

The Inflation Attention Threshold and Inflation Surges[†]

By OLIVER PFÄUTI*

The recent inflation surge brought inflation back on people's minds. I quantify when and how much attention to inflation changes and derive the macroeconomic implications of these attention changes. I estimate an attention threshold at an inflation rate of 4 percent, that attention doubles when inflation exceeds this threshold, and that supply shocks have stronger and more persistent effects on inflation in times of high attention. Developing a model featuring the attention threshold, I show that attention changes offer a joint explanation for inflation surges, inflation's co-movement with inflation expectations, and a long last mile of disinflation. (JEL D84, E12, E31, E43, E52)

Inflation is back. After decades of low and stable inflation, inflation surged in many advanced economies during the recovery phase of the pandemic. Inflation turned out to be higher and more persistent than many expected.¹ With inflation rising, the public's attention to inflation increased as well (panel A in Figure 1), and as inflation peaked, households' and firms' inflation expectations also started to pick up (panel B in Figure 1). During the buildup of the inflation surge, however, inflation expectations substantially underpredicted actual inflation. Only as inflation started to come down, inflation expectations started to overshoot inflation, and these expectations remained high while inflation stayed persistently above its target of 2 percent.

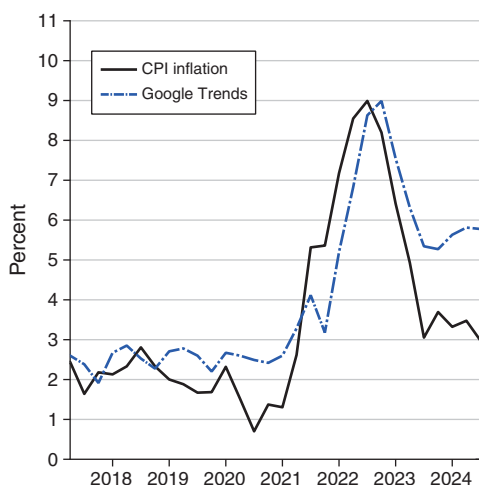
In this paper, I develop a framework of inflation expectations featuring state-dependent attention levels where these joint dynamics of inflation, expectations, and attention arise endogenously. This model delivers two key implications: (i) regime shifts in the responsiveness of inflation expectations to inflation and (ii) asymmetric inflation and inflation-expectations dynamics, including a persistent overshooting of expectations and a long “last mile” of disinflation back to target. When inflation exceeds an attention threshold, people pay more attention, expectations become more sensitive to inflation, and these expectations can reinforce inflationary surges and

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¹For example, Federal Reserve Chair Jerome H. Powell said in his 2021 Jackson Hole speech that inflation concerns are “likely to prove temporary” (see <https://www.federalreserve.gov/newsevents/speech/powell20210827a.htm>).

Panel A. Inflation and Google Trends



Panel B. Inflation and inflation expectations

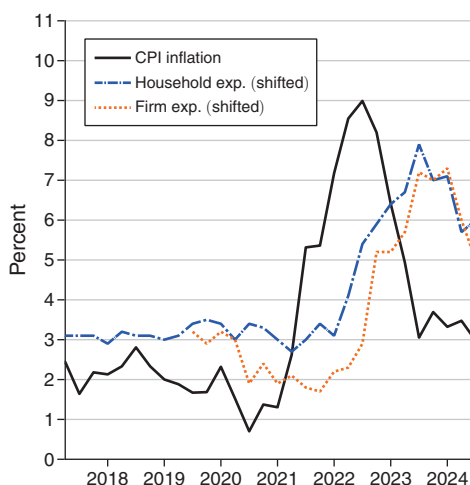


FIGURE 1. INFLATION, ATTENTION TO INFLATION, AND INFLATION EXPECTATIONS

Notes: Panel A shows US CPI inflation (black solid line) together with Google Trends searches of the word “inflation” in the United States (blue dashed-dotted line). Google Trends is normalized to have the same maximum as CPI inflation. Panel B shows US CPI inflation (black solid line) together with one-year-ahead inflation expectations for US households (blue dashed-dotted line) and firms (red dotted line). Expectations are shifted by one year such that the vertical distance to the black line captures the forecast errors. Household expectations are from the Survey of Consumers from the University of Michigan, and firm expectations from the Survey of Firms’ Inflation Expectations, provided by the Cleveland Fed.

make them more persistent. When inflation falls back below the threshold, attention declines, expectations become less responsive to disinflationary news, so expectations fall only gradually, and the economy experiences a prolonged last mile. The recent inflation episode in Figure 1 provides a salient example of these dynamics.

To arrive at these results, I propose a tractable model of inflation expectations featuring state-dependent attention reflected in an endogenous updating gain. Attention captures how strongly agents update their short-run inflation expectations in response to forecast errors.² In the theoretical framework that motivates my empirical approach, agents decide optimally how much attention to inflation they want to pay. Their prior uncertainty increases as inflation increases, and after inflation exceeds a certain threshold, agents decide to increase their attention to a higher level at which attention stays again constant even when inflation increases further. The threshold is endogenous and depends on the underlying fundamentals of the attention problem. The theory thus predicts that attention switches between two regimes, depending on whether inflation is below or above a certain threshold.

The tractability of this framework allows me to bring the model to the data directly, and I can estimate the attention threshold and the attention levels in the two regimes jointly using survey data from the University of Michigan’s Survey of

²For example, Werning (2022) discusses why short-run expectations are more important than long-run expectations for inflation. In Pfäuti (2025), I show that measuring attention to inflation by estimating how agents update their short-run expectations correlates strongly with other measures of attention.

Consumers for the period 1978 to 2024. I estimate an inflation attention threshold at an annualized inflation rate of about 4 percent, and that attention is about 0.18 when inflation is below the threshold and practically doubles to 0.35 when inflation is above the threshold. An attention level of 0.35 means that following a 1 percentage point forecast error, agents increase their inflation expectations by 0.35 percentage points. I find that the data suggest that there is only one attention threshold, that the threshold specification is preferred to smooth changes in attention, and that once I control for this threshold, I do not find any evidence that attention increases with inflation *within* regime. These results are robust across different specifications and datasets.

The attention regimes matter for the dynamics of inflation and inflation expectations. Using the high-frequency identification of Känzig (2021b), I use oil supply news shocks as a proxy for supply shocks, and I find that inflation increases more than twice as much in response to these shocks when they hit in the high-attention regime compared to the low-attention regime. A 1 standard deviation shock that pushes inflation up by about 20 basis points on average across regimes leads to a peak increase in inflation of about 40 basis points when the shock hits in the high-attention regime. These effects are persistent, as they only diminish after about one to two years. Using regional data and alternative measures of people's attention, I further disentangle the effects of attention from other changes in the economy that may arise from higher inflation and find that attention indeed leads to a stronger inflation response to supply shocks even when controlling for inflation directly.

Applying my results to the recent inflation surge, I find that the estimated attention threshold implies that the US economy entered the high-attention regime most recently in early 2021. To quantify the importance of this increased attention for the recent inflation surge, I first show that the oil supply news shocks explain about 50 percent of the inflation surge from the time the US economy entered the high-attention regime in early 2021 until the peak in mid-2022. Without the attention increase, however, the implied inflation increase would have only been half as strong.³ These results suggest that people's higher attention to inflation is not merely a by-product but an important driver of sudden and persistent inflation surges.

To understand these findings as well as their implications for monetary policy, I develop a New Keynesian model accounting for the attention threshold and the changing levels of attention. I find that in response to an inflationary supply shock that pushes inflation above the attention threshold, inflation keeps on increasing due to the attention increase. As attention increases, agents update their inflation expectations more strongly in response to the increase in inflation. These higher inflation expectations then fuel further inflation increases, leading to even higher inflation expectations. This illustrates how what normally would be a transitory inflation shock can become a very persistent one due to the heightened attention. As the shock dies out, inflation starts to decline after some time. However, inflation may remain elevated for a substantial period of time because once it falls back below the threshold, people pay less attention to inflation and hence only slowly revise

³I show that also other shocks, that is, the *inflation shock* from Angeletos, Collard, and Dellas (2020a) as well as monetary policy shocks, become more inflationary in the high-attention regime, indicating that shocks generally become more inflationary when attention to inflation is high.

their inflation expectations downward. As their prior expectations are now relatively high due to the experienced high-inflation period, expectations remain persistently high, leading to a slow decline of actual inflation. The inflation attention threshold and changing degrees of attention hence offer a joint explanation for why inflation surges tend to be hump shaped and why inflation expectations initially fall short of actual inflation but then surpass it once inflation starts to decline (as documented in panel B of Figure 1 and consistent with Angeletos, Huo, and Sastry (2020) and Blanco, Ottonello, and Ranošová (2025) more broadly). Therefore, changes in attention to inflation can explain why inflation may come down relatively quickly at first but then remains stubbornly above the central bank's inflation target.

That inflation expectations stay persistently high, even when inflation has already fallen back below the threshold, further gives rise to a heightened risk of another subsequent inflation surge. The higher inflation expectations keep actual inflation higher for longer and therefore closer to the attention threshold. Thus, a subsequent inflationary shock is more likely to push inflation back above the threshold, therefore leading to another episode of persistently high inflation, as, for example, in the 1970s and 1980s in the United States.

The attention threshold induces an asymmetry in the dynamics of inflation: attention increases when inflation is particularly high but remains constant when inflation is particularly low. Relative to the model abstracting from the attention threshold, this asymmetry increases the risk of periods of persistently high and volatile inflation rates but leaves the risk of deflation largely unchanged. This inflation asymmetry induced by the attention threshold also offers a potential explanation for why we did not observe long-lasting deflationary periods, for example, during the Great Financial Crisis (Coibion and Gorodnichenko 2015b).⁴ Using a wide range of alternative models, I show that only the model with the attention threshold can account for the documented empirical patterns of inflation and the asymmetry between periods of high versus low inflation.

This asymmetry also matters for the normative implications of the attention threshold. When monetary policy sets the nominal interest rate following a relatively dovish Taylor rule, the associated central bank losses are significantly larger compared to optimal policy rules or a strict inflation targeting rule. The reason is that under a standard Taylor rule, the economy spends a substantial amount of time in the high-attention regime in which inflation is high and volatile. Being frequently in the high-attention regime also increases the *average level of inflation* due to the asymmetry of the threshold, which is costly for the central bank. By following a more hawkish monetary policy rule, the central bank can mitigate these losses.

Related Literature.—This paper contributes to the literature on inflation expectations formation and, in particular, on the role of limited and time-varying attention for expectations and their macroeconomic implications. A central insight from the macroeconomic literature on the role of expectations is that macroeconomic dynamics depend not only on the level of expectations but also on how *responsive* expectations are to incoming information; in most of these models, an updating gain

⁴In fact, annualized quarter-on-quarter CPI inflation was negative only 7 percent of the time between 1978 and 2023, whereas it exceeded the attention threshold about 30 percent of the time during the same period.

governs the responsiveness of expectations (Evans and Honkapohja 2001; Eusepi and Preston 2011; Marcet and Nicolini 2003; Gáti 2023; Evans and Ramey 1995; Morris and Shin 2002; Jørgensen and Lansing 2025). Within this literature, the paper is most closely related to work on *endogenous gains* and *unanchoring* of inflation expectations. Existing contributions study how the degree of anchoring affects inflation dynamics and optimal policy, either through continuously varying gains (Gáti 2023) or through discrete changes in anchoring (Carvalho, Eusepi, Moench, and Preston 2023). A key contribution of the present paper is to provide a tractable, attention-based microfoundation for an endogenous gain that changes *discretely* across regimes through an inflation attention threshold, delivering (i) regime shifts in responsiveness and (ii) asymmetric inflation-expectations dynamics, including a long “last mile” of disinflation.

More broadly, the paper relates to models of costly information acquisition and imperfect information updating, including rational inattention and sticky expectations (Sims 2003, 2010; Reis 2006a, b; Lorenzoni 2009; Maćkowiak and Wiederholt 2009; Paciello and Wiederholt 2014; Afrouzi and Yang 2021), as well as (potentially state-dependent) behavioral inattention (Gabaix 2020). In contemporaneous work, Bianchi, Ilut, and Saijo (2024) develop a model of *smooth* diagnostic expectations in which expectations may overreact more in uncertain times. In contrast, the present paper emphasizes discrete regime shifts in attention and their macroeconomic implications.

