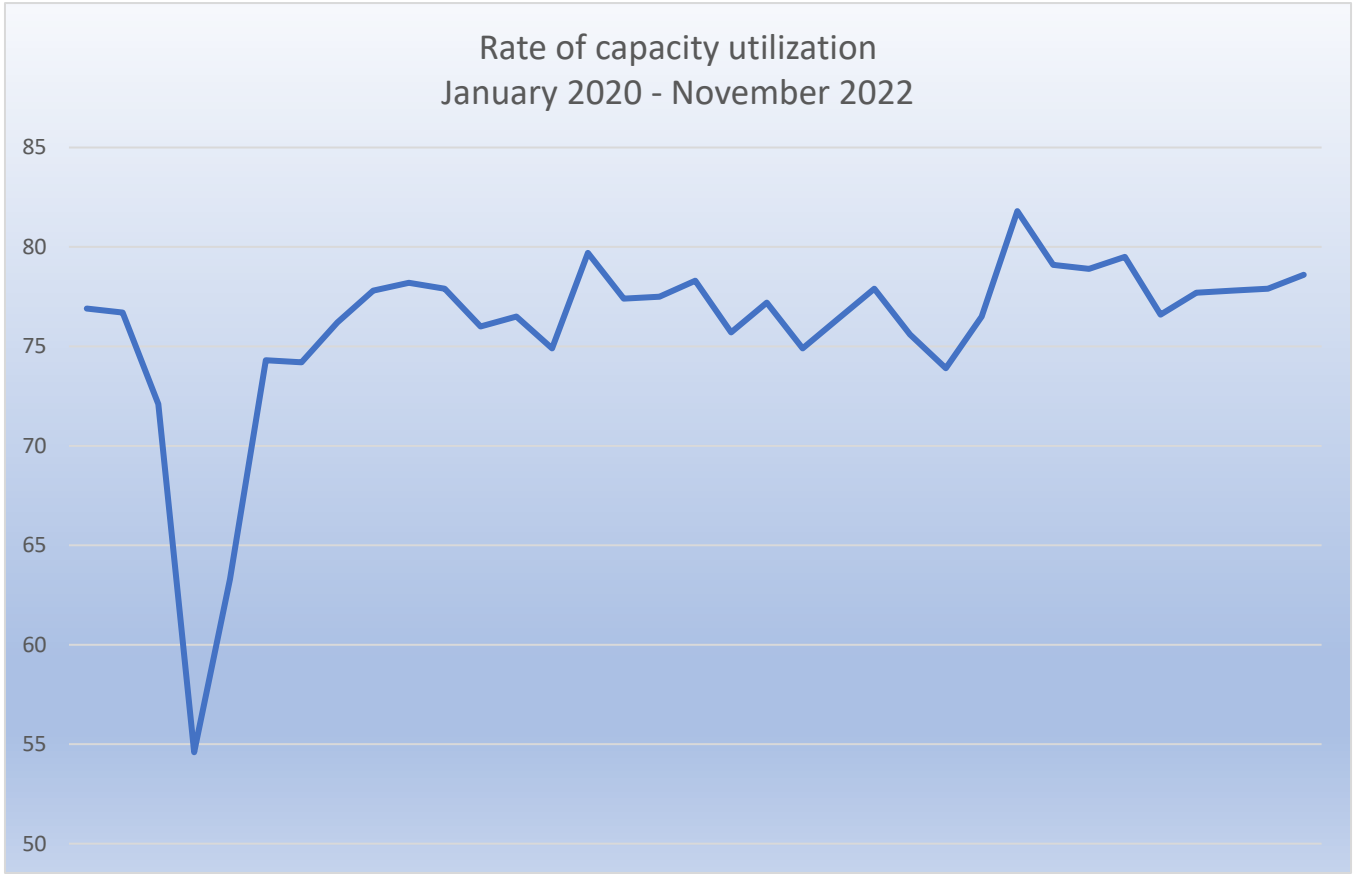


Notes: OD = normal direct unit costs ($NUDC$); DF = normal overhead unit costs; OF = normal unit costs (NUC); Fp = net costing margin ($\Theta.NUC$); Fp/OF = percentage net costing margin (Θ); Dp = gross costing margin ($\theta.NUDC$); Dp/OD = percentage gross costing margin (θ); Rp = realized net profit margin; Rp/OR = realized percentage net profit margin; Rp/Op = realized net profit share in sales.

