## Discussion of *The Inflation Attention Threshold and Inflation Surges* by Oliver Pfäuti

#### Joel P. Flynn Yale

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#### This Paper: A Summary

A very nice paper on an important topic!

- 1. Clear conceptual framework for why attention should be time-varying and why that could matter:
  - 1.1 Economic idea: In regimes with more volatile inflation, households should acquire more information
  - 1.2 Key Implication: households' inflation expectations respond more aggressively to the level of inflation when inflation is volatile

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- 3. Clear mapping between these findings and a standard macro model with important implications



1. The context of the paper in the cyclical attention literature

#### 2. Is attention about levels or volatilities?

3. Where do regimes come from?

1. Discussion Point I: Context in the Cyclical Attention Literature

#### Bracha-Tang (2024): Less Inattention When Inflation is High

Figure 2: Share of Same-DK Responses versus Actual Inflation Rates

(a) United States, March 1982 through Nov 2021

(b) The Euro Area, Jan. 1997 through Nov. 2021



Sources: Haver Analytics/European Commission

# Korenok et al. (2024): Nonlinear Attention Relationship in Online Traffic



# Link et al. (2024): People Report Being More Attentive to Inflation When it Rose in the Recent Surge



Figure 2: Attention to different topics over time

Notes: This figure displays the evolution of the fractions of respondents that raise different topics in the open-needs survey question among households (Panel A) and firms (Panel B) across survey waves. The "Any macro topic" and "Any household-/firm-level topic" summarize all household-/firm-level topics related to the macroceconomy, respectively. The remaining lines refer to specific macroeconomic topics, i.e., inflation, monetary policy/interest rates, growth, and Covid-19.

# Pfäuti's Key contribution I: Regime-Switching Behavior in *Expectations*

$$\begin{split} \tilde{E}_{t}\pi_{t+3} &= \mathbb{1}_{\pi_{t-1} \leq \tilde{\pi}} \left( \beta_{0,L} + \beta_{1,L} \tilde{E}_{t-3}\pi_{t} + \beta_{2,L} \left( \pi_{t} - \tilde{E}_{t-3}\pi_{t} \right) \right) \\ &+ \left( 1 - \mathbb{1}_{\pi_{t-1} \leq \tilde{\pi}} \right) \left( \beta_{0,H} + \beta_{1,H} \tilde{E}_{t-3}\pi_{t} + \beta_{2,H} \left( \pi_{t} - \tilde{E}_{t-3}\pi_{t} \right) \right) + \epsilon_{t}, \end{split}$$

Table 1: Estimated attention levels and the attention threshold

	Threshold $\hat{\pi}$	Low Att. $\widehat{\gamma}_{\pi,L}$	High Att. $\widehat{\gamma}_{\pi,H}$	<i>p</i> -val. $H_0: \gamma_{\pi,L} = \gamma_{\pi,H}$
Mean expectations	3.91%	0.18	0.35	0.000
s.e.		(0.018)	(0.042)	
Median expectations	4.44%	0.13	0.21	0.014
s.e.		(0.018)	(0.027)	
Quarterly frequency	3.21%	0.14	0.38	0.000
s.e.		(0.033)	(0.076)	

Notes: This table shows the results from regression (8), where  $\hat{\pi}$  denotes the estimated threshold,  $\hat{\gamma}_{\pi,L}$  and  $\hat{\gamma}_{\pi,H}$  the estimated attention levels when inflation is below or above the threshold, respectively. The last column shows the *p*-value for the null hypothesis that the two attention levels are equal. Standard errors are robust with respect to heteroskedasticity.

# Pfäuti's Key contribution II: Examining State-Dependent Supply Shock Propagation



### Where to Go From Here? Measuring Actions!

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  - 2. Show that attention has macroeconomic consequences

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- This is hard, but the literature has made some progress on this in both survey and observational settings:
  - 1. Surveys: Kumar, Gorodnichenko, and Coibion (2023) directly measure how firms respond to exogenous changes in information
  - 2. Observational: Flynn and Sastry (2024) show how to recover choice mistakes from observational data to test state-dependence in attention and decompose mechanisms

2. Disscussion Point II: The Level or Volatility of Inflation?

#### Inflation is High When Its Volatility is High

Figure 7: Estimates of Time-Varying Uncertainty



• From an estimated CCC GARCH(1,1) model

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- No particular role for the *level* of inflation
- My suggestion for this paper: make the empirics slightly more aligned with the theory by looking at changes in the *second moments*
- Very unlikely to matter for the empirical results of this paper...
- ... but matters a lot for our models and anything that could be said would be valuable!

#### Are Phillips Curves Non-Linear or State-Dependent?



Figure 1: The Phillips Correlation Across US Cities

• Figure from Cerrato and Gitti (2022)

#### Candidate I: Non-linear Phillips Curves (Levels)

- Benigno and Eggertsson (2023): It's Baaack: The Surge in Inflation in the 2020s and the Return of the Non-linear Phillips Curve
- A tight labor market can induce non-linearity in the Phillips curve



Figure 8: A Model of an Inv-L NK Phillips Curve as a function of labor market tightness.

• More mechanisms: Schmitt-Grohe and Uribe (2022), Blanco, Boar, Jones, and Midrigan (2024), Karadi, Nakov, Nuño, Pastén, and Thaler (2024)

## Candidate II: State-dependent Phillips Curves (Uncertainty)

- Flynn, Nikolakoudis, and Sastry (2024): A Theory of Supply Function Choice and Aggregate Supply
- Firms endogenously have more responsive prices when inflation *uncertainty* is high



Figure 4: The Slope of Aggregate Supply Over Time

3. Discussion Point III: Where do Regimes Come From?

## Where Do Regimes Come From?

- I like the two-state regime-shifting model for its simplicity
- For this paper: but I would have liked to have seen more in the paper about why two regimes fit the data better *vs.* a continuous but non-linear model
  - To be clear, the author does do model selection based on the BIC. But for such an important modeling assumption, I would like to see more discussion.

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- **Beyond this paper:** I think it would be valuable to more fully explore the nonlinearities and which variables most clearly seem to drive them
- It would be useful to return to the theory here:
  - 1. Are regimes changes between multiple equilibria?
  - 2. Are regimes arising from changes in the conduct of policy?
  - 3. Are regimes actually arising from large changes in underlying variables that affect decisions smoothly?

## Conclusion

- 1. A very nice and extremely well-written and executed paper that makes several important contributions to the literature
  - 1.1 A clear demonstration of how attention varies across inflationary regimes and manifests in inflation expectations
  - 1.2 This could matter for macro and monetary policy: shock propagation looks substantially different in high *vs.* low inflation regimes

## Conclusion

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  - 1.2 This could matter for macro and monetary policy: shock propagation looks substantially different in high *vs.* low inflation regimes
- 2. A challenge for the literature: it would be very valuable to go further and unpack three things
  - 2.1 Beliefs vs. Actions: Does state-dependent attention to inflation matter for price- and/or wage-setting?
  - 2.2 Levels *vs.* Uncertainty: very important for the growing theory literature on non-linear *vs.* state-dependent Phillips curves
  - 2.3 Where do regimes come from? Important for empirical analysis and for thinking about policy