Pfäuti (2025) documents that before the recent inflation surge, attention to inflation was at a historical low.⁵ Bracha and Tang (2025) find that when inflation increases, attention to inflation increases as well. Korenok, Munro, and Chen (2026) find, for a large number of countries, that people’s attention to inflation increases with inflation only after inflation exceeds a certain threshold. Using Google search data for the period from 2004 to 2022, they estimate this attention threshold to be at an annualized inflation rate of 3.55 percent for the United States. Buelens (2025) uses internet search behavior of households in the euro area to show that this form of attention to inflation positively depends on the level of inflation. Cavallo, Cruces, and Perez-Truglia (2017) show that survey respondents in high-inflation environments (Argentina) respond less to information about inflation than in low-inflation environments (United States), which is consistent with higher attention to inflation in times of high inflation. Weber et al. (2025) confirm, using a range of randomized control trials spanning over several years and different countries, that attention of households and firms is indeed higher in times of high inflation. Kroner (2024) focuses on financial markets and shows that attention—measured as asset price

⁵For the years before the recent inflation surge, Candia, Coibion, and Gorodnichenko (2024); Candia © Weber © Gorodnichenko © Coibion (2023); and Coibion, Gorodnichenko, Knotek, and Schoenle (2023) show that US firms as well as households are usually poorly informed about and inattentive to inflation and monetary policy (see also Weber, D’Acunto, Gorodnichenko, and Coibion (2022) for a recent review). Goldstein (2023) also finds that inattention varies over time. Different forms of changing attention are considered, e.g., in Coibion and Gorodnichenko (2015a), who show state dependence in the degree of information rigidity (focusing on GDP growth); or in Kim and Binder (2023), who examine how repeat participation in surveys that ask about inflation expectations may lead to higher attention to inflation; or in Flynn and Sastry (2022), who show—by using a textual proxy for firms’ attention toward macroeconomic conditions—that attention is countercyclical; or Gallegos (2023), who shows that firms’ less sluggish inflation expectations after the great inflation period offer a potential explanation for the decrease in the persistence of inflation as found, e.g., in Benati (2008). York (2023) exploits differences in survey dates to examine how inflation expectations respond to macroeconomic news releases.

responses to inflation news—is higher in times of high inflation. My key innovation relative to these papers is that I provide estimates of the attention threshold and the attention levels in the two regimes in a way that directly maps into otherwise standard macroeconomic models, and I quantify the macroeconomic implications of these attention changes.

I further contribute to the literature on the state dependency of shocks (Auerbach and Gorodnichenko 2012, 2013; Caggiano, Castelnuovo, and Goshenny 2014; Ramey and Zubairy 2018; Tenreyro and Thwaites 2016; Aastveit, Bjørnland, and Cross 2023; Jo and Zubairy 2025). The two papers most closely related are Ascari and Haber (2022) and Joussier, Martin, and Mejean (2023). Ascari and Haber (2022) show that the inflationary effects of monetary policy shocks are larger in times of high trend inflation. Joussier, Martin, and Mejean (2023) find that French firms pass through energy price shocks more to their prices in times of high inflation.⁶ I complement this work by highlighting a specific expectations channel—state-dependent attention to inflation—through which both supply and monetary shocks propagate more strongly when inflation is high, and by showing that the same mechanism can generate an asymmetric return to target that lengthens the “last mile” of disinflation.

This paper also contributes to the ongoing debate about the drivers of the recent inflation surge and offers an alternative and complementary perspective by highlighting the role of people’s heightened attention during that period. The existing literature emphasizes supply-side factors and bottlenecks (Shapiro 2026; Bernanke and Blanchard 2025; Amiti, Heise, Karahan, and Şahin 2023; Gagliardone and Gertler 2023), fiscal forces and beliefs about the fiscal framework (Bianchi and Melosi 2022; Bianchi, Faccini, and Melosi 2023), nonlinearities and labor market mechanisms (Cerrato and Gitti 2022; Gitti 2024; Benigno and Eggertsson 2023; Ball, Leigh, and Mishra 2022; Lorenzoni and Werning 2023; Crump, Eusepi, Giannoni, and Şahin 2024; Erceg, Lindé, and Trabandt 2024), and changes in price adjustment behavior (Cavallo, Lippi, and Miyahara 2024; Blanco, Boar, Jones, and Midrigan 2024). In contrast to these papers, I focus on the role of changes in attention to inflation. Attention serves as a complementary propagation mechanism rather than as an exogenous impulse and offers an explanation for the observed interplay between inflation and inflation expectations (panel B in Figure 1) as well as for the long last mile of disinflation.⁷

Outline.—In Section I, I develop the theoretical model of state-dependent attention and estimate the inflation attention threshold and attention across regimes. In Section II, I show that the attention regime matters for the inflationary effects of shocks and quantify the role of attention for these effects. I introduce the New Keynesian model with limited attention in Section III and the model’s positive results in Section IV. In Section V, I discuss the threshold’s normative implications, and Section VI concludes.

⁶Based on the present paper and Korenok, Munro, and Chen (2026), Joussier, Martin, and Mejean (2023) use Google Trends data to proxy for attention to energy prices and energy cost and show that the passthrough of energy shocks to prices in France is stronger in times of higher attention to energy prices.

⁷See Binder and Kamdar (2022) for a narrative history of how inflation and inflation expectations evolved jointly during several recessions and periods of high inflation since the Great Depression.

I. Attention and the Inflation Attention Threshold

In this section, I present a model of inflation expectations formation with limited and state-dependent attention. Attention governs how strongly agents update their inflation expectations when receiving new information. When inflation is low, agents update their inflation expectations relatively little and place more weight on their prior beliefs, whereas they update their expectations more strongly when inflation is high. I then bring this model to the data to estimate how and when attention to inflation changes. I relegate detailed derivations and microfoundations to Supplemental Appendix A.

A. Attention to Inflation

In order to estimate how and when attention to inflation changes, I extend the method I develop in Pfäuti (2025). The agent believes that inflation in the next period, π' , depends on inflation today, π , as follows:

$$\pi' = \tilde{\rho}_\pi \pi + \nu,$$

where $\nu \sim i.i.N.(0, \sigma_\nu^2)$ and $\tilde{\rho}_\pi \in [0, 1]$ denotes the perceived persistence of inflation.⁸ Inflation in the current period is unobservable, so before forming an expectation about future inflation, the agent needs to form expectations about today's inflation. Given this perceived law of motion, the full-information forecast is given by $\tilde{\rho}_\pi \pi$. But because π is not perfectly observable, the actual forecast will deviate from this full-information forecast. These deviations are costly, and the agent can pay more attention to reduce these deviations. Thus, the agent's choice is not only about how to form her expectations given certain information but about how to choose and process this information optimally while taking into account how this will later affect her forecast.

The agent's prior is assumed to be Gaussian; $\pi \sim N(\pi^{prior}, \sigma_\pi^2)$, with π^{prior} denoting the prior mean and σ_π^2 the prior uncertainty. I assume that the agent's prior uncertainty, σ_π^2 , increases smoothly (strictly monotonically) with the level of inflation. This assumption reflects the strong positive empirical correlation between the inflation level and its volatility. In my baseline sample, for example, the correlation between the average level of inflation and its volatility, computed within five-year rolling windows, is 0.76. The agent knows σ_π^2 , but she cannot back out the inflation rate from observing σ_π^2 .⁹

The signals the agent obtains are Gaussian:

$$s = \pi + \varepsilon,$$

⁸That inflation expectations solely depend on perceived inflation is supported by a large empirical literature documenting that perceived inflation is indeed the key predictor for inflation expectations (see, e.g., Jonung (1981) and Weber, D'Acunto, Gorodnichenko, and Coibion (2022) for households and Candia & Weber & Gorodnichenko & Coibion (2023) for firms). That said, however, I also allow for a multivariate expectations formation process in the estimation later.

⁹Note that σ_π^2 is the agent's subjective uncertainty, which is part of the agent's information set, whereas the realization of current inflation, π , is not perfectly observed. As in rational-inattention models more broadly, I take the agent's perceived distribution of inflation (including its second moment) as given when attention is chosen. This abstracts from learning or uncertainty about uncertainty itself. Consistent with my model, Li, Londono, and Ma (2025) show that inflation uncertainty increased substantially during the recent inflation surge.

with noise $\varepsilon \sim i.i.N.(0, \sigma_\varepsilon^2)$. Attention is inversely related to the noise variance σ_ε^2 , which is chosen optimally. Hence, paying more or less attention is akin to choosing whether to acquire more or less precise signals.

Given the Gaussian prior and signal, the optimal forecast, π^e , takes the form

$$(1) \quad \pi^e = \tilde{\rho}_\pi(1 - \gamma_\pi)\pi^{prior} + \tilde{\rho}_\pi\gamma_\pi s,$$

where $\gamma_\pi \in [0, 1]$ measures the agent's attention to inflation, and I refer to it as attention or the updating gain, interchangeably.¹⁰ Note that γ_π is akin to a Kalman gain where this gain is chosen optimally as it reflects the agent's attention choice. Hence, the results in this section can be viewed as an attention-based microfoundation for models of endogenous or time-varying updating gains and unanchoring (as, e.g., in Gáti 2023). When the agent is inattentive, she obtains relatively noisy signals and thus, puts little weight on these signals, reflected in a small γ_π . Therefore, lower attention, that is, a lower γ_π , implies that the agent updates her expectations to a given signal s less strongly and instead puts more weight on her prior beliefs π^{prior} .

Equation (1) describes how agents form their inflation expectations for a *given* level of attention γ_π . Attention, however, is a choice, and the agent chooses γ_π optimally, given the current inflation environment and the costs and benefits of paying attention. As I detail in Supplemental Appendix A, I assume that the agent obtains a certain level of attention for free, which I denote $\gamma_{\pi,L}$, where *L* denotes that this is a relatively *Low* level of attention. Increasing attention beyond this level allows the agent to predict inflation more accurately, and hence, the agent makes smaller mistakes. Increasing her attention, however, is costly, and the agent solves this trade-off optimally. In contrast to most models of rational inattention (see, e.g., Maćkowiak, Matějka, and Wiederholt (2023) for a recent review), the agent in my model can choose between paying either a fixed cost, in which case her attention jumps to a *Higher* level of attention, $\gamma_{\pi,H} > \gamma_{\pi,L}$, or paying a standard mutual information cognitive cost and adjusting her attention to inflation smoothly.¹¹

As inflation increases, the agent's prior uncertainty increases. Therefore, the cost of being inattentive increases with the level of inflation, and the agent becomes more likely to increase her attention. Under conditions I derive in Supplemental Appendix A, the agent's optimal attention choice takes on the behavior shown in Figure 2.¹² The figure shows the optimal attention level γ_π^* on the vertical axis at different levels of inflation on the horizontal axis.

¹⁰The updating gain γ_π captures the signal-to-noise ratio and can be written as $\gamma_\pi = 1 - \frac{\sigma_{\pi s}^2}{\sigma_\pi^2} \in [0, 1]$, where σ_π^2 denotes the agent's prior uncertainty about inflation and $\sigma_{\pi s}^2$, the posterior uncertainty given the signal s .

¹¹Mutual-information costs have an axiomatic foundation, but adding a fixed-cost attention option means the overall cost structure is best viewed as a hybrid menu of information technologies and thus need not satisfy all axioms that characterize pure mutual-information costs. This allows me to solve for attention and the attention threshold in closed form, and Section IB shows that the data favor the threshold specification.

¹²In Supplemental Appendix A, I provide all the details necessary to derive Figure 2 and characterize the threshold analytically. One important condition that needs to hold is that the fixed cost the agent needs to pay for an attention level of $\gamma_{\pi,H}$ must be relatively low compared to the mutual information cost.

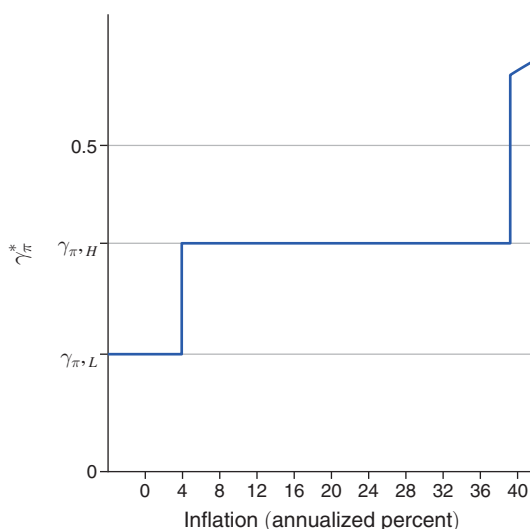


FIGURE 2. OPTIMAL ATTENTION

Notes: This figure shows optimal attention to inflation, γ_{π}^* , as a function of the level of inflation π . The attention levels $\gamma_{\pi,L}$ and $\gamma_{\pi,H}$ are at 0.18 and 0.35 to be consistent with the empirical findings in Table 1.

The figure illustrates how agents optimally allocate their attention to inflation. At relatively low levels of inflation, agents do not pay more attention than what they obtain for free. The reason is that their prior uncertainty is low in these times, and hence, the benefit of increasing their attention is less than the costs of doing so. Once inflation exceeds a threshold, $\bar{\pi}$, the agent pays the fixed cost, and her attention jumps to $\gamma_{\pi,H}$. Attention then stays constant at $\gamma_{\pi,H}$ even at higher levels of inflation, up until a second threshold at which attention jumps once more, after which it increases smoothly with inflation. This second jump mirrors the agent's decision to pay the mutual information cost instead of the fixed cost. The reason is that with the fixed cost, the agent's attention is stuck at $\gamma_{\pi,H}$, and hence, the agent's losses from not being fully attentive increase as inflation increases. Once these losses are large enough, the agent decides to pay the mutual information cost, which allows her to increase attention even further. The empirical results in the following section suggest, however, that this last part has not been relevant in the United States since the beginning of my sample. Nevertheless, it illustrates that attention may increase even further if inflation reaches these very high levels.

The state-dependent attention gain implies an asymmetry in the agent's expectation formation; if inflation and prior expectations are low, attention is low, and expectations only update slowly in response to new signals, which means that expectations remain relatively low. If inflation is high, attention rises, and expectations are updated strongly. Hence, expectations may increase quickly when inflation itself is high. If inflation declines after a period of high inflation and people become less attentive, updating becomes slower again. However, if people's prior beliefs are higher after an inflationary episode, the slower updating implies that inflation expectations remain stubbornly higher.