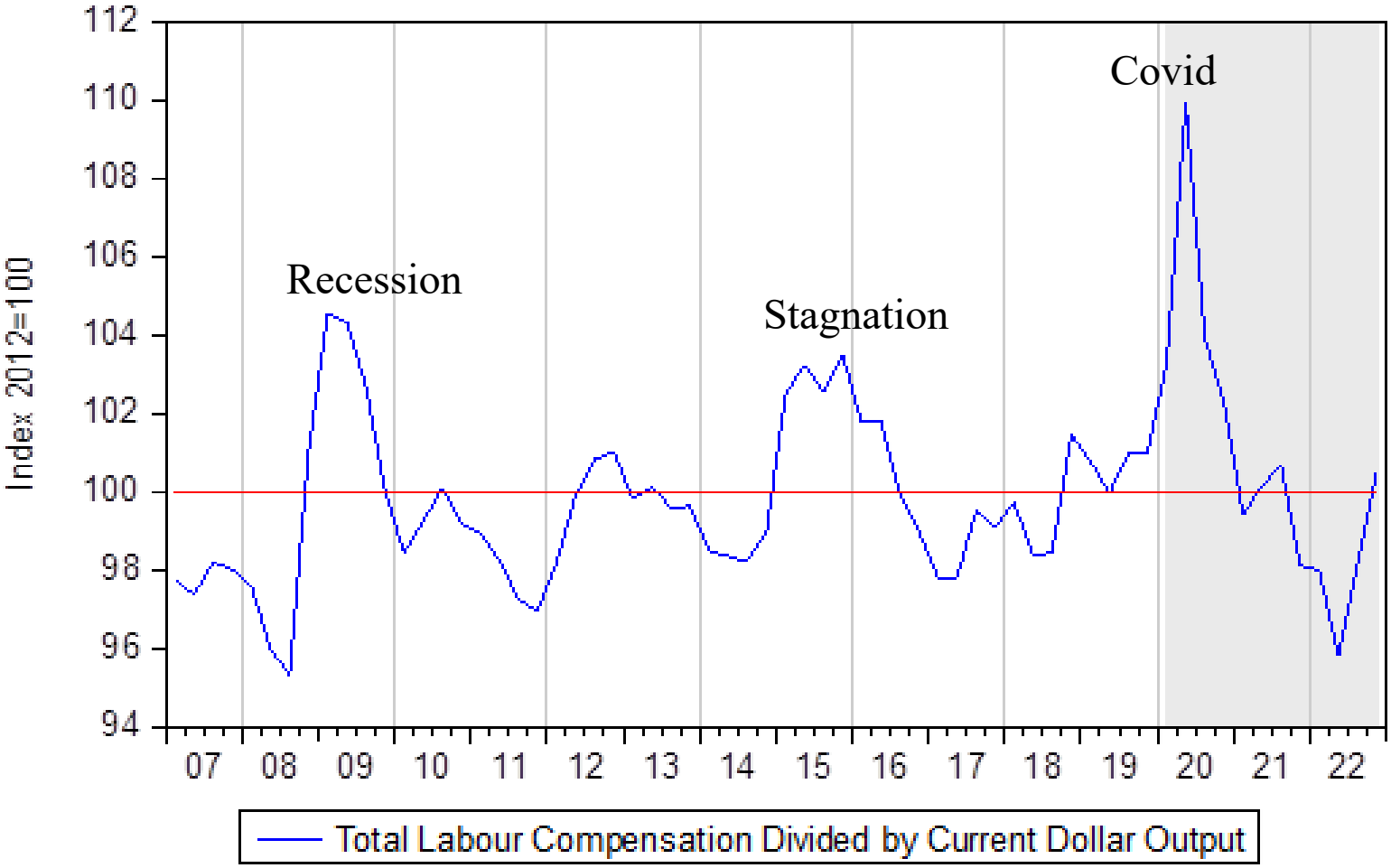
Net costing margin vs actual net profit margin (Coutts and Norman)



Canada, capacity utilization, 2020-22



Canada, labour share, 2007-2022



THE OMISSION OF (IMPORTED) RAW MATERIALS

Second problem with *p/ULC* as a measure of profit inflation

- **The second problem** is that labour costs are not the only costs faced by firms. **Firms also face material costs**, in particular the cost of intermediate goods (**imported materials in national accounts**), which enter into their direct costs *UDC*.
  - We thus have $UDC = UDLC + UMC$
  - If *UMC* rises faster than *UDLC*, an increase in the ratio $p/UDLC$ or p/ULC will also give the illusion that the markup has risen.

