The Causal Effect of News on Inflation Expectations*

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Abstract

This paper studies the response of household inflation expectations to television news coverage of inflation. We analyze news data from CNN, Fox News, and MSNBC alongside a daily measure of inflation expectations. Using a local projection instrumental variables approach, we estimate the dynamic causal effect of inflation news coverage on household inflation expectations at a daily frequency. Increased media coverage of inflation raises expectations, with effects peaking within a few days and fading after approximately 11 days. Additionally, we document a key nonlinearity: positive CPI surprises—i.e., inflation exceeding market expectations—generate more persistent news coverage, particularly on Fox News, and lead to stronger expectation responses than negative surprises.

Keywords: Inflation expectations; expectations surveys; daily data; cable television; news coverage; local projection

1 Introduction

The news media play a large role in transmitting economic news and to the general public (Carroll 2003; Krueger and Blinder 2004; Binder 2017b; Coibion et al. 2020;

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Larsen, Thorsrud, and Zhulanova 2021; Chahrour, Nimark, and Pitschner 2021; Binder 2017a; Ehrmann, Pfajfar, and Santoroc 2017). News about monetary policy and macroeconomic data often reach consumers primarily through the media. This means that media coverage of inflation is likely to have important implications for inflation expectations and, in turn, for consumer behavior and inflation dynamics.

Assessing the *causal* impact of news coverage on inflation expectations poses challenges. When inflation and expected inflation are high, the demand for news coverage of inflation rises. Consequently, time-series correlations of the quantity of coverage and expectations do not imply a causal effect of inflation coverage on expectations. The relatively low frequency of most available survey data further makes it difficult to attribute changes in expectations to high-frequency changes in media coverage. Moreover, news coverage of inflation may contain information suggesting upward or downward pressure on prices, which may have asymmetric effects on inflation expectations (Chahrour, Shapiro, and Wilson 2024). Current research on the effect of news on inflation expectations therefore relies heavily on randomized control trials (RCTs) that directly expose some participants to selected media content (Binder 2021b; Coibion, Gorodnichenko, and Weber 2022). While such studies provide clean identification, it is unclear how generalizable their results are to news encountered outside of an experimental setting.

We make use of daily data and an instrumental variables strategy to overcome these challenges. Specifically, we study the effect of cable news coverage of inflation on household inflation expectations at daily frequency using a local projections instrumental variables (LP-IV) approach. Our primary endogeneity concern is that the quantity of inflation news increases due to expectations-driven demand for such news. The ideal instrument should therefore be a "supply shock" to inflation news—an increase in coverage driven by something other than audience demand. We argue that the release of a CPI report as well as the magnitude of the "surprise" it constitutes relative to the professional consensus forecast for that month matches this description. The release date of a CPI report is predetermined and exogenous and, *ex ante*, the surprise is not foreseeable and not driven by consumer expectations. We then use our instrument in a local projection model to study the dynamic response of consumer

expectations to news coverage of inflation.

The first part of our paper establishes the strength and relevance of our instrument. We confirm that mentions of inflation indeed increase on CPI release dates and that more surprising reports generate more news coverage. This is consistent with an RCT study by Binder 2021a.[1] Moreover, we see that the cable television coverage on CPI release dates frequently mentions the CPI report itself and indicates whether inflation was higher or lower than expected.

Both positive and negative CPI surprises increase news coverage, but somewhat asymmetrically. Positive surprises generate a larger and longer-lasting response. This asymmetry is driven by Fox News, which covers positive surprises more heavily, and for an extra day. These results are in line with prior findings that, in general, the mass media tends to emphasize negative news, including news of crime, conflict, and crises (Altheide 1997). This tendency extends to economic coverage on US television (Harrington 1989).

Our LP-IV analysis shows that an increase in inflation news coverage raises household inflation expectations, peaking within the first few days. An increase in news coverage of 128 seconds, generated by a 0.1 percentage point "surprise" in inflation expectations on a release day, raises expectations to a peak of 0.14 percentage points on day 4 and declines back to zero starting on day 11. While the magnitude of this change is small and the effect dies out, this overall effect may be attenuating the effects of inflationary and disinflationary news.

Indeed, we find an asymmetric and *persistent* expectations response to higher- or lower-than-expected inflation reports. After a positive CPI surprise, expectations rise immediately and persistently. The response is highest in the first week after the release, peaking, and then declines slightly in the second week. In contrast, negative surprises have a weaker and less robust effect on expectations, suggesting a more muted response that aligns with the reduced media coverage of such events. Related work by Gambetti, Maffei-Faccioli, and Zoi 2022, which focuses on newspaper coverage of unemployment, suggests that bad shocks have larger and more persistent

[1] Surveying consumers before and after CPI release in June 2021, she found that those interviewed after the release were 11 percentage points more likely to report having heard news about inflation.

effects than good shocks because of their higher information content—they lead to larger revisions and less disagreement in economic expectations.