Dynamic Model.—To bring the attention model to the data, I now introduce dynamics. The agent believes that inflation π follows

$$\pi_t = (1 - \tilde{\rho}_\pi)\underline{\pi} + \tilde{\rho}_\pi\pi_{t-1} + \nu_t,$$

where $\underline{\pi}$ is the agent's long-run belief about inflation. I assume that the error term ν_t is normally distributed with mean zero and variance σ_ν^2 . The agent receives a signal about inflation of the form

$$s_t = \pi_t + \varepsilon_t,$$

where the noise ε_t is normally distributed with variance σ_ε^2 . As in the static model, higher attention is reflected in less noise, that is, a lower σ_ε^2 .

Figure 2 suggests that there are two attention regimes: one with low attention and low inflation and one with high attention and high inflation. As I show in the following, this two-regime specification is the specification that the data prefer, relative to specifications with more than two regimes or smooth changes in attention. I use subscripts r to denote (potentially) regime-dependent parameters. Note, however, that my estimation approach does not impose that attention has to be higher when inflation is higher.

I assume that agents always use the steady-state Kalman filter in each regime $r \in \{L, H\}$, so that optimal updating in a given regime r is given by

$$(2) \quad \pi_{t+1|t}^e = (1 - \tilde{\rho}_{\pi,r})\underline{\pi}_r + \tilde{\rho}_{\pi,r}\pi_{t|t-1}^e + \tilde{\rho}_{\pi,r}\gamma_{\pi,r}(\pi_t - \pi_{t|t-1}^e) + \eta_t,$$

where $\gamma_{\pi,r}$ captures how attentive the agent is.¹³ Explicitly accounting for the attention threshold $\bar{\pi}$, agents form their one-period-ahead inflation expectations according to

$$(3) \quad \pi_{t+1|t}^e = \begin{cases} (1 - \tilde{\rho}_{\pi,L})\underline{\pi}_L + \tilde{\rho}_{\pi,L}\pi_{t|t-1}^e + \tilde{\rho}_{\pi,L}\gamma_{\pi,L}(\pi_t - \pi_{t|t-1}^e) + \eta_t, & \text{when } \pi_{t-1} < \bar{\pi} \\ (1 - \tilde{\rho}_{\pi,H})\underline{\pi}_H + \tilde{\rho}_{\pi,H}\pi_{t|t-1}^e + \tilde{\rho}_{\pi,H}\gamma_{\pi,H}(\pi_t - \pi_{t|t-1}^e) + \eta_t, & \text{when } \pi_{t-1} \geq \bar{\pi}. \end{cases}$$

Here, $\pi_{t+1|t}^e$ denotes expectations about inflation in period $t + 1$ based on time- t information. Note that I allow the long-run mean belief, $\underline{\pi}_r$, the perceived persistence, $\tilde{\rho}_{\pi,r}$, and attention, $\gamma_{\pi,r}$, to differ across regimes.¹⁴ I discuss alternative specifications and robustness checks at the end of the section.

B. Estimating Attention and the Attention Threshold

Data.—As my baseline measure of inflation expectations, I rely on the Survey of Consumers from the University of Michigan (2026). I use average and median household inflation expectations for the period 1978:1–2024:5. For the period 2013–2024, I also use individual inflation expectations from the Survey

¹³ Assuming that agents always use the steady-state Kalman filter is a standard assumption in the rational inattention literature and basically means that the agent receives all her signals before forming her expectations (see, e.g., Maćkowiak and Wiederholt 2009; Maćkowiak, Matějka, and Wiederholt 2018, 2023). This leaves conditional second moments time invariant and thus the optimal level of attention constant. An important recent paper that relaxes this assumption is Afrouzi and Yang (2021). However, they focus on the linear-quadratic-Gaussian case, which in my case is not applicable due to the nonlinearity introduced by the attention threshold.

¹⁴ Note that $\eta_t = \tilde{\rho}_{\pi,r}\gamma_{\pi,r}\varepsilon_t$. Through the lens of the rational inattention model, ε_t and thus, η_t are uncorrelated with the independent variables.

of Consumer Expectations from the Federal Reserve Bank of New York (2026). Even though I focus on inflation and inflation expectations over one quarter, I use monthly data to increase the number of observations. As a robustness check, however, I also consider expectations at quarterly frequency. One advantage of using quarterly observations is that the Survey of Consumers provides mean expectations going back to 1960:II. Both surveys ask consumers for their price growth expectations one year ahead: $\pi_{t+12|t}^e$. I transform them into one-quarter-ahead forecasts as follows: $\pi_{t+3|t}^e \equiv \frac{\pi_{t+12|t}^e}{4}$. Computing one-quarter-ahead expectations allows me to compare the results directly to the model, which is calibrated at quarterly frequency. For actual inflation, I use the monthly CPI inflation rate from the FRED database (Federal Reserve Bank of St. Louis 2026), and to be consistent with the model, I focus on quarter-on-quarter inflation: $\pi_t \equiv \frac{P_t - P_{t-3}}{P_{t-3}}$. As I show in Supplemental Appendix B, the results are qualitatively similar when using one-year-ahead expectations and year-on-year inflation as the actual measure of inflation.¹⁵

Estimating Attention and the Attention Threshold.—In order to estimate the two attention levels $\gamma_{\pi,r}$ for $r \in \{L, H\}$, as well as the attention threshold $\bar{\pi}$, I estimate the following threshold regression:

$$(4) \quad \pi_{t+3|t}^e = \mathbf{1}_{\pi_{t-1} \leq \bar{\pi}} (\beta_{0,L} + \beta_{1,L} \pi_{t|t-3}^e + \beta_{2,L} (\pi_t - \pi_{t|t-3}^e)) \\ + (1 - \mathbf{1}_{\pi_{t-1} \leq \bar{\pi}}) (\beta_{0,H} + \beta_{1,H} \pi_{t|t-3}^e + \beta_{2,H} (\pi_t - \pi_{t|t-3}^e)) + \epsilon_t,$$

where $\beta_{0,r} = (1 - \tilde{\rho}_{\pi,r}) \underline{\pi}_r$ denotes the intercept in regime $r \in \{L, H\}$, $\beta_{1,r} = \tilde{\rho}_{\pi,r}$ the perceived persistence, and $\frac{\beta_{2,r}}{\beta_{1,r}} = \gamma_{\pi,r}$ the attention level in regime r . I therefore not only allow the attention parameters to differ across regimes but also the perceived persistence of inflation as well as agents' long-run beliefs about inflation. $\mathbf{1}_{\pi_{t-1} \leq \bar{\pi}}$ is the indicator function that equals one when inflation in the previous month π_{t-1} was below the threshold $\bar{\pi}$ and zero otherwise. The threshold value is then estimated jointly with the regression coefficients by minimizing the sum of squared residuals obtained for all possible thresholds (e.g., Gonzalo and Pitarakis (2002) and Hansen (2011)). Note that I do not impose that the attention level in the regime in which inflation is above the threshold needs to be higher than in the regime with inflation below the threshold.

Estimation Results.—Table 1 shows the estimation results. For the baseline specification, I estimate an attention threshold of $\hat{\bar{\pi}} = 3.91\%$. Attention in the regime in which inflation is below this threshold is $\hat{\gamma}_{\pi,L} = 0.18$, and attention in the high-inflation regime is equal to $\hat{\gamma}_{\pi,H} = 0.35$. Thus, attention in the high-inflation

¹⁵ The remaining public data sources used in the paper and in the replication package are Google Trends (Google 2026); the Cleveland Fed Survey of Firms' Inflation Expectations (Federal Reserve Bank of Cleveland 2026), the Philadelphia Fed Survey of Professional Forecasters (Federal Reserve Bank of Philadelphia 2026b), and the Philadelphia Fed Real-Time Data Set for Macroeconomists (Federal Reserve Bank of Philadelphia 2026a).

TABLE 1—ESTIMATED ATTENTION LEVELS AND THE ATTENTION THRESHOLD

	Threshold $\hat{\pi}$	Low att. $\hat{\gamma}_{\pi,L}$	High att. $\hat{\gamma}_{\pi,H}$	p -val. $H_0 : \gamma_{\pi,L} = \gamma_{\pi,H}$
Mean expectations	3.91%	0.18	0.35	0.000
SE		(0.018)	(0.042)	

Notes: This table shows the results from regression (4), 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 for the attention estimates are computed using the delta method, based on Newey–West heteroskedasticity- and autocorrelation-robust covariance estimates with 12 lags.

regime is higher than in the low-inflation regime, and I therefore refer to the regime with inflation above the threshold as the *high-attention regime*. The threshold value of 3.91 percent implies that the US economy spent about 32 percent of the time between 1978 and 2024 in the high-attention regime. Most recently, inflation exceeded this threshold in early 2021. Google searches also started to increase around that time (see panel A in Figure 1). These findings are consistent with the theoretical predictions in Figure 2.

To test for multiple thresholds, I use the Bayesian Information Criterion (BIC) to select the number of thresholds, and I find that the data prefer the specification with only one threshold.¹⁶

C. Robustness

I now discuss the robustness of these results. I summarize the additional tests here briefly and relegate a detailed discussion of all these results to Supplemental Appendix B.

Median Expectations.—The results are robust to using median expectations instead of average expectations. The estimated threshold value is somewhat higher, and the attention gains lower. The lower attention gains are consistent with the fact that median expectations tend to be less volatile than mean expectations.

Quarterly Frequency.—When I run regression (4) at quarterly frequency instead of monthly frequency, I obtain a similar though slightly lower threshold value and attention estimates that are very close to my baseline estimates.

Alternative Threshold-Defining Variables.—I show that using current inflation or inflation volatility instead of last month's inflation rate as the threshold-defining variable leads to similar results. I also show, however, that the BIC prefers the level, not the volatility, as the threshold-defining variable.

Other Surveys.—I also consider individual household expectations from the New York Fed Survey of Consumer Expectations as well as firm expectations from the Survey of Firms' Inflation Expectations from the Cleveland Fed. Even though the samples for these surveys are much shorter, the findings are consistent with the

¹⁶For example, the BIC increases from -534.12 to -524.70 when going from one to two thresholds and to -512.03 when going to three thresholds. The BIC is given by $T \ln(SSR/T) + k \ln(T)$, where k is the number of parameters, T the number of periods, and SSR the sum of squared residuals. As a robustness check, I also consider the Hannan–Quinn IC and find that also the HQIC selects the model with one threshold only.

baseline results in Table 1. Professional forecasters, on the other hand, behave quite differently from households and firms.

Regional Variation.—The Survey of Consumers also provides the regions consumers are in, which allows me to leverage regional variation to test for the robustness of my results. In particular, I use the four census regions: West, Northeast, North Central (or Midwest), and South. Doing so and controlling for region-specific fixed effects leaves my baseline estimates largely unchanged.¹⁷

Alternative Attention Measure.—I consider an alternative measure of attention to inflation, following Bracha and Tang (2024, 2025). I extend their estimation until 2024 and estimate attention both at the aggregate as well as at the regional level. I find that my results are robust to this alternative attention measure by showing that the implied threshold is similar to the one estimated in Table 1 and that the differences in attention across regimes are significant. I further show that the data prefer having exactly one threshold and that controlling additionally for inflation does not affect these results and that the coefficients related to inflation are insignificant, supporting the two-regime specification.

A Multivariate System of Inflation Expectations.—The agent's perceived law of motion of inflation could in principle also depend on other variables instead of being an AR(1) process. To test whether this affects my results or not, I allow inflation expectations to also depend on unemployment expectations. I find that the coefficients related to unemployment are not significantly different from zero, and the coefficients related to inflation are largely unaffected.

Markov-Switching Model.—An alternative approach to estimate regime-dependent attention gains is estimating a Markov-switching model where I do not need to take a stance on what defines the regimes. The results I obtain from following that approach are consistent with the ones reported in Table 1.

Smooth Changes in Attention.—When I allow for additional terms in regression (4) capturing potential additional effects of past inflation or inflation volatility, I find that the data (according to the Bayesian information criterion) prefer my baseline specification. Additionally, I find that my baseline estimates are largely unchanged and that the additional coefficients are economically very small.

Attention Changes within Regime.—I estimate a time series of attention gains and regress these attention gains on the level of inflation as well as on a dummy variable capturing the threshold. The dummy coefficient is highly statistically significant, whereas the other coefficients are not. These results further support the view that

¹⁷For this, I use the following series from the FRED database: Consumer Price Index for All Urban Consumers: All Items in South (CUUR0300SA0), Consumer Price Index for All Urban Consumers: All Items in Northeast (CUUR0100SA0), Consumer Price Index for All Urban Consumers: All Items in West (CUUR0400SA0), Consumer Price Index for All Urban Consumers: All Items in Midwest (CUUR0200SA0).

attention follows the threshold-like behavior, consistent with the theoretical predictions in Figure 2.

Long-Run Expectations.—As I detail in Supplemental Appendix B, I can also use long-run expectations to estimate the attention gains as well as the attention threshold. The findings I obtain when following that approach are very close to my baseline estimates in Table 1. Similarly, controlling for long-run expectations in regression (4) leaves my baseline results largely unchanged.

II. Inflation Dynamics across Attention Regimes

In this section, I show that negative supply shocks have more inflationary and longer-lasting effects when attention is high and that the increase in attention in early 2021 roughly doubled the inflationary effects of supply shocks in the subsequent inflation surge.