The PK view of inflation, with (imported) raw materials and intermediate goods

- With $j = UMC/UDLC$, that is the unit material cost relative to the unit direct labour cost, the pricing equation then becomes:
- $p = (1 + m)(UDLC + UMC) = (1 + m)(1 + j)UDLC =$
- $p = (1 + m)(1 + j)w/\lambda_d$
- Simplifying by writing again $\kappa = (1 + m)$ and adding that $J = (1 + j)$, price inflation may now be written as:
- $\hat{p} = \hat{\kappa} + \hat{J} + (\hat{w} - \hat{\lambda}_d)$
- $\hat{p} = \hat{m}(\frac{m}{1+m}) + \hat{j}(\frac{j}{1+j}) + (\hat{w} - \hat{\lambda}_d)$

What if *UMC* rises faster than *UDLC* …

- Omitting overhead labour, the profit share in value added rises with *j*:

$$ps = \frac{m(1+j)}{1+m(1+j)}$$

$$\frac{dps}{dj} = \frac{m}{D^2} > 0$$

One must note that an increase in the value of *j* (thus with $\hat{J} > 0$), **despite a constant markup**, will lead to a fall in the real wage of workers (and a fall in the wage share).

$$\frac{w}{p} = \frac{\lambda_d}{(1+m)(1+j)}$$

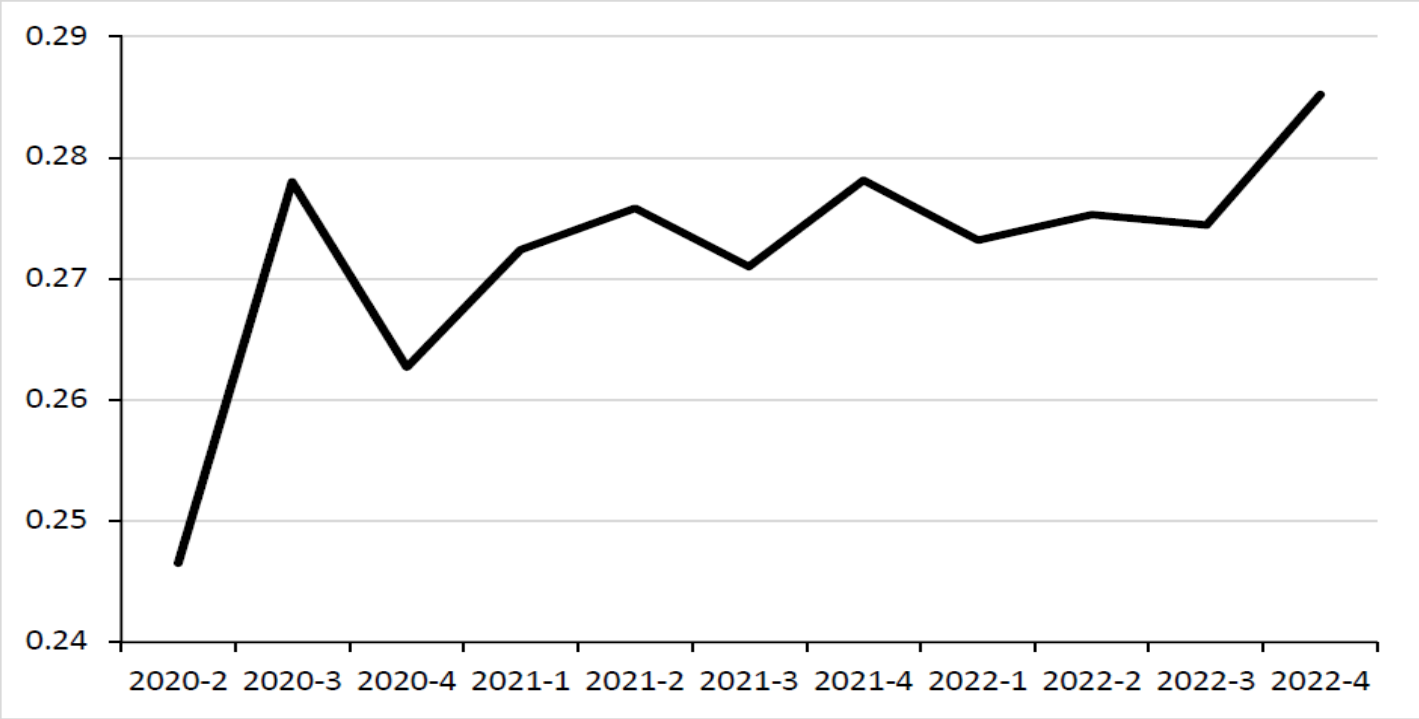
So, what if markups take into account unit direct costs and material costs?

