

Inflation Attention Thresholds and Regional Phillips Curves: Micro Evidence from Household Panel Data

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Abstract

Recent research in macroeconomics posits that household attention to inflation is state-dependent, intensifying when inflation surpasses salient thresholds. While aggregate studies suggest such thresholds exist, direct empirical validation at the micro level remains limited. This paper provides the first household-level test of the inflation attention threshold hypothesis using panel data from the University of Michigan Survey of Consumers linked to regional CPI data from the BLS. I find that households residing in regions with inflation above 4% revise their short-term inflation expectations significantly more than those in low-inflation regions. This effect is concentrated among lower-income and less-educated households. These results offer micro-level support for threshold-based models of attention and shed new light on the behavioral foundations of regional Phillips Curves, with implications for inflation persistence and the effectiveness of monetary policy.

Introduction

The Federal Reserve’s dual mandate—to ensure price stability and maximum employment—relies on the premise that inflation expectations are well-anchored. Recent literature emphasizes the central role of household expectations in shaping consumption, wage-setting, and firm pricing behavior (Coibion et al., 2022). Yet, despite a muted Phillips Curve at the national level, regional inflation-unemployment dynamics remain active. Studies by McLeay and Tenreyro (2020) and Hazell et al. (2020) show that Phillips Curves estimated at the regional level remain significantly steeper than their aggregate counterparts, indicating greater sensitivity of inflation to local labor market slack.

One possible explanation for this divergence lies in the heterogeneity of household attention to inflation. A growing body of research posits that households do not process macroeconomic information uniformly; instead, their attention varies with the inflation environment. Recent theoretical work by Pfäuti (2025) introduces the idea of an “inflation attention threshold,” suggesting that households systematically underreact to inflation news when inflation is below 4%, but substantially increase their updating intensity once inflation exceeds this level. This behavioral

nonlinearity may amplify local inflation dynamics, contributing to regional variation in the slope of the Phillips Curve.

This paper provides a micro-level empirical test of the inflation attention threshold hypothesis using household-level panel data from the University of Michigan Survey of Consumers. I ask whether households residing in regions where inflation exceeds 4% revise their inflation expectations more strongly in response to recent inflation shocks. To motivate the analysis, I document regional heterogeneity in inflation expectations using data from the New York Fed’s Survey of Consumer Expectations (SCE)¹, showing that attention to inflation appears to diverge most in high-inflation regions during periods of national inflationary pressure. This variation supports the hypothesis that inflation attention is heterogeneous and may respond nonlinearly to local inflation levels.

Literature Review

This paper aims to contribute to two strands of literature: (1) research on the formation of inflation expectations under limited attention, and (2) the study of regional macroeconomic dynamics and Phillips Curve heterogeneity. Pfäuti (2025) introduces a threshold-based model of inflation attention, in which households revise their expectations more aggressively when inflation exceeds 4%. Using survey data, he proxies attention by measuring the responsiveness of expectations to recent inflation surprises and shows a doubling of this responsiveness above the 4% threshold. The result implies that inflation dynamics may become more persistent during high-inflation periods, as attention-induced expectation revisions amplify the pass-through of inflation shocks.

Earlier work by Pfäuti (2024) formalizes the concept of “inflation-attention traps,” wherein prolonged periods of low inflation—especially under effective lower bound (ELB) constraints—lead to inattentive households, sluggish expectation adjustments, and persistent disinflation. These traps present a challenge for central banks attempting to re-anchor expectations after inflation undershooting. Pfäuti, Seyrich, and Zinman (2024) extend the framework by introducing heterogeneity in cognitive skill and overconfidence. They find that lower-skilled and overconfident individuals are more likely to underreact to economic news and overestimate their own financial outlook, compounding inattention biases in the aggregate. The idea that households respond more to local economic conditions than national aggregates is reinforced by Kuchler and Zafar (2019), who show that individuals extrapolate inflation expectations from personal or local price experiences. This tendency is especially pronounced among less financially literate individuals, suggesting an interaction between sophistication, local economic exposure, and expectation formation.

This paper advances the literature by directly testing whether attention thresholds proposed by Pfäuti (2025) manifest at the household level in microdata. In contrast to previous work that analyzes national aggregates or theoretical models, this paper exploits regional variation in inflation and expectation dynamics to provide new evidence on how inflation attention varies across space

¹Figure 1 in the appendix.

and over time.