Supply Shocks.—As my empirical measure of supply shocks, I use the oil supply news shocks from Känzig (2021a) for the period 1975:1–2022:12. In a first step, oil surprises are identified by using institutional features of the Organization of the Petroleum Exporting Countries (OPEC) and high-frequency data on variation in oil futures prices around OPEC announcements. In a second step, the resulting surprises are then used as an external instrument in an oil VAR, to identify a structural oil supply news shock. In the following, I show the responses to a negative shock that pushes up oil prices and lowers oil production. I refer to these shocks as oil news shocks, cost-push shocks, or supply shocks interchangeably.

Attention Regimes.—Given the results in Section I, I define the high-attention regime to be periods in which inflation in the previous month exceeded 3.91 percent. As an alternative indicator for the attention regimes, I also use Google Trends data, with the drawback that these data are only available since 2004. However, it will allow me to disentangle attention from other changes in the economy that tend to arise when inflation is higher (e.g., changes in the frequency of price adjustments; see, e.g., Blanco, Boar, Jones, and Midrigan (2024)). The Google data are normalized such that the month with the most Google searches of the word “inflation” is assigned a value of 100, and all the other months are expressed relative to that month. I assign months to the high-attention regime when Google searches of inflation in that month exceed the seventy-fifth percentile.¹⁸ As a robustness check, I also use the attention measure proposed by Bracha and Tang (2025) as an alternative.

Table 2 lists the mean and the standard deviation of the shocks for the high-attention and low-attention regime, separately. The upper part of the table shows these statistics for the case in which the regimes are defined based on whether the previous month’s inflation rate was below or above the 3.91 percent threshold, and the lower part of the table for the case where the regimes are defined based on Google

¹⁸ When I compute the pre-2020 (or also pre-2021) mean $\hat{\mu}_{google}$ and standard deviation $\hat{\sigma}_{google}$, and then estimate the ninety-fifth percentile under the assumption of an underlying normal distribution as $\hat{\mu}_{google} + 1.645 \cdot \hat{\sigma}_{google}$, the resulting value is practically identical to the seventy-fifth percentile of the full sample.

TABLE 2—SHOCK PROPERTIES ACROSS REGIMES

Regime	Mean	Standard deviation
<i>Inflation as regime-defining variable</i>		
High	−0.017	0.554
Low	0.008	0.550
<i>Google Trends as regime-defining variable</i>		
High	−0.009	0.517
Low	0.021	0.622

Notes: This table shows the mean and the standard deviation for the oil supply news shocks across the two attention regimes. The upper part of the table shows the case where the previous month's inflation is the threshold-defining variable and the lower part the case where Google Trends is used to identify the two regimes.

Trends data. We see that in both cases, the shock series have similar first and second moments across regimes. When using Google Trends as the regime-defining variable, the volatility of the supply shocks is slightly lower in times of high attention. However, the following empirical results remain robust even when excluding shocks that are larger than 1 standard deviation. Thus, the following results are unlikely to be driven by differences in the shock series across regimes.¹⁹

The Role of the Attention Regime for the Propagation of Supply Shocks to Inflation.—To examine whether the effects of negative supply shocks on inflation differ across regimes, I estimate the local projection (Jordà 2005):

$$(5) \quad \pi_{t+j} = \mathbf{1}_H(\alpha_j^H + \beta_j^H \varepsilon_t) + (1 - \mathbf{1}_H)(\alpha_j^L + \beta_j^L \varepsilon_t) + \Gamma' X_t + \epsilon_{t+j},$$

where π_{t+j} denotes inflation at time $t + j$, $\mathbf{1}_H$ is an indicator function that equals one when the economy is in the high-attention regime at the time of the shock and zero otherwise, ε_t denotes the shock at time t , and X_t are controls. In my baseline estimation, I use four lags of the shock, four lags of the unemployment rate, of inflation and of inflation expectations as controls. In Supplemental Appendix C, I show that the results remain robust when using other controls.

Figure 3 shows the estimation results of regression (5). Panel A depicts the inflation response to a negative oil news shock in the high-attention regime, panel B in the low-attention regime, panel C shows the average effect, and panel D the difference between the effects in the high-attention regime and the low-attention regime. In all cases, I consider a 1 standard deviation shock. The dark shaded areas depict the 68 percent confidence bands, and the light-shaded areas the 90 percent confidence bands. Standard errors are robust with respect to serial correlation and heteroskedasticity (Newey and West (1987) with 12 lags).

Inflation increases about twice as much in the high-attention regime compared to the low-attention regime. These differences are quite persistent and statistically significant at the 10 percent significance level in the first 6 months. Thus, when the

¹⁹Excluding large shocks also helps to address the issues that may arise with state-dependent local projections when the state is endogenous (Gonçalves, Herrera, Kilian, and Pesavento 2024).

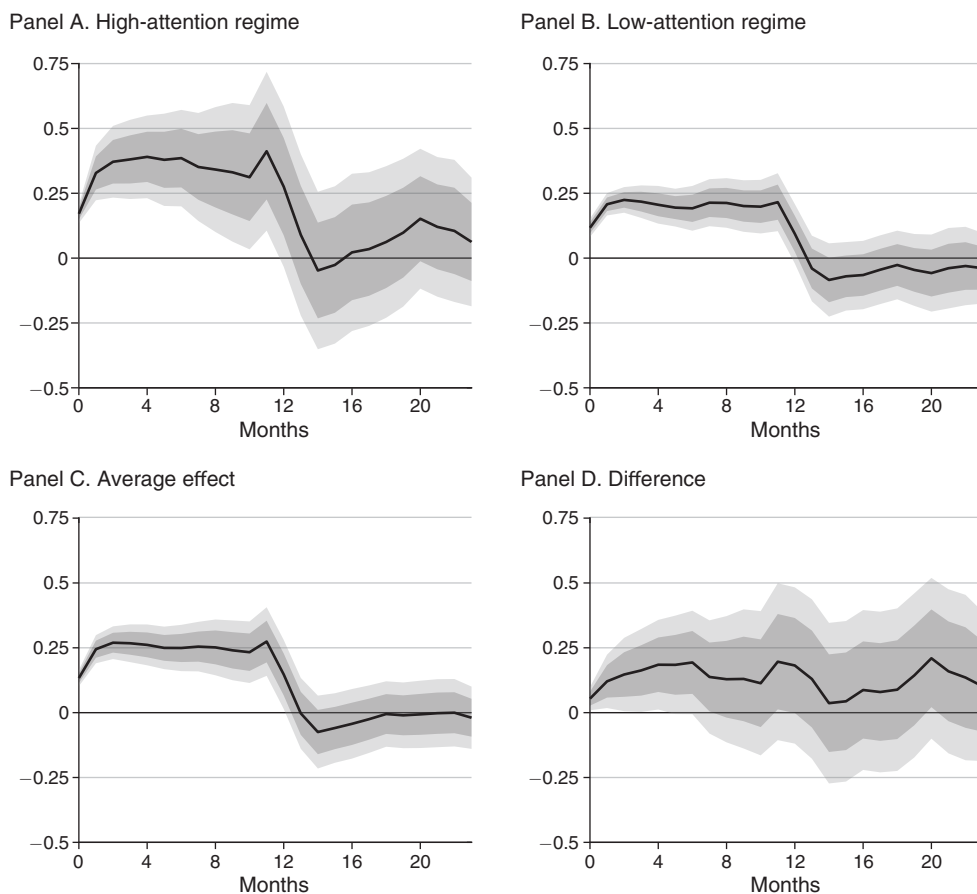


FIGURE 3. INFLATION RESPONSE TO AN OIL SUPPLY NEWS SHOCK

Notes: This figure shows the inflation response to an oil supply news shock (equation (5)) in the high-attention regime (panel A), the low-attention regime (panel B), on average across regimes (panel C), and the difference between the two regimes (panel D). The dark shaded areas depict the 68 percent confidence bands, and the light-shaded area the 90 percent confidence bands. Standard errors are robust with respect to serial correlation and heteroskedasticity (Newey and West 1987 with 12 lags).

economy is hit by a 1 standard deviation supply shock when people's attention to inflation is high, inflation increases on average by about 40 basis points. In contrast, when attention to inflation is low at the time of the shock, inflation only increases by about 20 basis points. Figure C3 in Supplemental Appendix C shows that the results are very similar when using Google Trends as the regime-defining variable.

Regional Variation.—As in Section I, I now also use regional variation of the four census regions. In particular, I use region-specific CPI inflation as the dependent variable. Additionally, I control for region fixed effects as well as four lags of region-specific inflation, plus interactions of those with the shock, to control for local shocks that may drive inflation independent of attention.

Figure 4 shows the results. We see that the results are very similar to my baseline specification even though the overall effects are slightly smaller and the confidence bands for the high-attention regime wider.

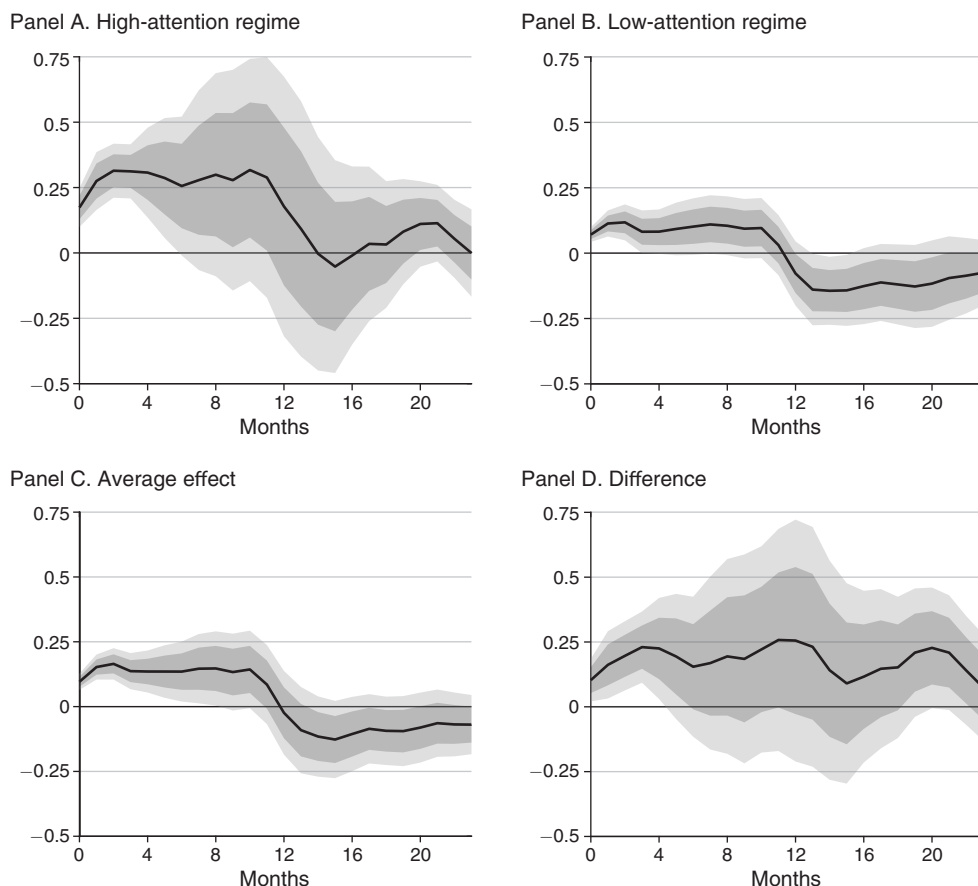


FIGURE 4. INFLATION RESPONSE TO AN OIL SUPPLY SHOCK USING REGIONAL VARIATION

Notes: This figure shows the inflation response to an oil supply news shock in the high-attention regime (panel A), the low-attention regime (panel B), on average across regimes (panel C), and the difference between the two regimes (panel D) when using regional variation and region-specific CPI inflation. The dark shaded areas depict the 68 percent confidence bands, and the light-shaded area the 90 percent confidence bands. Standard errors are robust with respect to heteroskedasticity as well as serial and cross-sectional correlation.

The regional data also help me to disentangle attention from other phenomena that arise with higher inflation. To do so, I take two approaches. In the first one, I use Google Trends as the attention-regime-defining variable for the four different regions.²⁰ To control for other phenomena apart from attention that may arise with inflation, I further include an interaction term of the shock with lagged inflation, and I include region fixed effects. Panels A–C in Figure 5 show the results. In particular, we see that adverse oil supply news shocks have a strong and persistent effect on inflation when attention is high, whereas the effects in times of low attention are substantially weaker. In addition, the interaction term with inflation is practically zero at all horizons. These results therefore suggest that attention to

²⁰I take the average within each month across all states within a particular census region in order to aggregate Google Trends at the census region level.