- A number of studies have been based on **the cost of goods sold, COGS,** which only takes into account direct labour and material costs.
- So this ought to be the best measure of the evolution of the markup.
- In different ways, this is the case of Konczal and Lusiani (2022), Statistics Canada (2023), Servaas Storm (2023), and others.
- Some of these assume the existence of a Cobb-Douglas production function, rising marginal costs, counter-cyclical markups, and hence are puzzling and potentially not fully reliable (from a PK standpoint).
- For most countries, they find some increase in the markup, when they compare 2019 to 2022.

Storm (2023): why start from 2020Q2?

Figure 4

The profit markup: Private industries
(2020Q2-2022Q4)



Source: Author's estimates. Calculated using data from the National Income and Product Accounts (NIPA) of BEA.

COMPLEXITIES

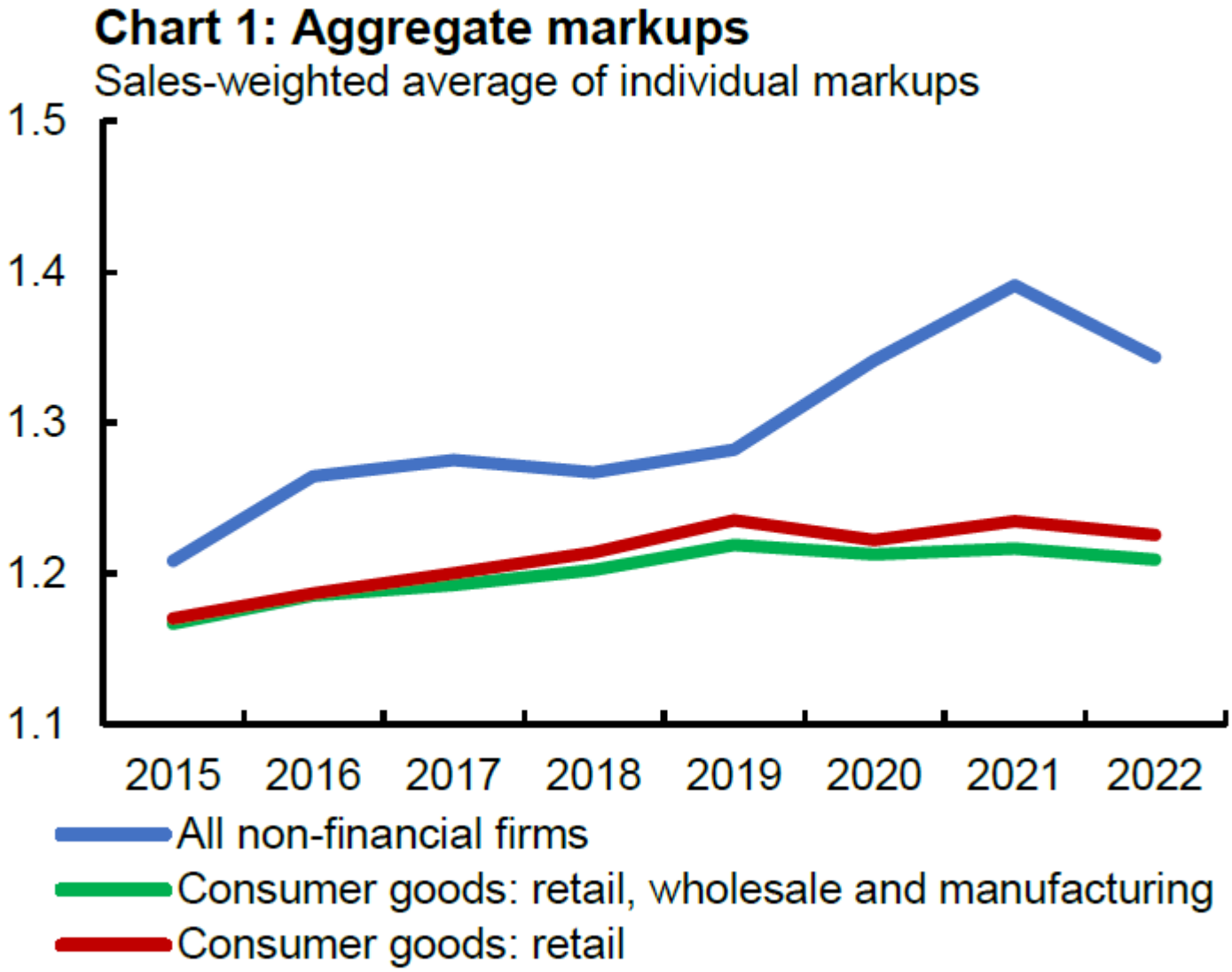
Alternative definitions of profit inflation

