Inflation Attention Thresholds and Regional Phillips Curves: Empirical Evidence from NY Fed SCE Data

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May 24, 2025

Motivation

The Federal Reserve's dual mandate aims to maintain price stability and maximum employment. Central to achieving these goals is the anchoring of inflation expectations. Recent literature has highlighted how household expectations shape both consumption and firm pricing behavior (Coibion et al., 2022).

Despite flattened reduced-form Phillips Curves at the national level, McLeay and Tenreyro (2020) and Hazell et al. (2020) find that regional Phillips Curves remain steep. However, these studies do not directly test how household attention or expectation dynamics might drive these differences. Bracha and Tang (2023) and Pfäuti (2025) suggest that households pay more attention to inflation when inflation is high, implying an *attention threshold* that could drive regional differences in inflation-unemployment tradeoffs.

Literature Review

1. Inflation Attention Threshold (Pfäuti, 2025)
    - Households pay very little attention to inflation when inflation is below 4%. Attention doubles when inflation exceeds this 4% threshold. Attention is proxied by how strongly households revise expectations in response to inflation surprises.
    - Implication: Expectations become more sensitive to inflation news in high-inflation periods, reinforcing inflation dynamics.
2. Underreaction and "Inflation-Attention Traps" (Pfäuti, 2024)
    - In periods of low inflation and ELB constraints, attention is low $\rightarrow$ expectations adjust slowly $\rightarrow$ persistent low inflation even after recovery begins. Central banks may find it hard to raise expectations in low-attention regimes.
3. Cognitive Skill & Overconfidence (Pfäuti, Seyrich, Zinman, 2024)
    - Lower-skilled and overconfident individuals are more inattentive, underreact to news, and overestimate their personal economic outlooks.
4. Personal Experience Shapes Expectations (Kuchler & Zafar, 2019)
    - Individuals extrapolate from local inflation experiences, not necessarily national trends. Less sophisticated individuals extrapolate more from their own experiences.

Key Theoretical Insight from Pfäuti (2025)

Pfäuti (2025) proposes that attention to inflation increases sharply when inflation exceeds a 4% threshold:

- Below 4% inflation: households underreact to inflation news.

- Above 4% inflation: households double their updating intensity.
- Attention amplifies inflation dynamics by increasing expectation sensitivity.

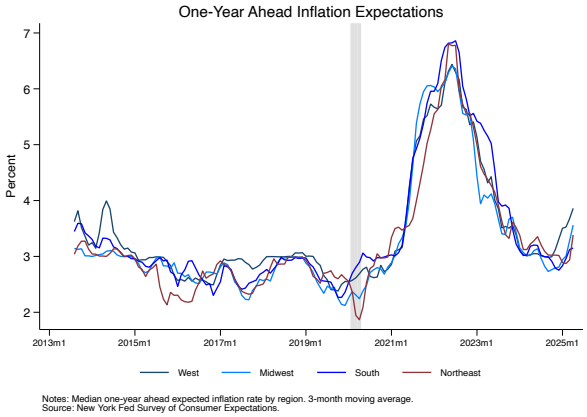
This threshold-based behavior may explain why inflation appears more persistent and the Phillips Curve steeper in high-inflation regions or periods.

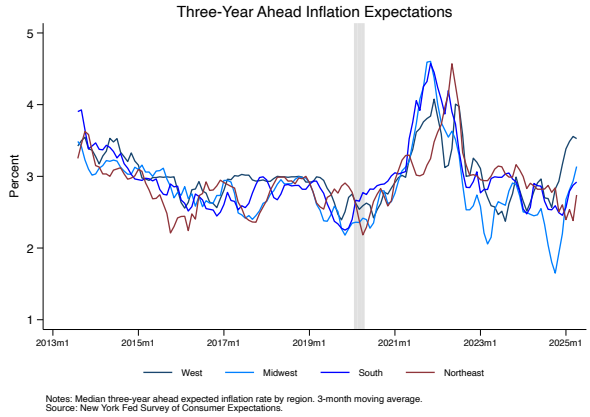
Research Objective

I will empirically test whether households in regions with inflation above 4% revise their inflation expectations more sharply, using microdata from the NY Fed Survey of Consumer Expectations (SCE). This provides the first direct test of the "inflation attention threshold" hypothesis at the household level.

Descriptive Patterns in the Data

To motivate the empirical investigation, I begin by examining regional trends in household inflation expectations using the New York Fed Survey of Consumer Expectations (SCE). The figures below plot the median one-year and three-year ahead inflation expectations by Census region—West, Midwest, South, and Northeast—between 2013 and early 2025. Both series are displayed as three-month moving averages to smooth seasonal volatility.





The data reveal several key patterns:

- During the post-2013 period of low and stable inflation, expectations across regions were relatively aligned, reflecting a national anchoring of beliefs.
- Around 2021, expectations began to diverge more sharply across regions. Notably, the South and West regions experienced slightly larger increases in both one-year and three-year ahead inflation expectations, consistent with higher realized inflation and/or greater economic volatility in those regions.
- The Midwest and Northeast display more moderate inflation expectations throughout, which may reflect differences in regional economic structure, political alignment, or information exposure.
- The divergence appears more pronounced in the short-run expectations (one-year ahead), suggesting that regional heterogeneity in attention and information updating plays a stronger role over short horizons.

These regional differences in expectations suggest that inflation attention and expectation formation may indeed be heterogeneous across the U.S. The observed patterns motivate the empirical strategy, which tests whether higher local inflation and regional volatility amplify household responsiveness to inflation news—particularly in regions with historically less anchored expectations.

Empirical Fact

Hypothesis: Households in regions with inflation above 4% revise their short-term inflation expectations more strongly than households in low-inflation regions.

Data and Measurement Strategy

- **Inflation Expectations:** NY Fed SCE microdata (1-year and 3-year inflation expectations).
- **Expectation Revision (Dependent Variable):**

$$\Delta E_{it} = |E[\pi_{i,t}] - E[\pi_{i,t-1}]|$$

- **Attention Proxy (Key Regressor):**

$$\text{HighInfl}_{rt} = \mathbb{1}(\pi_{rt} > 0.04)$$

  where π_{rt} is regional CPI inflation.

- **Controls:** Age, education, income, employment status, region fixed effects (δ_r), and time fixed effects (δ_t).

Baseline Regression Specification

$$\Delta E_{irt} = \alpha + \beta_1 \cdot \text{HighInfl}_{rt} + \mathbf{X}'_{irt}\gamma + \delta_r + \delta_t + \varepsilon_{irt}$$

- ΔE_{irt}: Absolute change in expected inflation for individual i in region r at time t
- HighInfl_{rt}: Indicator for inflation above 4% in region r
- $\mathbf{X}_{irt}$: Vector of demographic controls

Testable Prediction: $\beta_1 > 0$

Extensions and Heterogeneity Tests

1. **Cognitive Skill Heterogeneity:**
   - Interact HighInfl with low education
   - Hypothesis: agents with lower levels of education attainment may react more strongly in high-inflation regimes
2. **Phillips Curve Slope by Regime:**
   - Split sample into high- and low-inflation regimes
   - Estimate regional Phillips Curve slopes separately
3. **Political Misalignment:**
   - Test whether states misaligned with the federal administration exhibit weaker expectation revisions

Policy Implications

If attention to inflation exhibits nonlinear responses to inflation levels, monetary policy may be more effective in high-inflation states and less so in low-attention regimes. Regional stabilization policy could therefore benefit from targeting communication strategies toward inattentive households or politically skeptical regions.

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