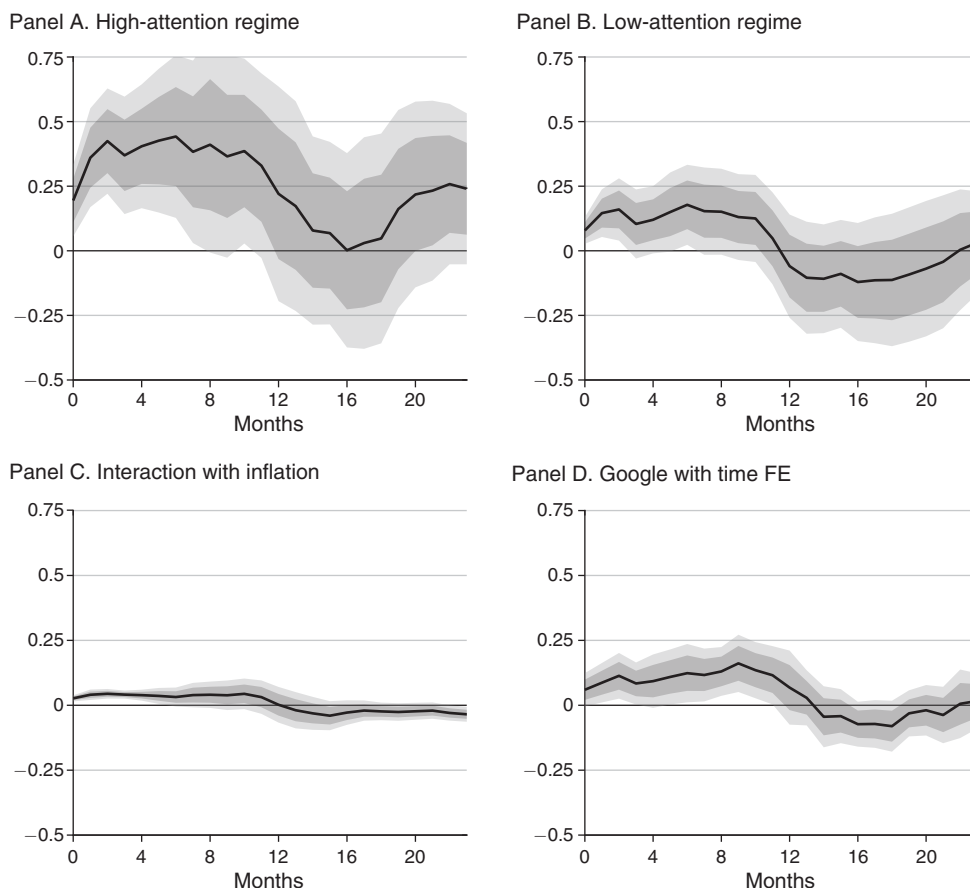


FIGURE 5. DISENTANGLING ATTENTION AND INFLATION

Notes: This figure shows the inflation response to an oil supply news shock in the high-attention regime (panel A) and the low-attention regime (panel B) when using regional CPI data and when controlling for the interaction of the shock with last month's inflation (which is shown in panel C). The attention regimes are based on Google Trends. Panel D shows the interaction term of Google Trends with the shock (for a 1 standard deviation shock and Google Trends being 1 standard deviation above its mean) when controlling for regional CPI inflation and time and region fixed effects. Standard errors are robust with respect to heteroskedasticity as well as serial and cross-sectional correlation.

inflation renders supply shocks more inflationary even when controlling for inflation itself. The results in panels A and B also suggest that the inflation response is *qualitatively* different across the two regimes. While inflation peaks on impact in the low-attention regime, it shows more of a hump-shaped response in the high-attention regime. Following Coibion, Gorodnichenko, Kueng, and Silvia (2017), I test the joint null hypothesis that the difference in impulse responses between the high- and low-attention regimes is 0 at all horizons $h = 0, \dots, 24$ and reject it with an associated p -value of 0.008.

In the second approach, I control for time and region fixed effects and for regional-specific inflation as well as an interaction term of the shock with regional inflation in order to control for other local shocks that may affect inflation other than

attention.²¹ However, since the regimes based on Google Trends overlap strongly across regions—and are therefore largely absorbed by time fixed effects—I instead include an interaction term of last month’s Google Trends searches with the shock rather than focusing on regimes. Panel D in Figure 5 shows that this interaction term is highly significant in the first 10 months (the coefficient is normalized to show the additional effect of a 1 standard deviation shock when Google Trends is 1 standard deviation above its mean). These results indicate that the different inflation responses across attention regimes are unlikely to be solely driven by aggregate phenomena that may confound the results, such as different policy responses across regimes, a general increase in the frequency of price adjustments, or an increase in the slope of the aggregate Phillips curve. Furthermore, controlling for regional fixed effects, inflation and inflation interacted with the shock, the findings in panel D are unlikely to be driven by local characteristics or local shocks and changes that affect inflation through other channels than attention. Instead, the significant effects arising from more Google searches of inflation indicate that higher attention indeed drives at least partly the different inflation responses observed across regimes.

Other Shocks.—So far, I focused on the implications of supply shocks on inflation. In Supplemental Appendix C, I show that other shocks become more inflationary in the high-attention regime as well. In Supplemental Appendix Figure C1, I show that inflation responds twice as much to the *main inflation shock* from Angeletos, Collard, and Dellas (2020a, b) and that these differences are highly persistent. In Supplemental Appendix Figure C2, I show that inflation also responds more strongly in the high-attention regime to monetary policy shocks identified using a high-frequency identification (the shocks are taken from Jarociński and Karadi (2020a, b) and are purged from the information effects of monetary policy statements). These findings suggest that higher attention to inflation not only renders supply shocks more inflationary, but shocks more generally become more inflationary. The predictions of the model derived later will be consistent with these findings.

Robustness.—In Supplemental Appendix C, I discuss a number of robustness checks. In particular, I show that my results are not driven by different oil price responses (Supplemental Appendix Figures C4 and C5) or a higher sensitivity of macroeconomic variables in general (Supplemental Appendix Figures C6 and C7). The results are very similar when excluding the COVID-19 period (Supplemental Appendix Figure C8) or when excluding the Great Inflation period (Supplemental Appendix Figure C9). Similarly, the results remain robust when using different control variables (Supplemental Appendix Figures C10 and C11) or when focusing on the cumulative changes in the price level rather than the cumulative changes in inflation compared to the initial inflation rate (Supplemental Appendix Figure C12). I also use the attention measure based on Bracha and Tang (2025) and show that the results remain robust to using this alternative measure (Supplemental Appendix Figure C13). I also consider two alternative approaches to construct Google Trends

²¹I include four lags of Google Trends, regional inflation, and regional inflation interacted with the shock.

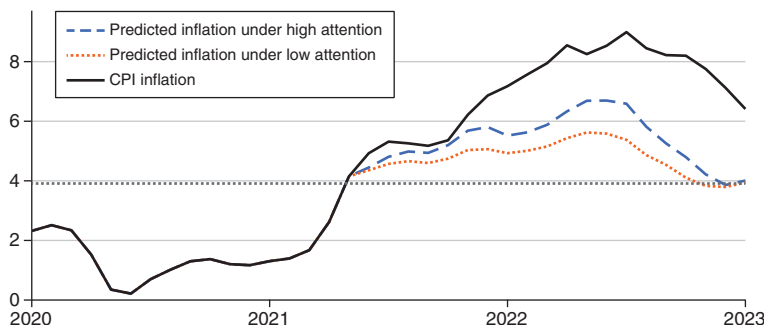


FIGURE 6. SUPPLY SHOCKS, ATTENTION, AND THE POST-COVID INFLATION SURGE

Note: This figure shows the actual US CPI inflation from 2020 until 2023, as well as the counterfactual inflation dynamics arising only from oil supply news shocks in the economy accounting for the increase in attention in April 2021 (blue dashed line) and in the economy ignoring the increase in attention (red dotted line).

at the regional level (Supplemental Appendix Figure C14). Overall, the results in this section show that inflation responds two to three times as strongly to inflationary supply shocks when the public's attention to inflation is high compared to periods in which it is low.

The Role of Attention in the Post-COVID-19 Inflation Surge.—I now use my estimates to quantify how much the increase in people's attention to inflation mattered in the post-COVID-19 inflation surge in the United States.²² The black solid line in Figure 6 shows the evolution of CPI inflation for the period 2020–2023.

To quantify the importance of the change in attention and of oil supply shocks, I estimate the counterfactual evolution of CPI inflation when only considering oil supply news shocks starting in April 2021, which is when inflation exceeded 3.91 percent and thus, the economy entered the high-attention regime.²³ I do this twice: once taking the increase in attention into account and once without the increase in attention. For the case with the increase in attention, I therefore feed in the identified oil supply shocks from April 2021 until the end of 2022 using the estimated impulse response functions from panel A of Figure 3. The blue dashed line shows the implied inflation rate. We see that the shape of the implied inflation rate is similar to the actual inflation rate, and they both peak in mid-2022. Furthermore, even though I only consider oil supply shocks and abstract from all other potential exogenous drivers of inflation, the implied inflation rate increases from the initial value of 4.1 percent up to almost 6.69 percent. Thus, the oil supply shocks account for

²² A similar approach is, e.g., used in Coibion (2012), who analyzes the historical contribution of monetary policy shocks to industrial production, unemployment, and inflation, or by Mitra (2023), who examines the role of noise shocks for the dynamics of labor markets.

²³ I ignore all previous shocks; that is, I compute the counterfactuals as if the economy was in steady state in April 2021 and that there were no shocks before that period. Thus, the reported results in this section are likely to be at the lower end of the actual importance of attention for the inflation dynamics, given that inflation was already increasing before and that the supply shocks in the first three months of 2021 were all negative (i.e., inflationary). Consistent with early 2021 being the time attention increased, Hilscher, Raviv, and Reis (2026) document a rise in the probability of persistent high inflation for the United States in mid-2021. Reis (2022) also documents that household inflation expectations in mid-2021 were not very well anchored anymore.

about 50 percent of the additional increase from early 2021 until mid-2022. This is consistent with the findings in Shapiro (2026), who estimates the supply-driven part of (PCE) inflation in 2022 to be of similar magnitude.²⁴

How much of this is due to the increase in attention? The red dotted line shows that if there had not been an increase in people's attention, that is, when relying on the estimated impulse response functions from the low-attention regime (panel B in Figure 3), the implied inflation increase from April 2021 until mid-2022 would have only been about 1.5 percentage points (compared to the 2.59 percentage points when accounting for people's change in attention). These results suggest that the rise in the public's attention to inflation was quantitatively important in driving inflation further up in response to supply shocks during the recent inflation surge and that without the increase in people's attention, supply-driven inflation would have been less than half as high as it was.

III. A Monetary Model with the Attention Threshold

To better understand the underlying mechanisms of the empirical results of the previous section, as well as the macroeconomic implications of the attention threshold more generally, I now introduce the attention threshold and changing degrees of people's attention to inflation in an otherwise standard New Keynesian model (Woodford 2003; Galí 2015).

A. Households

There is a representative household obtaining utility from consumption and disutility from working, with lifetime utility

$$(6) \quad \tilde{E}_0 \sum_{t=0}^{\infty} \beta^t Z_t [\log(C_t) - \Xi H_t],$$

where C_t is consumption of the final good, H_t is hours worked, β is the household's time discount factor, and $\tilde{E}_t$ denotes the household's subjective expectations operator based on information available in period t . Z_t are exogenous preference shocks. The parameter Ξ is the utility weight on hours worked.

Households maximize their lifetime utility subject to the flow budget constraints

$$(7) \quad C_t + B_t = W_t H_t + \frac{1 + R_{t-1}}{1 + \pi_t} B_{t-1} + \frac{T_t^H}{P_t}, \text{ for all } t,$$

where B_t is the real value of government bonds, W_t the real wage, π_t is the net inflation rate, and R_t the nominal interest rate. T_t^H comprises lump-sum taxes and transfers from the government as well as firm profits.

²⁴Even though I focus on supply shocks, the increase in people's attention to inflation in 2021 likely also increased the inflationary effects of demand shocks, such as monetary stimulus, given that I also find demand shocks to be more inflationary in times of higher attention (Supplemental Appendix Figure C2).

Maximizing (6) subject to (7) yields the Euler equation

$$(8) \quad Z_t C_t^{-1} = \beta(1 + R_t) \tilde{E}_t \left[Z_{t+1} C_{t+1}^{-1} \frac{1}{1 + \pi_{t+1}} \right],$$

and the labor-leisure condition

$$(9) \quad W_t = \Xi C_t.$$

The labor-leisure equation (9) shows that consumption fluctuations are solely driven by aggregate wage fluctuations.

B. Firms

The firm sector is held by risk-neutral managers who discount future profits by β , and they have a mass of zero, such that their consumption is zero, and all their profits go to the households, as in Bayer, Born, and Luetticke (2024).

Final Good Producer.—There is a representative final good producer that aggregates the intermediate goods $Y_t(j)$ to a final good Y_t , according to

$$(10) \quad Y_t = \left(\int_0^1 Y_t(j)^{\frac{\epsilon-1}{\epsilon}} dj \right)^{\frac{\epsilon}{\epsilon-1}},$$

with $\epsilon > 1$. Nominal profits are given by $P_t \left(\int_0^1 Y_t(j)^{\frac{\epsilon-1}{\epsilon}} dj \right)^{\frac{\epsilon}{\epsilon-1}} - \int_0^1 P_t(j) Y_t(j) dj$, and profit maximization gives rise to the demand for each variety j :

$$(11) \quad Y_t(j) = \left(\frac{P_t(j)}{P_t} \right)^{-\epsilon} Y_t.$$

Thus, demand for variety j is a function of its relative price, the price elasticity of demand ϵ , and aggregate output Y_t . The aggregate price level is given by

$$(12) \quad P_t = \left(\int_0^1 P_t(j)^{1-\epsilon} dj \right)^{\frac{1}{1-\epsilon}}.$$

Intermediate Producers.—Intermediate producer of variety j produces output $Y_t(j)$ using labor $H_t(j)$ as its only input:

$$(13) \quad Y_t(j) = H_t(j).$$

All intermediate producers pay the same wage W_t and a sales tax (or subsidy) τ_t , which in steady state is set such that profits in steady state are zero.²⁵ These taxes are given back to firms in a lump-sum fashion, denoted $T_t^F(j)$. Taxes are assumed to be constant in the efficient economy, that is, absent price rigidities, but fluctuate around their steady state in the economy with price rigidities in order to give rise to exogenous cost-push shocks.