- Nikiforos and Grothe (2023) argue that if individual firms try to push back on workers an increase in the cost of imported materials, there would be profit inflation. They call this cost-push profit-led inflation.
- Storm (2023) makes a similar point: the increase in the price of commodity inputs needs not lead to a rise in the share of profits if firms are unable to sustain the level of their markups.
- **Profit inflation is then redefined as a situation where firms refuse to see a fall in their costing margins**

Heterogeneity of firms I: Obvious!

- When calculating the aggregate profit margins, one needs to realize that domestic firms may operate in sectors where prices are determined in world markets; these prices rose substantially, from 2021Q2 to 2022Q4
- « Some evidence has shown that profits and profit margins have risen, but much of that has been in the oil and gas extraction, mining and quarrying, petroleum and coal product manufacturing sectors » (Statistics Canada, Faryaar and Leung, 2023).
- « While one can certainly acknowledge that some industries such as the oil industry have benefitted from higher profit margins, as explained by David MacDonald (2022) for Canada » (Lavoie 2023)
- Food prices are also related in some measure to world prices

Bank of Canada (2023) calculations



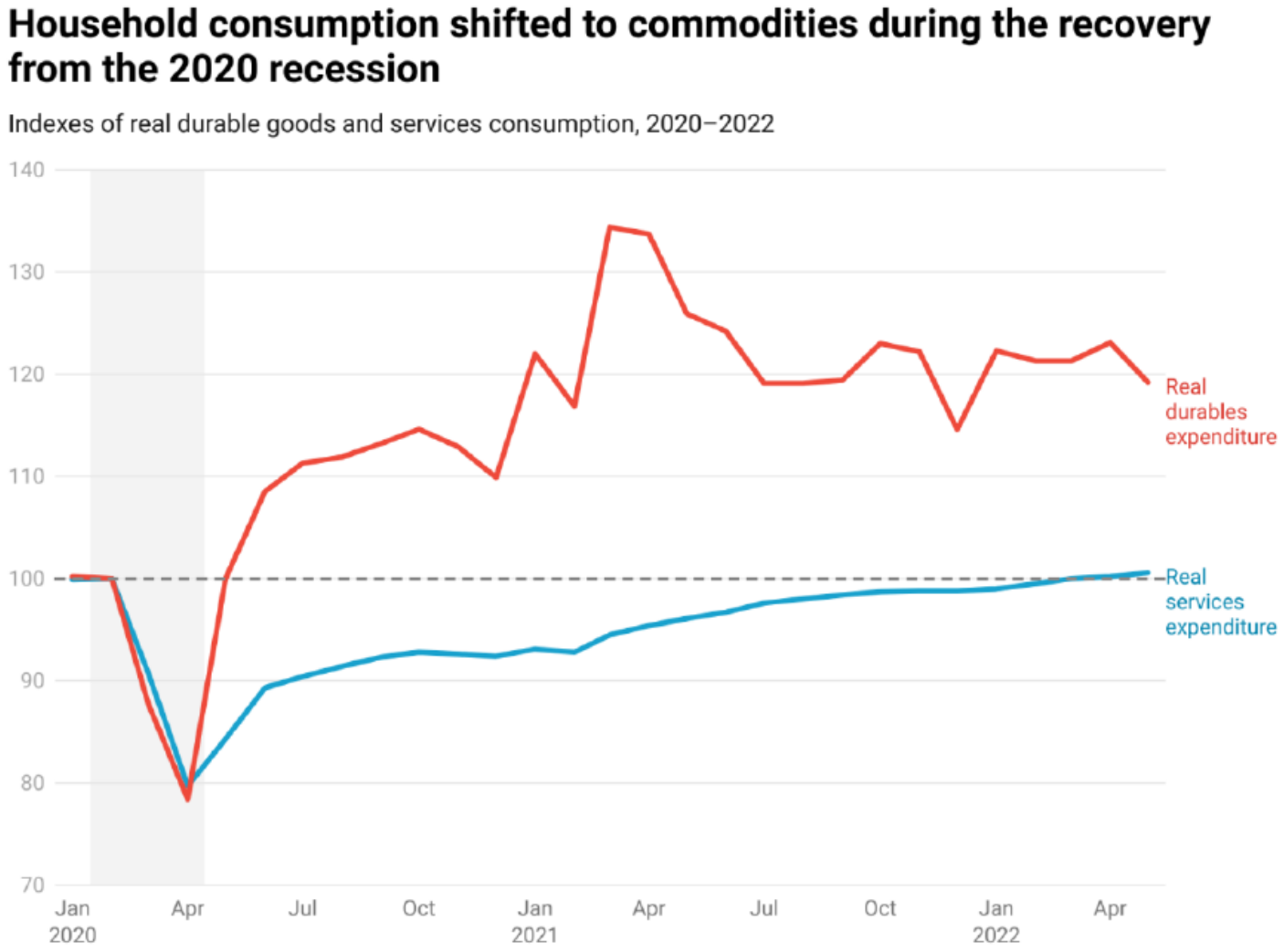
Heterogeity of firms II

- As argued by Joseph Steindl (1952) and recently by Olivier Allain (2019), different firms have different costing margins.
- After a big recession, such as happened during the Covid episode, firms with small costing margins are likely to have gone bankrupt and hence their market share will be taken over by firms will higher costing margins.
- This could explain part of the rise in profit or costing margins.
- « Aggregate markups could be driven by the exit of low-markup firms, or the reallocation of market share to firms with higher markups » (Statistics Canada, Faryaar et al. 2023)

Heterogeneity of firms IIIA

- The richest 10% of households “have powered the recovery of aggregate US consumption expenditure”(Tom Ferguson and Servaas Storm 2022.
- Rich households buy more luxury goods that carry a higher profit margin,
- Anecdotal evidence of this: sales of small cars in Canada fell by 78% since 2018), while large luxury SUVs (with higher profit margins) went up by 163%.

Heterogeneity of firms IIIB: change in the structure of demand (Jarsulic 2022); cf DeLong 2023

