Discussion: "Setting the Wrong Price for the Right Reason: Consequences for Inflation and Monetary Policy (Morales-Jiménez, Stevens, and Wang)"

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The views expressed herein do not represent the positions of either the IMF, the IMF Executive Board, or IMF management.

Summary

Nominal price rigidity is at the heart of the transmission of monetary policy. Crucial question remains: which frictions are most relevant for the observed rigidity?

- The paper introduces a model of endogenous price adjustments, with price frictions arising from (1) menu cost (κ) and (2) information costs (θ^a: information extensive margin, θ^p: information on the intensive margin).
- These three price frictions are structurally estimated on a time series of the moments from the distribution of price changes (e.g., frequency of price changes, the average size of price adjustments) in the U.S from 1978 to 2023. Similar to HANK.

Key Findings

- Information costs matter.
- In particular, pricing mistakes on the **intensive margin** make prices changes to appear "random (DKW, 1999)."
- This generates high price dispersion even conditional on price adjustment - when firms get the timing right, but not get the price right (Woodford, 2009).
- "Price inaction" arises not only due to menu cost, but also due to uncertainty about the right price to set.
- As a result, information costs, coupled with menu cost, generate larger monetary non-neutrality as under the standard Calvo model.

Information frictions are costly.

TABLE III: Steady State Outcomes

	Baseline	$\kappa \doteq 0$	$\theta^a \doteq 0$	$\theta^p \doteq 0$	$K \doteq 5$
Spending on repricing (share of revenues)					
Fixed cost ($\kappa \bar{\Lambda}$)	0.0028	0	0.0038	0.0140	0.0056
Review cost ($\theta^a I^a_{ss}$)	0.0076	0.0088	0	0.0021	0.0003
Repricing cost ($\theta^p I^p_{ss}$)	0.0158	0.0140	0.0199	0	0.0045
Total spending (F_t)	0.0262	0.0228	0.0237	0.0162	0.0104
Outcomes (relative to flex-price outcomes)					
Consumption	0.9258	0.9574	0.9352	0.8527	0.9656
Employment	1.0514	1.0359	1.0432	1.0211	1.0670
Wages	0.9493	0.9745	0.9552	0.8616	0.9975
Output	0.9507	0.9798	0.9579	0.8667	0.9758
Price Dispersion	1.1058	1.0573	1.0891	1.1781	1.0936

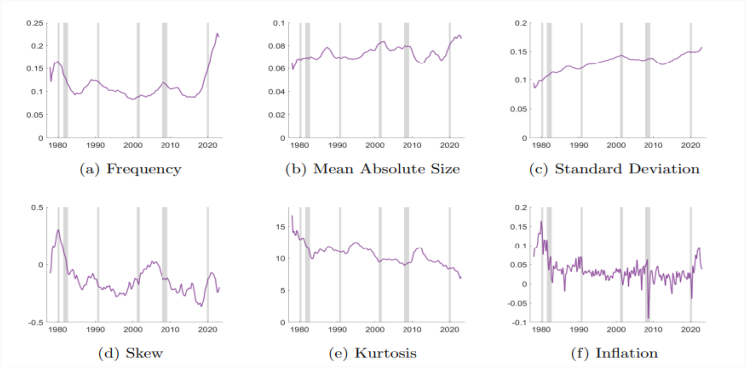
- Compared to the flexible-price steady state, the baseline with all three frictions reduces the steady state consumption (7.4%), wages (5.1%), while increasing employment (5%).
- Even without menu cost, information frictions distort prices, reduces consumption and wages. Work more and consume less.

Non-neutrality from price frictions

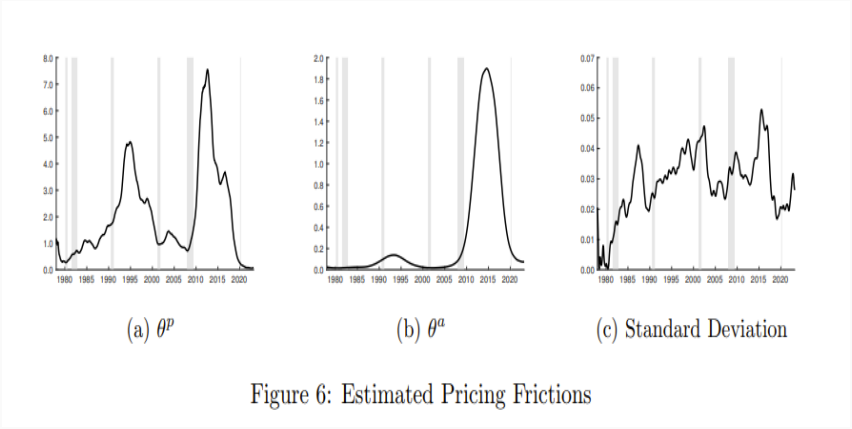
- Time-dependent pricing: θ. Phillips Curve, weighting between p_{t-1} and $p*$
- In this paper, even with $\kappa = 0$ and only with information costs, the model delivers infrequent price adjustment (8.8% vs. the baseline 9.8%, data from 1978-2023Q1: 11%)
- Even conditional on price adjustment, information friction strengthens non-neutrality. Firms err on getting the right price (p^*), resulting in high price dispersion.
- Monetary non-neutrality from the model explains about 80% of the response the Calvo model would predict.

Time-Series of the Moments from the Distribution of Price Changes

- Price flexibility appears to have risen sharply since 2020, but the trend predates the pandemic. Implications of large (even unprecedented and highly skewed) demand and supply shocks on firms' price-setting (Midrigan (2011), Karadi and Reiff (2012)).



Price adjustments during high inflation period



(a) θ^p (b) θ^a (c) Standard Deviation

Figure 6: Estimated Pricing Frictions

High inflation period are generally more associated with higher uncertainty from price-setter's perspective. Wouldn't this induce more "inaction"? Why does the magnitude of information frictions decline with high inflation?

Estimated Non-Neutrality

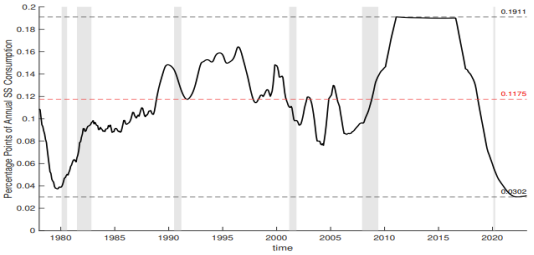


Figure 8: Implied Nominal Rigidity Over Time

The implied non-neutrality does not show a clear trend. No pricing moments are sufficient statistics for monetary non-neutrality (Hong, Klepacz, Pasten, Schoenle, 2023).

Q. How does it square with the evidence that MP tightening was influential in the disinflation?

Conclusion

- Great paper!
- We need to think harder about explaining the price changes since the pandemic. As inflation returns to the pre-pandemic level, will the pricing moments reverse their trends as well?
- How do price adjustments change during high-inflation period? How can information frictions help here?