Each intermediate firm has two managers; one is responsible for the firm's forecasts, and the other one sets the price of firm j given these forecasts, similar to the

²⁵Therefore, we have $1 - \tau = \frac{\epsilon}{\epsilon-1}$ in steady state.

setup in, e.g., Adam and Padula (2011). I first discuss the problem of the price setter and discuss the forecaster's problem later.

When adjusting the price, the firm is subject to a Rotemberg (1982) price-adjustment friction. Cavallo, Lippi, and Miyahara (2024) and Blanco, Boar, Jones, and Midrigan (2024) argue that the frequency of price adjustments has increased during the recent inflation surge (see also Hall 2023). While attention and the frequency of price adjustment are empirically both positively correlated with inflation, my results using alternative measures of attention to inflation (such as Google Trends or the measure based on Bracha and Tang 2025)—in which I control for inflation and time fixed effects—suggest that changes in price-setting behavior alone cannot explain the whole inflation dynamics and that attention indeed played an important role. In Supplemental Appendix E.2, I show that a model with constant attention but state-dependent price adjustment costs cannot account for the inflation patterns arising from changing attention levels.

The per period profits (in real terms) are given by

$$(14) \quad (1 - \tau_t) P_t(j) \left(\frac{P_t(j)}{P_t} \right)^{-\epsilon} \frac{Y_t}{P_t} - W_t H_t(j) - \frac{\psi}{2} \left(\frac{P_t(j)}{P_{t-1}(j)} - 1 \right)^2 Y_t + T_t^F(j),$$

where $\psi \geq 0$ captures the price-adjustment cost parameter. The price setter sets the price to maximize profits:

$$(15) \quad \Omega_0(j) = \tilde{E}_0^j \sum_{t=0}^{\infty} \beta^t \left[(1 - \tau_t) P_t(j) \left(\frac{P_t(j)}{P_t} \right)^{-\epsilon} \frac{Y_t}{P_t} - MC_t H_t(j) - \frac{\psi}{2} \left(\frac{P_t(j)}{P_{t-1}(j)} - 1 \right)^2 Y_t + T_t^F(j) \right],$$

where $MC_t = W_t$ denotes the real marginal cost, which is the same for every firm. Using the production function to substitute for $H_t(j)$ and the demand for firm j 's product from the final goods producer, the corresponding first-order condition is then given by

$$\begin{aligned} (1 - \tau_t)(\epsilon - 1) P_t(j)^{-\epsilon} \frac{Y_t}{P_t^{1-\epsilon}} &= \epsilon MC_t \left(\frac{P_t(j)}{P_t} \right)^{-\epsilon-1} \frac{Y_t}{P_t} \\ &\quad - \psi \left(\frac{P_t(j)}{P_{t-1}(j)} - 1 \right) \frac{Y_t}{P_{t-1}(j)} \\ &\quad + \beta \psi \tilde{E}_t^j \left[\left(\frac{P_{t+1}(j)}{P_t(j)} - 1 \right) \frac{P_{t+1}(j)}{P_t(j)} \frac{Y_{t+1}}{P_t(j)} \right]. \end{aligned}$$

Defining $T_t \equiv 1 - \tau_t$, it follows that after a linearization around the zero-inflation steady state, firm j sets its price according to

$$(16) \quad p_t(j) = \frac{1}{\psi + \epsilon} [\psi p_{t-1}(j) + \epsilon(mc_t - t_t + p_t) + \beta \psi \tilde{E}_t^j \pi_{t+1}^j],$$

where small letters denote log deviations of the respective variables from their steady-state values (see Supplemental Appendix D for all derivations). Therefore, prices may only differ across firms j due to differences in forecasts $\tilde{E}_t^j \pi_{t+1}^j$ or differences in past prices $p_{t-1}(j)$.

Government.—The government imposes a sales tax τ_t on sales of intermediate goods, issues government bonds, and pays lump-sum taxes and transfers $\mathcal{T}_t^H$ to households and T_t^F to firms. The real government budget constraint is given by

$$B_t = B_{t-1} \frac{1 + R_{t-1}}{1 + \pi_t} + \frac{\mathcal{T}_t^H}{P_t} - \tau Y_t + T_t^F.$$

The monetary authority sets the nominal interest rate according to a (linearized) Taylor rule:

$$(17) \quad i_t = \rho_i i_{t-1} + (1 - \rho_i)(\phi_\pi \pi_t + \phi_x x_t),$$

where i_t denotes the nominal interest rate in deviations from its steady state, ρ_i captures interest rate smoothing, and ϕ_π and ϕ_x pin down the response coefficients with respect to inflation and the output gap, respectively. I discuss other rules for monetary policy in Section V.

C. Subjective Expectations under Limited Attention

The subjective expectations of households and firm managers are modeled in such a way that there is a direct mapping from the empirical results of Section I to the model. I solve the model under the assumption that the agents in a given regime do not foresee that their attention will change when inflation exceeds or falls below the threshold. Even though the attention model in Section IA features a second threshold (see Figure 2), I focus here on the case with only one threshold, given that the empirical evidence in Section I suggests that the second threshold has not been relevant in the post-1970s US experience.

Households.—Households have to form expectations about inflation and real wages, as consumption fluctuations are solely driven by aggregate wage fluctuations.²⁶ Households believe that wages and inflation both follow an AR(1):²⁷

$$\begin{aligned} \pi_t &= (1 - \tilde{\rho}_\pi) \underline{\pi} + \tilde{\rho}_\pi \pi_{t-1} + \nu_{\pi,t} \\ w_t &= (1 - \tilde{\rho}_w) \underline{w} + \tilde{\rho}_w w_{t-1} + \nu_{w,t}, \end{aligned}$$

²⁶I assume that bonds adjust residually such that the budget constraint always holds (a standard assumption in the rational inattention literature, see, e.g., the discussion on p. 242 in Maćkowiak, Matějka, and Wiederholt 2023). Households do not update their information set at the end of the period when bond holdings adjust.

²⁷The perceived law of motion and the actual law of motion coincide in general equilibrium only in the special case of full attention and no endogenous persistence and choosing the perceived persistences to be equal to the persistence of the exogenous shock.

where $\nu_{\pi,t}$ and $\nu_{w,t}$ are normally distributed with mean zero and independent from each other. I discuss the case in which households hold rational expectations about real wages later. As a baseline, I focus on $\tilde{\rho}_{\pi} = \tilde{\rho}_w = 1$, which implies that long-run expectations align with the actual long-run variables and I do not need to take a stance on what the long-run beliefs π and w are. I discuss the case with $\tilde{\rho}_{\pi} < 1$ in Supplemental Appendix E.2. Agents observe the aggregate shocks τ_t and Z_t perfectly.

At the time the household forms her expectations about future wages and inflation, she does not perfectly observe their current realizations, capturing that the household is not at all times perfectly monitoring the (real) wage incomes of the members of the household and that inflation is not perfectly observable in real time. Instead, the household only sees noisy signals of the form

$$s_{\pi,t} = \pi_t + \varepsilon_{\pi,r,t}$$

$$s_{w,t} = w_t + \varepsilon_{w,t},$$

with normally distributed noise terms $\varepsilon_{\pi,r,t}$ and $\varepsilon_{w,t}$. I assume that signals are public signals and every agent in the economy receives the same signals. This implies that all agents have the same information and hence hold the same expectations. Households treat these signals as separate, meaning that households do not infer from the signal about real wages any information about the price level and inflation (or vice versa).²⁸

As detailed in Supplemental Appendix D, potential output, that is, output under flexible prices, is constant, and consumption in log-deviations from steady state is equal to the output gap x_t in equilibrium (and equal to wages in deviations from steady state), $c_t = w_t = x_t$.²⁹ It follows that if we assume initial values $c_{0|-1}^e = w_{0|-1}^e = x_{0|-1}^e$, we have $c_{t+1|t}^e = w_{t+1|t}^e = x_{t+1|t}^e$ for all t . This holds true, even if the household does not know that consumption and wages are equal to the output gap in equilibrium.

Expectations about the output gap, x_t , then evolve as follows:

$$(18) \quad x_{t+1|t}^e = x_{t|t-1}^e + \gamma_x(x_t - x_{t|t-1}^e),$$

where $x_{t+1|t}^e$ denotes the agent's expectations of the one-period-ahead output gap. The parameter γ_x denotes attention to the output gap, based on the agent's subjective model of how the output gap evolves. A higher γ_x denotes a higher attention level. If $\gamma_x = 0$, the agent is completely inattentive and just sticks to her prior belief $x_{t|t-1}^e$, whereas $\gamma_x = 1$ captures the case of full attention, in which case the agent

²⁸ Thus, the relevant information set of households to form expectations consists of the history of those two signals, and they treat them separately when forming their expectations about real wages and inflation. An alternative is that agents have rational expectations about the wage, and they solely obtain signals about inflation. Again, households do not use information about other variables to infer anything about inflation or the price level. I show in Supplemental Appendix E.2 that the results are very similar in that case.

²⁹ Note that the price adjustment costs do neither affect the steady state nor the linearized resource constraint when linearized around the zero-inflation steady state, such that $y_t = c_t$.

believes $x_{t+1|t}^e = x_t$, which is the full-information belief of someone who believes that the output gap follows a random walk. As I discuss in more detail in the calibration section later on, I do not find any differences in attention to unemployment changes (which I use as a proxy for the output gap) in the data. I therefore impose that γ_x does not change across regimes in the baseline case. I discuss the cases with regime-dependent γ_x and with rational output gap expectations later.

Inflation expectations follow the law of motion derived in equation (3) for $\tilde{\rho}_\pi = 1$, so that they are given by

$$(19) \quad \pi_{t+1|t}^e = \begin{cases} \pi_{t|t-1}^e + \gamma_{\pi,L}(\pi_t - \pi_{t|t-1}^e), & \text{when } \pi_{t-1} < \bar{\pi} \\ \pi_{t|t-1}^e + \gamma_{\pi,H}(\pi_t - \pi_{t|t-1}^e), & \text{when } \pi_{t-1} \geq \bar{\pi}, \end{cases}$$

where $\gamma_{\pi,r}$ captures the optimal level of attention to inflation in regime $r \in \{L, H\}$.³⁰

Firm Managers.—Since there are no idiosyncratic shocks, I assume that the forecasting manager of firm j uses expectations about aggregate inflation to form her expectations about firm j 's future price change, that is, $\tilde{E}_t^j \pi_{t+1}^j = \tilde{E}_t^j \pi_{t+1}$, and that they form expectations about inflation in the same way as households. Consistent with these assumptions, Yotzov et al. (2024) show that firms' expected own-price growth is strongly positively correlated with changes in CPI inflation, and McClure, Yaremko, Coibion, and Gorodnichenko (2025) show that managers and nonmanagers hold similar average inflation and unemployment expectations and respond similarly to information treatments.³¹ As for households, all forecasters receive the same public signal about current inflation, from which it follows that $\tilde{E}_t^j \pi_{t+1}^j = \tilde{E}_t^j \pi_{t+1} = \tilde{E}_t \pi_{t+1} \equiv \pi_{t+1|t}^e$.

Assuming that firms all start out with the same initial price, that is, $p_{-1}(j) = p_{-1}$ for all $j \in [0, 1]$, it follows that all firms set the same price (as they do under rational expectations). Thus, firm-specific inflation is indeed equal to aggregate inflation, which confirms the forecaster's belief that the two are equal, and hence, the forecaster has no reason to deviate from these beliefs.

Given these assumptions, equation (16) can be written as

$$(20) \quad \pi_t = \frac{\epsilon}{\psi}(mc_t - t_t) + \beta \pi_{t+1|t}^e.$$

From the labor-leisure equation and the production function, we have $mc_t = y_t$, and since potential output is constant, we have $y_t = x_t$. Defining cost-push shocks

³⁰Without loss of generality, I do not explicitly model noise shocks. Accounting for noise shocks would introduce an additional exogenous shock but does not affect my analysis of how supply and demand shocks are transmitted.