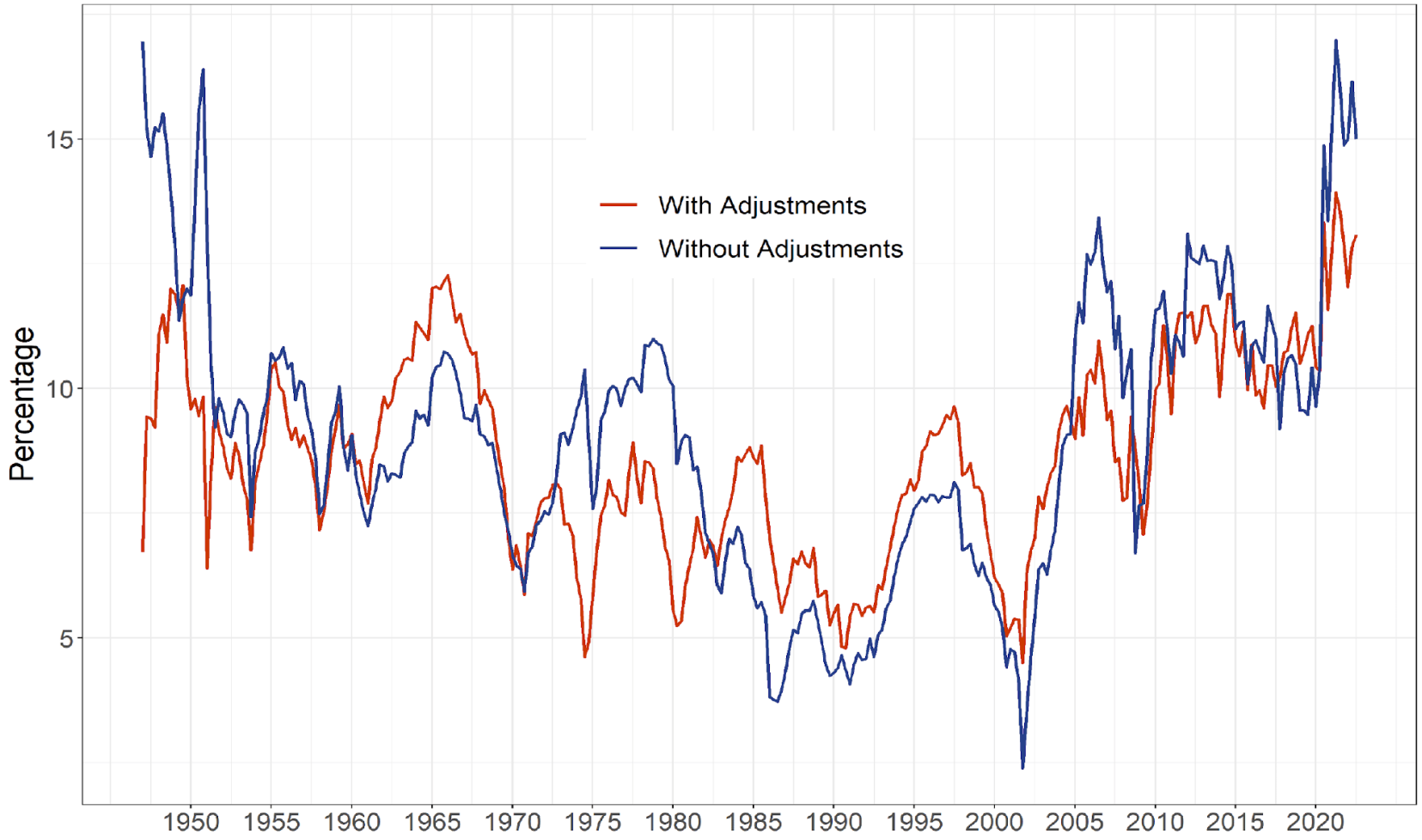


Profit measures with or without inventory valuation adjustment (IVA)?

- With inflation, the IVA normally reduces the amount of NIPA profits
- This is because stocks of intermediary goods and unsold finished goods are worth more at time t than they were worth at time t-1
- Weber and Wasner (2023) argue that « profits without adjustments … may be a more meaningful measure than profits with adjustments »
- However, profits from which IVA is subtracted is the true measure of the profit share (See Godley and Lavoie 2007, ch. 8)
- **The share of profits reduced by IVA corresponds to the share of profits if there was no inflation.**
- So depending on how profits were measured, the increase in the profit share or markup may have been over-estimated.
- IVA (in absolute terms) was very large in 2022.