Data

The empirical analysis draws on household-level panel data from the University of Michigan Survey of Consumers, a long-running monthly survey that elicits consumer expectations and perceptions of economic conditions. I focus on individual responses to questions about short-term (one-year ahead) inflation expectations. The survey includes a rotating panel structure that allows for measuring revisions in expectations across consecutive waves. Respondents are geocoded by Census region, enabling linkage to regional CPI inflation rates.

Empirical Model

The central hypothesis is that households residing in regions experiencing high inflation—defined as inflation rates exceeding 4%—revise their inflation expectations more sharply than those in low-inflation regions. To test this, I estimate a fixed effects panel regression model where the dependent variable is the absolute revision in one-year-ahead inflation expectations between two consecutive interviews. The key explanatory variable is a binary indicator equal to one if regional inflation exceeds 4% in a given month. Formally, the regression takes the form:

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

where ΔE_{irt} is the magnitude of the expectation revision for individual i , in region r , at time t , HighInfl_{rt} is the high-inflation indicator, X_{irt} includes demographic controls (age, education, and income), and δ_r and δ_t are region and time fixed effects, respectively. The coefficient β captures whether expectations become more responsive in high-inflation regimes, with the prediction that $\beta > 1$.

Results

Baseline Specification

The baseline regression results are presented in Table 1. Consistent with the inflation attention threshold hypothesis, I find that individuals revise their short-term inflation expectations more sharply when regional inflation exceeds 4%. The coefficient on the high-inflation indicator is positive and statistically significant, indicating that attention to inflation is indeed state-dependent. The inclusion of region and time fixed effects ensures that the estimates are not confounded by persistent differences across regions or macroeconomic shocks common to all regions.

Heterogeneity by Education

Table 2 presents regression results disaggregated by educational attainment. The attention threshold effect is most pronounced among individuals with some high school education. For this group, the coefficient on the high-inflation indicator is large, positive, and statistically significant, suggesting that lower-educated households (but not the lowest) are more likely to adjust their expectations when inflation exceeds the 4% threshold. In contrast, the responsiveness among college-educated or college-plus individuals is smaller in magnitude (even negative for College Plus category) and but statistically significant, indicating more stable expectations among more educated individuals.

This finding aligns with theories of information frictions and cognitive limitations in expectation formation. Individuals with lower educational attainment may be more susceptible to salience effects, relying more heavily on local price changes and less anchored expectations when inflation becomes salient.

Heterogeneity by Income

In Table 3, I examine heterogeneity in inflation attention by income quartile. The results show that the baseline effect is primarily driven by individuals in the lowest income quartile. Among these individuals, the estimated coefficient on the high-inflation indicator is again positive and highly significant, while the effect attenuates and becomes statistically insignificant in the upper income quartiles.

These results suggest that lower-income households are both more exposed to, and more reactive to, local inflation shocks—consistent with recent evidence that economic hardship amplifies sensitivity to salient price changes. In contrast, higher-income households may be better insulated from inflation volatility, either due to more diversified consumption baskets or more stable macroeconomic expectations.

Conclusion

The findings provide micro-level validation of the idea that household attention to inflation is state-dependent, intensifying only when local inflation exceeds a salient threshold. This attention mechanism helps explain why inflation expectations diverge more in certain regions or among vulnerable populations during inflationary episodes. Looking ahead, future work will aim to refine the 4% threshold benchmark by testing for alternative or subgroup-specific thresholds and exploring non-linear responses using flexible functional forms. Additionally, I plan to assess the role of regional inflation volatility and prior inflation history in shaping attention dynamics, allowing for a more comprehensive test of state dependence. These extensions will help clarify how and when households begin to pay attention to inflation, with important implications for monetary policy communication and the anchoring of expectations.