³¹McClure, Yaremko, Coibion, and Gorodnichenko (2025) further show that managers' expectations indeed affect their economic decisions. Relatedly, Link et al. (2025) elicit firm managers' attention to economic topics, and they show that firm managers who pay more attention to inflation update their inflation expectations more strongly (consistent with my measure of attention), and they increase their prices more or plan to increase their prices more in times of high inflation compared to firm managers who do not pay attention to inflation.

as $u_t \equiv -\frac{\epsilon}{\psi} t_t$ and $\kappa \equiv \frac{\epsilon}{\psi}$, we arrive at the linearized New Keynesian Phillips curve:

$$(21) \quad \pi_t = \beta \pi_{t+1|t}^e + \kappa x_t + u_t.$$

D. Equilibrium

The equilibrium is a *restricted perceptions equilibrium* (Sargent 1991; Branch 2006); private agents' perceived law of motion for inflation and real wages is an AR(1) process, which differs from the actual law of motion of these variables.³² The model can be summarized by three equilibrium equations when expressed in log-deviations from the zero-inflation steady state (see Supplemental Appendix D):

$$(22) \quad \pi_t = \beta \pi_{t+1|t}^e + \kappa x_t + u_t,$$

$$(23) \quad x_t = x_{t+1|t}^e - (\bar{i}_t - \pi_{t+1|t}^e - r_t^*),$$

$$(24) \quad i_t = \rho_i i_{t-1} + (1 - \rho_i)(\phi_\pi \pi_t + \phi_x x_t),$$

as well as the two laws of motion for output gap expectations and inflation expectations, equations (18) and (19). Equations (22)–(24) are identical to the three-equation representation of the standard New Keynesian model (see Galí 2015) except for the expectations formation of agents.

Equation (22) is the New Keynesian Phillips curve, representing the supply side of the economy, and equation (23) denotes the aggregate Euler (or IS) equation, which together with monetary policy (equation (24)) pins down aggregate demand. The natural interest rate r_t^* is the real rate that prevails in the economy with fully flexible prices and solely depends on the exogenous shocks Z_t . It follows an AR(1) process with persistence $\rho_r \in [0, 1]$ and innovations $\varepsilon^r \sim i.i.N.(0, \sigma_r^2)$, independent of ε^u . I will refer to shocks to r_t^* as demand shocks. The nominal interest rate i_t and the natural rate are both expressed in absolute deviations of their respective steady-state values, $\bar{i}$ and $\bar{r}^*$, with $\bar{i} = \bar{r}^*$, as the model is linearized around the zero-inflation steady state.

E. Calibration

Most of the calibration is standard. I set the discount factor β to target a steady-state natural rate of 1 percent (annualized), and the slope of the Phillips curve κ to 0.057. The Taylor rule coefficients are set to $\rho_i = 0.7$, $\phi_\pi = 2$, and $\phi_x = 0.125$.³³

³²In the special case of full attention, the restricted perceptions equilibrium (RPE) may coincide with the rational expectations equilibrium if $\rho_i = 0$ and the perceived persistence of real wages and inflation coincide with the exogenous persistence of the shocks. In this case, the RPE is equivalent to a *consistent expectations equilibrium* (Hommes and Sorger 1998). See Moll (2024) for a recent overview of these different equilibrium concepts and how they relate to each other.

³³The model is determinate under this specification for the monetary policy rule. Numerically, I find that the model does not satisfy the Blanchard-Kahn conditions any longer when attention reaches a level of 0.82 (while keeping the remaining parameters fixed). When considering the calibration used to produce Figure 2, I find that this level of attention is reached at an inflation rate of 80 percent, indicating that the economy may become indeterminate at such a high level of inflation.

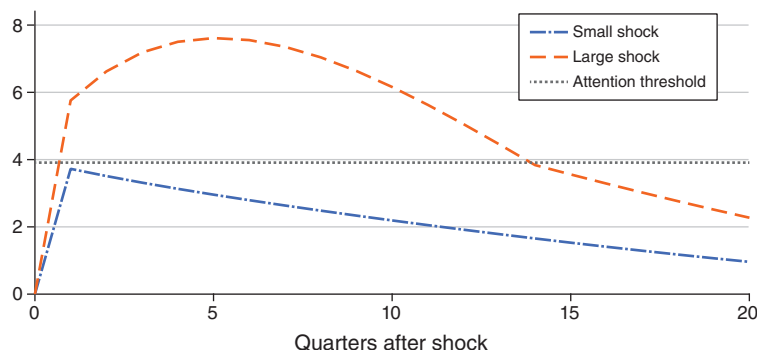


FIGURE 7. INFLATION DYNAMICS

Note: The blue dashed-dotted line shows the (annualized) inflation response to a cost-push shock that does not push inflation above the attention threshold, and the red dashed line shows the inflation dynamics for a cost-push shock that is large enough to push inflation above the threshold.

I assume that both shocks follow an AR(1) process with persistence 0.8, and I set $\sigma_u = \sigma_r = 0.3\%$. I set $\gamma_{\pi,L} = 0.18$, $\gamma_{\pi,H} = 0.35$, and the threshold to $\bar{\pi} = 3.91\%$ (annualized), as estimated in Section I.³⁴

To calibrate the attention parameter with respect to the output gap γ_x , I follow the same procedure as for inflation but focus on expectations about unemployment changes (see Supplemental Appendix D.1). This results in $\gamma_x = 0.25$ for both regimes, and hence, I impose that γ_x does not change across regimes and set it to $\gamma_x = 0.25$.

As a sanity check of the proposed empirical approach to estimate the attention threshold and the degrees of attention in a setup in which inflation and inflation expectations are determined jointly and different types of shocks are hitting the economy, I estimate the threshold regression (4) on model-simulated data and find that the regression results are exactly equal to the calibrated parameters.

IV. Inflation Surges

In this section, I show how the model with two inflation-attention regimes can jointly generate persistent heightened inflation periods, a long last mile of disinflation, forecast error dynamics mirroring the ones recently observed in the United States, and lead to an asymmetry in the dynamics of inflation. In Supplemental Appendix E.1, I show how the model can be represented in a standard AS-AD framework in which crossing the attention threshold leads to a steepening of both the AS and the AD curve. Thus, the attention threshold gives rise to a *dynamic* nonlinearity. Additionally, the heightened attention amplifies the inflationary effects of shocks. In Supplemental Appendix E.1, I also provide empirical evidence for the changes in the slopes of the AS and AD curve.

³⁴ Instead of directly calibrating the threshold, I could instead calibrate the different cost parameters, as outlined in Supplemental Appendix A. As these cost parameters only matter for the threshold, however, I take the more direct route by directly calibrating the threshold to the empirically estimated one.

A. Crossing the Attention Threshold

Figure 7 shows the inflation dynamics following a cost-push shock that pushes inflation in the first period above the attention threshold $\bar{\pi}$ with a persistence of 0.8 (the red dashed line shows the inflation response, and the black dotted line the attention threshold), as well as following a shock that does not push inflation above the threshold (blue dashed-dotted line).

The two cases exhibit fundamentally different inflation dynamics. When attention remains low, which happens in response to the relatively small shock, inflation peaks on impact and then gradually returns to its initial value of zero. After the larger shock, however, inflation keeps on increasing for about five periods before it peaks and then starts to decrease thereafter. While this decrease happens relatively fast at first, it slows down once inflation falls back below the attention threshold, and thus, inflation remains elevated quite persistently. These self-reinforcing dynamics in the first few periods would not be present in the case of deflationary shocks because attention to inflation stays constant in that scenario. Therefore, the model with the attention threshold offers a simultaneous explanation for the recent inflation surge as well as the “missing deflation puzzle” in the aftermath of the Great Financial Crisis (see, e.g., Coibion and Gorodnichenko 2015b). Additionally, the different inflation dynamics also mirror the ones discussed in Figure 5, namely, that inflation peaks on impact when attention is low, whereas it is hump shaped in times of high attention.³⁵

To understand how inflation surges may arise in the model with the attention threshold, both regime switches that take place are key. The first regime switch occurs because the shock impulse is large enough to push inflation above the attention threshold. Thus, in the second period, agents are more attentive to inflation and hence increase their inflation expectations more strongly in response to the forecast errors they make. For a given nominal rate, households now perceive the real rate to be lower and thus increase their consumption in response. The attention regime change also matters for the supply side. Firms increase their inflation expectations more strongly, which leads them to increase their prices more strongly. On top of that, the equilibrium inflation response to the cost-push shock in a given state of the economy is higher in the high-attention regime. Hence, inflation keeps on increasing, further fueling higher inflation expectations, leading to additional inflation increases.

As the shock slowly dies out, inflation eventually starts to decline. This initial period of disinflation happens relatively quickly. The reason is that once inflation actually starts to come down, households and firm managers are still highly attentive and hence revise their expectations downward strongly. Thus, actual inflation falls relatively quickly.

However, once inflation falls back below the threshold $\bar{\pi}$ —and the second regime switch occurs—the speed of disinflation decreases. When the economy enters the low-attention regime, agents decrease their attention to inflation. Thus, they mainly stick to their prior beliefs and only slowly update their expectations. Their priors are now relatively high because of the high-inflation period that agents just lived

³⁵ Supplemental Appendix Figure E4 shows the response of inflation when the shock hits in times of high attention and illustrates that the inflation response is indeed hump shaped in that case.

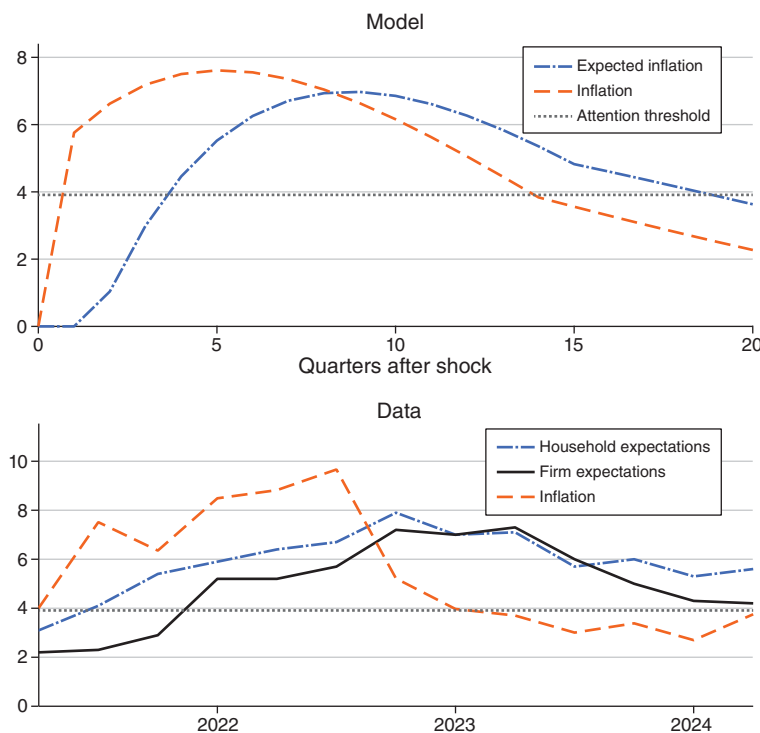


FIGURE 8. INFLATION AND INFLATION EXPECTATIONS DYNAMICS

Notes: The upper panel shows the dynamics of inflation and inflation expectations after a cost-push shock that pushes inflation above the attention threshold. The lower panel plots quarter-on-quarter (annualized) CPI inflation and average inflation expectations for the period 2021:I–2024:I, as well as the estimated attention threshold at 3.91 percent. In both panels, the inflation expectations are shifted such that the vertical distance between the two shows the respective forecast errors.

through, and therefore, their inflation expectations remain persistently high, which hinders actual inflation from decreasing quickly.³⁶

To clearly see the interplay of inflation and inflation expectations, the upper panel in Figure 8 plots expected and actual inflation, jointly. Inflation expectations are shifted such that the vertical distance between the two lines captures the forecast errors. Initially, expected inflation does not quite catch up with actual inflation, leading to positive forecast errors. After some time—around eight quarters after the shock—when inflation is already decreasing, expected inflation surpasses actual inflation. Hence, forecast errors become negative.

The recent inflationary period provides a salient example of these patterns, as documented in panel B in Figure 1. The lower panel in Figure 8 shows the same time series but for quarter-on-quarter inflation to make them consistent with the model (Figure C15 in Supplemental Appendix C shows these patterns in the

³⁶Lebow and Peneva (2024) also show that the perceptions of inflation among households came down more slowly than actual inflation.

data conditional on an oil supply news shock).³⁷ The figure shows annualized quarter-on-quarter CPI inflation (red dashed line) and average inflation expectations from the Michigan Survey (blue dashed-dotted line) and from the Survey of Firms' Inflation Expectations (black solid line) for the period from 2021:I until 2024:I. Consistent with the model, inflation peaks about a year and a half after exceeding the threshold. During this inflation surge, inflation expectations lagged actual inflation. As inflation peaked and began to decline, however, inflation expectations started to surpass actual inflation after about two years after inflation exceeded the attention threshold. Consistent with the model, inflation peaks at a higher value than inflation expectations. The recent inflation surge is just one example of a high-attention period. The model's dynamics are also consistent with the empirical findings in Blanco, Ottonello, and Ranošová (2025), who document, for a number of countries and different periods of inflation surges, that (i) inflation stays persistently high after the initial surge and (ii) that short-run inflation expectations initially fall short of actual inflation.

That inflation expectations stay persistently high may lead to a prolonged period of inflation stubbornly above the central bank's target even though the initial disinflationary phase happens relatively quickly. Put differently, once attention to inflation decreases again, the higher prior expectations after the inflation surge may render the "last mile" of inflation back to target more arduous. In Supplemental Appendix E.2, I show that the attention decrease can explain a substantial fraction of the long last mile of disinflation observed in the United States after the recent inflation surge.