Weber-Wasner 2023

Figure 1: After-tax profit margins of non-financial corporate business



TWO CONCLUDING REMARKS

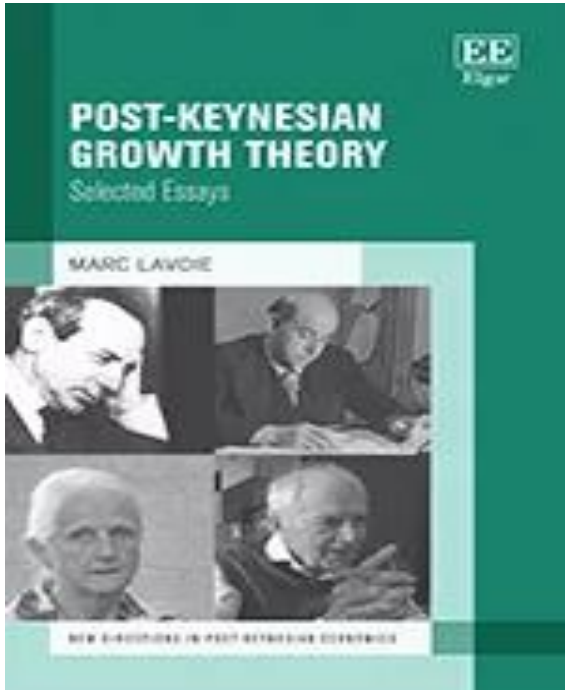
The issue of wage increases again

- Wages still have to catch-up with price increases.
- However in Canada **unit labour costs** have risen by 5.1 and 6.8 per cent in 2021 and 2022 and 5.8 per cent in the first half of 2023, while they have risen by 2.5 and 6.2 per cent in the USA.
- Why is this so? Labour productivity in both countries has decreased in 2022, and keeps going down in the first half of 2023.
- This corresponds to the $\hat{w} - \hat{\lambda}$ component of the price inflation equation. Surely this disappointing productivity performance must also explain part of the rising 2022 inflation rates, as pointed out by Steve Pressman (2023).

Profit inflation today

- A deputy governor of the Bank of Canada (N. Vincent) has given his full support to the case of profit inflation: the Bank is not to blame, the culprits are the firms, who now change prices more frequently, thus leading to an acceleration of inflation – profit inflation.
- But if the prices of intermediary or imported products start going down, then this is good news, because, if there is some symmetry, firms should be adjusting downward the prices of final products more rapidly than before.

Thank you!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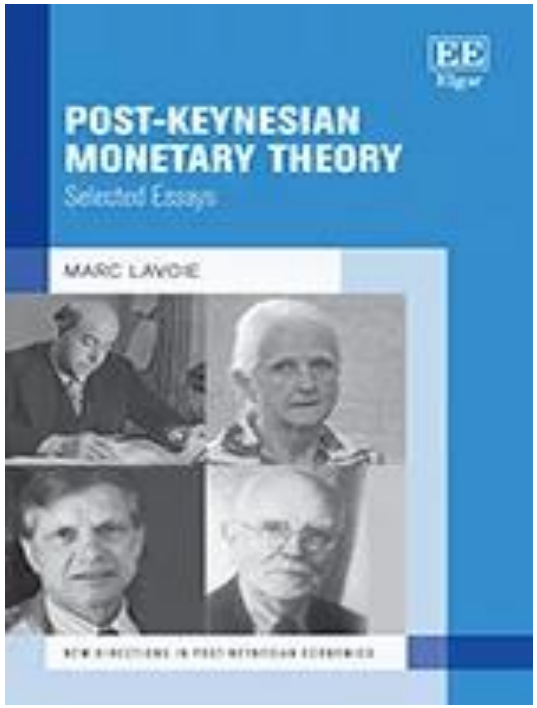
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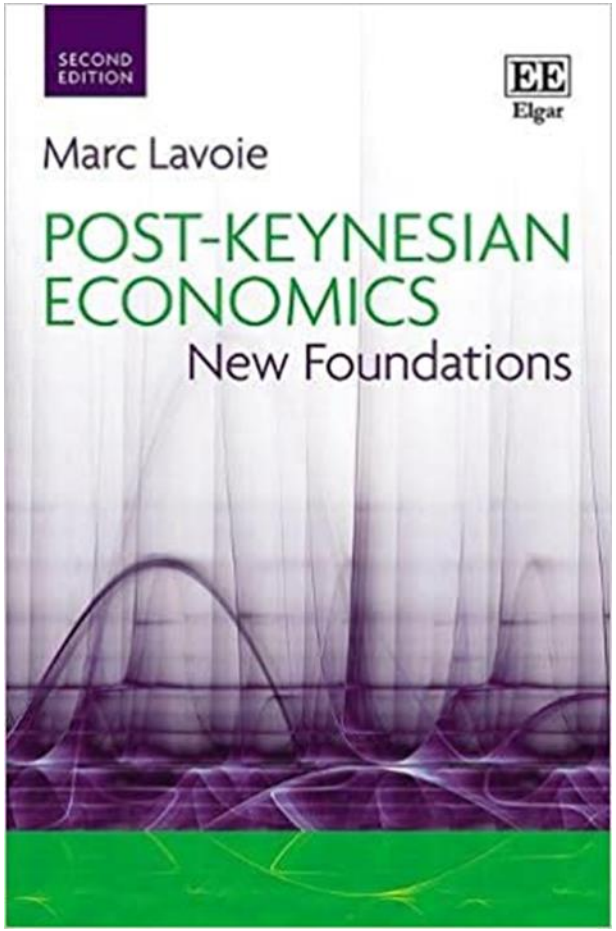
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