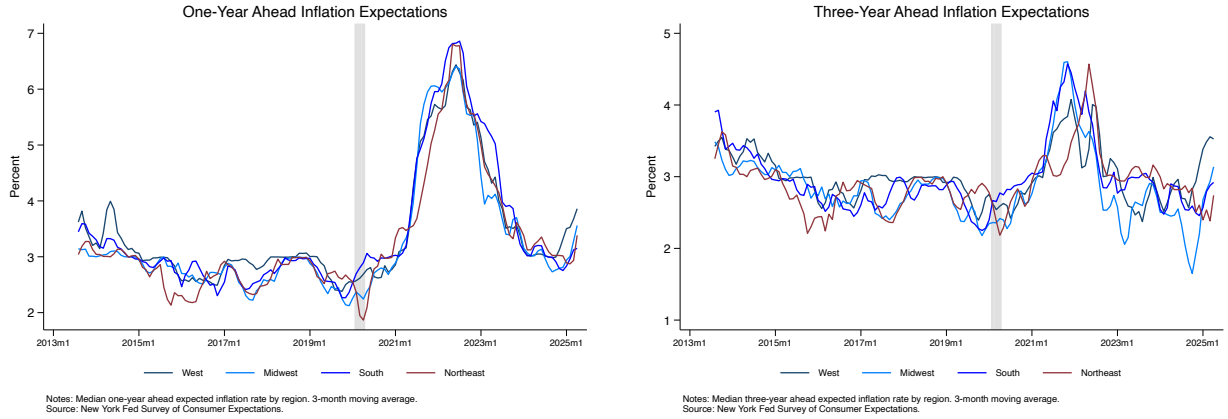
This paper offers new microeconomic evidence in support of the inflation attention threshold hypothesis by leveraging household-level panel data from the University of Michigan Survey of Consumers. While Pfäuti (2025) documents threshold-based attention dynamics using national aggregates, this analysis moves beyond the aggregate by estimating how individual households revise their expectations in response to local inflation shocks. By linking respondents to regional CPI inflation and tracking expectation updates across survey waves, the paper uncovers substantial heterogeneity in attention behavior: the threshold effect is strongest among low-income and less-educated households. This spatially and demographically disaggregated approach provides a more granular test of the theory and offers insights into which groups are most sensitive to inflationary environments. Moreover, the empirical specification controls for potential state dependence and regional volatility by including time and region fixed effects, as well as detailed demographic covariates, strengthening the causal interpretation of the results.

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Figures

Figure 1: Regional Heterogeneity in Inflation Expectation



Regression Tables

Table 1: Regression Results on Inflation Expectations

	Region FE	Time Effects	Region-Time FE
High Infaltion Region	1.101*** (0.058)	0.383** (0.151)	0.320** (0.152)
Age	-0.002* (0.001)	-0.006*** (0.001)	-0.006*** (0.001)
Education	-0.155*** (0.011)	-0.160*** (0.011)	-0.160*** (0.011)
Log Income	-0.383*** (0.028)	-0.519*** (0.028)	-0.523*** (0.028)
Constant	9.516*** (0.305)	11.370*** (0.316)	11.436*** (0.317)
Observations	74421	74421	74421

Standard errors in parentheses

Robust SEs; FE model includes region and mdate fixed effects

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 2: Regression Results on Inflation Expectations by Education Groups

	LT High School	High School	Some College	College Plus
High Infaltion Region	0.993 (1.120)	0.910** (0.377)	0.312 (0.234)	-0.205 (0.161)
Age	-0.030*** (0.008)	-0.013*** (0.003)	-0.003 (0.002)	0.000 (0.002)
Education	-0.091 (0.068)	-0.108 (0.072)	-0.081* (0.044)	-0.176*** (0.033)
Log Income	-0.818*** (0.191)	-0.710*** (0.072)	-0.452*** (0.051)	-0.431*** (0.033)
Constant	15.030*** (2.201)	12.829*** (1.152)	9.467*** (0.810)	10.499*** (0.607)
Observations	3571	17376	18889	34574

Standard errors in parentheses

Robust SEs; FE model includes region and mdate fixed effects

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Regression Results on Inflation Expectations by Income Distribution

	Income QT 1	QT 2	QT 3	QT 4
High Infaltion Region	0.553* (0.327)	0.437* (0.254)	0.234 (0.232)	-0.111 (0.294)
Age	-0.006** (0.002)	-0.005** (0.002)	-0.006*** (0.002)	-0.008*** (0.003)
Education	-0.189*** (0.021)	-0.124*** (0.017)	-0.115*** (0.016)	-0.200*** (0.023)
Log Income	-0.676*** (0.110)	-0.595*** (0.208)	-0.685*** (0.185)	-0.203** (0.081)
Constant	13.172*** (1.124)	11.401*** (2.229)	12.620*** (2.034)	8.822*** (0.999)
Observations	18687	18785	20593	16352

Standard errors in parentheses

Robust SEs; FE model includes region and mdate fixed effects

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$