Stubbornly high inflation and inflation expectations also give rise to a heightened risk of another subsequent inflation surge. The higher inflation expectations keep actual inflation higher for longer and therefore closer to the attention threshold. Thus, a subsequent inflationary shock is more likely to push inflation back above the threshold and therefore lead to another episode of persistently high inflation. Hence, endogenous changes in the private sector's attention to inflation may partially account for some of the empirically documented time variation in trend inflation (see, e.g., Stock and Watson 2016).

In Supplemental Appendix E.2, I show that these inflation dynamics are unique to the model with the attention threshold. In particular, the models under full-information rational expectations (FIRE) or in which attention remains low predict that inflation peaks on impact and then comes down relatively quickly. Additionally, models with FIRE could not account for the observed dynamics of forecast errors (among other failures of this model in accounting for the recent inflation dynamics). A model variant in which attention to inflation is always high, on the other hand, can produce the initial hump-shaped response but then predicts a fast decline back to target; that is, this model would not explain why we see such a long last mile of disinflation. Furthermore, a model in which attention is always high would have predicted a very pronounced deflationary period after the Great Financial Crisis. Thus, accounting for the observed attention changes is necessary to rationalize the recent inflationary episode.

³⁷ Angeletos, Huo, and Sastry (2020) show that this initial undershooting followed by a delayed overshooting of expectations is a general pattern in response to shocks in the data.

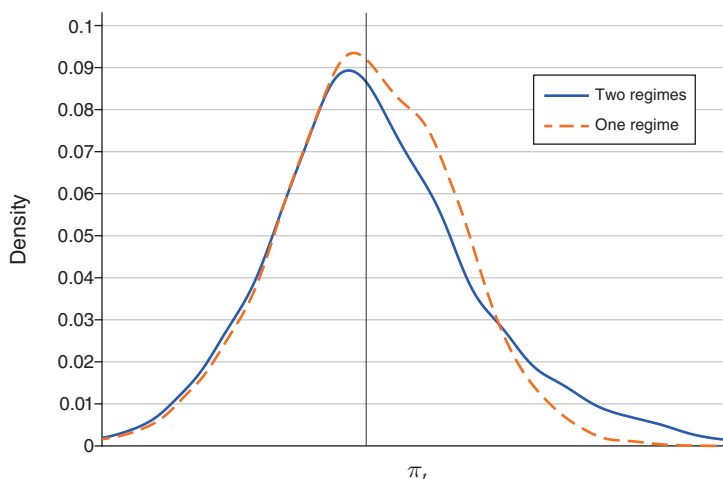


FIGURE 9. THE ATTENTION THRESHOLD AND INFLATION ASYMMETRY

Note: This figure shows the distribution of inflation (annualized) for the model with the attention threshold (solid blue line) and the one without the attention threshold (dashed red line).

In Supplemental Appendix E.2, I further discuss (i) the inflation dynamics following a demand shock (Supplemental Appendix Figure E5), (ii) what the model predicts when attention to the output gap decreases in times of high attention to inflation (Supplemental Appendix Figure E6), and (iii) how the inflation dynamics look when consumption expectations are formed under FIRE. In cases (i) and (ii), the inflation surge is somewhat more persistent but otherwise very similar to the baseline case of the discussed cost-push shock with constant attention to the output gap, whereas in (iii) the model produces slightly less endogenous persistence. I also consider the possibility that attention stays elevated for some time after an inflation surge and show that my results are largely unaffected when doing so.

B. Asymmetry

The attention threshold induces an asymmetry in the dynamics of inflation. When inflation exceeds the threshold, attention increases, leading to a period of persistently high inflation. If, however, inflation is particularly low, attention remains unchanged. For example, when a shock pushes inflation from 0 percent to -4 percent, attention does not change. Therefore, we would not see long-lived periods of pronounced deflation after such a shock, consistent with the fact that the US economy did not experience any long-lasting deflationary periods since World War II. These asymmetries matter for the overall properties of inflation. In particular, ignoring the attention threshold results in underpredicting the risk of persistently high inflation rates.

Figure 9 plots the distribution of inflation for the model with the attention threshold (blue solid line) and for the limited-attention model without the threshold (red dashed line). These figures are obtained by simulating the model for 10,000 periods by hitting it with random normally distributed cost-push and demand shocks.

TABLE 3—MONETARY POLICY RULES

Nr.	Name	Equation
(1)	Taylor rule with smoothing	$i_t = \rho i_{t-1} + (1 - \rho)(\phi_\pi \pi_t + \phi_x x_t)$
(2)	Taylor rule without smoothing	$i_t = \phi_\pi \pi_t$
(3)	Optimal RE commitment policy	$\pi_t + \frac{\Upsilon}{\kappa}(x_t - x_{t-1}) = 0$
(4)	Optimal RE discretionary policy	$\pi_t + \frac{\Upsilon}{\kappa} x_t = 0$
(5)	Strict inflation targeting	$\pi_t = 0$

The model with the attention threshold has a substantially thicker right tail than the one without the attention threshold, as is the case empirically. The probability that inflation exceeds 8 percent (annualized) is about 8.3 percent in the model with the threshold and thus very close to its empirical counterpart of 7.3 percent, whereas the model without the threshold predicts inflation to exceed 8 percent only 2.9 percent of the time. When it comes to periods of deflation, the two models exhibit very similar properties. For example, both models predict inflation to fall below -8 percent in only 3.5–4 percent of the periods, compared to 0.6 percent empirically, and the median in both models is very close to 0.³⁸ Thus, inflation in the model without the attention threshold is symmetric around its steady-state value of 0, whereas it features a substantially higher risk of periods of high inflation in the model with the threshold. Inflation is also more volatile when attention to inflation is higher.

V. Monetary Policy Implications

I now characterize the normative implications of the inflation attention threshold and the corresponding changes in attention. To compare different policy rules, I define the central bank's loss function as

$$(25) \quad \frac{1}{2} E_0 \sum_{t=0}^{\infty} \beta^t [\pi_t^2 + \Upsilon x_t^2],$$

where Υ is the relative weight of the output gap, which I set to $\Upsilon = 0.007$ as in Adam and Billi (2006). The policymaker wants to minimize (25) subject to the private sector's optimality conditions, characterized by equations (22) and (23). But I assume that the planner wrongly believes that the private sector holds rational expectations. The problem from the policymaker's perspective is then identical to the one in Clarida, Gali, and Gertler (1999), who show that the optimal policy is given by

$$\pi_t + \frac{\Upsilon}{\kappa}(x_t - x_{t-1}) = 0$$

³⁸The mean is above zero in the model with the threshold, whereas it is practically zero in the model without the threshold. I discuss this in more detail in Section V, where I derive the normative implications of these results.

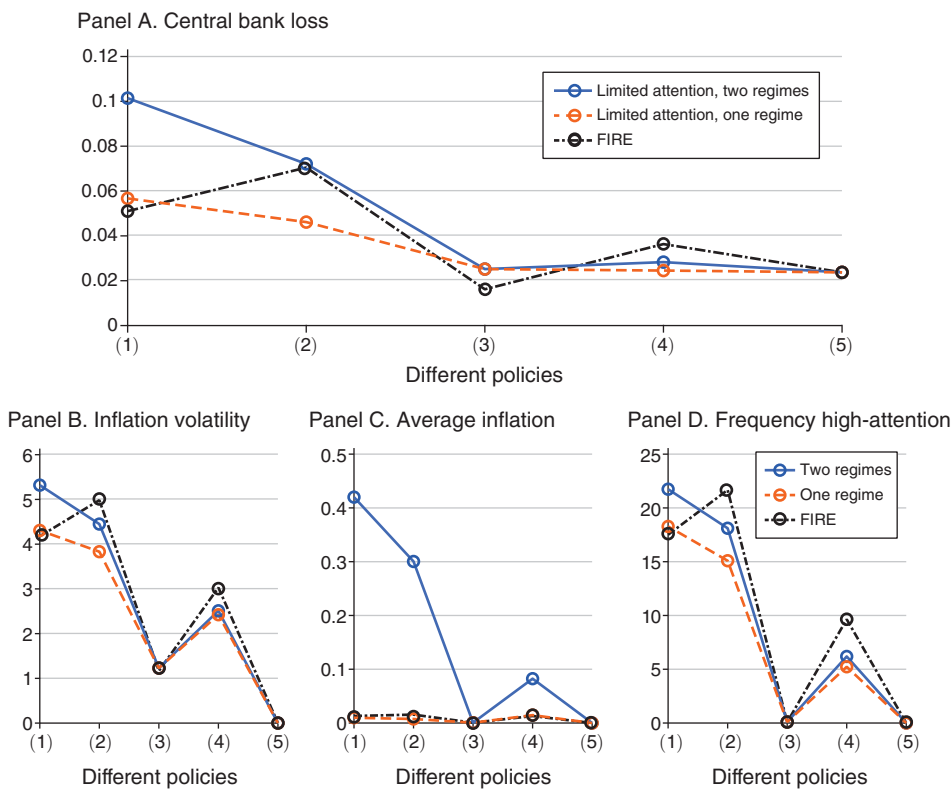


FIGURE 10. IMPLICATIONS OF DIFFERENT MONETARY POLICY RULES

Note: This figure shows the central bank loss (using equation (25) and shown in panel A), inflation volatility (panel B), average inflation (panel C), and the frequency of being in the high-attention regime (panel D) for the five different monetary policy rules from Table 3.

if the policymaker can fully commit to its policy. If the policymaker cannot commit, the optimal policy rule under discretion is given by

$$\pi_t + \frac{\gamma}{\kappa} x_t = 0.$$

In the following, I compare the implications of these two policy rules to the Taylor rule (24) as well as to a Taylor rule without interest rate smoothing and no response to the output gap, that is, to (24), where $\rho_i = \phi_x = 0$, as well as to a strict-inflation targeting regime in which inflation is kept at zero at all times. Table 3 summarizes these different policy rules.

I then simulate the economy for 10,000 periods for each of the different policy rules. Panel A in Figure 10 plots the central bank's losses (25) for the model with the attention threshold (blue solid line), with limited attention but absent the attention threshold (red dashed line) and the model under FIRE (black dashed-dotted line) for the five different policy rules. Panel B shows the respective inflation volatilities, panel C the average level of inflation, and panel D the frequency of how often inflation is above the threshold of 3.91 percent.

There are two main takeaways from Figure 10. First, following simple Taylor rules (policy rules (1) and (2)) leads to substantially larger central bank losses compared to optimal policy rules or a strict inflation targeting rule in the model with the attention threshold, especially for the case with interest rate smoothing.³⁹ The reason is that the economy spends a substantial amount of time in the high-attention regime in which inflation is high and volatile (see panel D in Figure 10). Due to the asymmetry of the attention threshold, the average level of inflation is higher when the economy is in the high-attention regime frequently (panel C). This is in stark contrast to the model without the threshold or the one with fully informed rational agents, where inflation fluctuates symmetrically around zero. Interest rate smoothing introduces additional persistence, such that the periods in the high-attention regime last longer, and thus, the average level of inflation and its volatility increase.

The second main takeaway is that these losses can be mitigated when monetary policy follows one of the rules (3)–(5). In these cases, inflation is relatively stable and fluctuates almost symmetrically around zero, as the economy very rarely stays in the high-attention regime. In the case of the strict-inflation targeting regime (5), the inflation volatility is exactly zero. However, in that case, the output gap is more volatile (not shown) such that the overall losses are very similar to the ones under the other policy rules from (3) and (4).

Overall, Figure 10 illustrates that following simple Taylor rules, especially ones with interest rate smoothing and relatively low inflation-response coefficients, can lead to large central bank losses when the public's attention to inflation increases during times of high inflation. Policies that are more hawkish and induce much smaller inflation fluctuations, in contrast, can mitigate the potentially detrimental effects of sudden increases in attention much more effectively or even prevent these episodes from happening completely.

VI. Conclusion

The recent inflation surge brought inflation back on people's minds. In this paper, I quantify the inflation attention threshold after which people start to pay more attention to inflation. I estimate this attention threshold to be at an inflation rate of about 4 percent and that attention doubles from the low-attention regime to the high-attention regime. Supply shocks become twice as inflationary in the high-attention regime.

A New Keynesian model that accounts for the inflation attention threshold can replicate the empirical findings and produces inflation and inflation expectations dynamics that are consistent with the ones documented empirically and recently observed in the United States. As inflation exceeds the threshold, the increase in people's attention leads to an endogenous amplification of the initial inflation surge. After inflation peaks, inflation comes back down relatively quickly initially, but once attention to inflation decreases again, the higher prior expectations after the

³⁹Gáti (2023) shows that in her model with varying degrees of long-run-expectations anchoring, losses of Taylor rules with a low inflation-response coefficient may go to infinity, as in this case the model becomes unstable and inflation (and the output gap and interest rates) becomes explosive. Similarly, Benchimol and Bounader (2023) find that under inattention to prices, central bank losses under Taylor rules are higher than with other policy rules.

inflation surge may render the “last mile” of inflation back to target more arduous. Accounting for varying attention levels also matters for the model’s normative predictions. I show that following simple Taylor rules leads to substantially larger central bank losses compared to more hawkish rules.

The state-dependent attention mechanism studied here may interact with other forms of state dependence, such as in the frequency of price adjustment, changing supply chain networks, or the conduct of monetary policy, and exploring these interactions presents a promising avenue for future work. Similarly, characterizing the fully optimal monetary policy when people’s attention to inflation is subject to sudden changes and studying how the conduct of monetary policy feeds back into people’s attention is a fruitful direction for future research.

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