Our work is related to a growing literature using high frequency data to assess the response of inflation expectations to macroeconomic data releases (Bauer 2015; Binder 2021a; Binder, Campbell, and Ryngaert 2024; Binder, Kamdar, and Ryngaert 2024; York 2023). Binder, Campbell, and Ryngaert 2024 find that CPI releases have mixed effects on consumer inflation expectations, and suggest that releases with larger effects may have been more newsworthy. Our results lend credence to that suggestion. Binder, Kamdar, and Ryngaert 2024 find that Republicans' and Democrats' inflation expectations moved in opposite directions following several CPI reports with large positive surprises in 2021, and point to different coverage of inflation on Fox versus CNN.

Our focus on cable television coverage reflects its important role in the media landscape. Two decades ago, Krueger and Blinder 2004 found that television—especially cable television—was the most frequently-used source of information about the economy by a large margin. Cable TV still remains an important source of news for adults in the United States, used much more widely than either national or local newspapers.[2]

The paper is structured as follows. Section 2 presents the daily news coverage data, survey data on inflation expectations, and the construction of the CPI "surprise" series. Section 3 examines patterns in news coverage around CPI release days. Section 4 outlines our econometric framework and estimates the dynamic causal effect of news on inflation expectations, emphasizing the asymmetric impact of positive and negative inflation surprises. Section 5 provides robustness checks, and Section 6 concludes.

[2]An Economist/YouGov poll from March 2022 found that 39% of adults had used cable TV as a news source in the past week, versus 23% and 22% for national newspapers and local newspapers, respectively. See https://today.yougov.com/politics/articles/41957-trust-media-2022-where-americans-get-news-poll.

2 Data

Our study uses three sets of data: survey data on consumer inflation expectations, cable television coverage data, and data from CPI releases and professional forecasts use to construct the instrument. The sample includes all available data from the Biden presidency (January 20, 2020 to May 1, 2024), which included a rise and decline in inflation and major inflation surprises of both positive and negative sign.[3] In this period, cable television coverage of inflation was more prominent than in prior years, and CPI releases were especially important focal points of inflation coverage. Even as inflation declined, the prominence of CPI releases remained elevated. In 2024, 20% of inflation coverage in a month occurred on the day of or the day after a CPI release, compared to less than 10% in most years prior to 2020. Thus, our instrument is particularly relevant during this sample period.

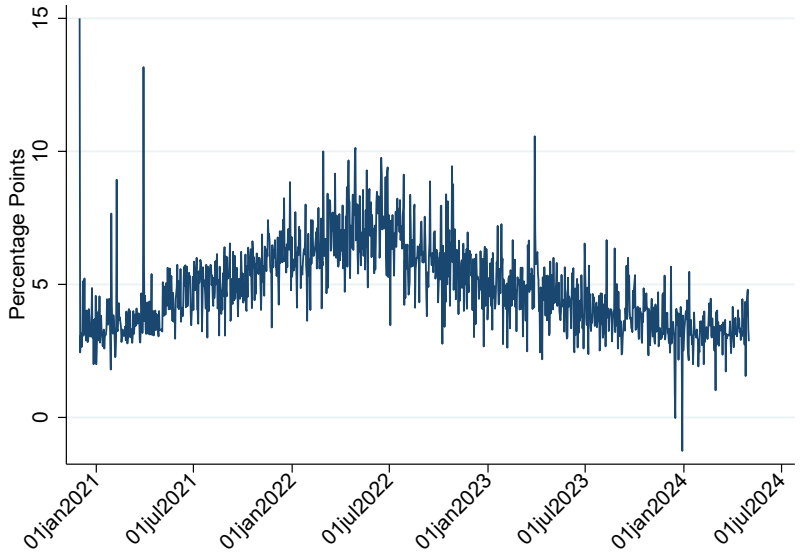
2.1 Expectations Data

Our data on inflation expectations comes from the Federal Reserve Bank of New York's Survey of Consumer Expectations (SCE). As documented in Binder, Campbell, and Ryngaert 2024, though this is a monthly survey, respondents take the survey throughout the month, and respondent characteristics are consistent across the month. They also show that respondents do not appear to select into taking the survey around particular events, like FOMC announcements or data releases. Thus, we use of the survey at daily frequency.

Survey respondents provide forecasts in two formats: numerical point forecasts and density forecasts. In the latter, respondents are asked to assign probability to outcomes that inflation falls several ranges (more than 12%, between 8% and 12%, between 4% and 8%, between 2% and 4%, between 0% and 2%, ..., between -12% and -8%, and less than -12%). We use a method for fitting subjective probability distributions to density forecasts suggested by Ryngaert 2023, which makes use of data from both the point and density forecasts and allows for possibly asymmetric

[3]The instrument includes all release dates during this period. To accommodate the inclusion of lags in our model, we use data extending into December 2020.

Figure 1: Daily Consumer Inflation Expectations



Notes: Figure shows the interpolated median 1-year ahead inflation expectations of households on the daily frequency. Data from Survey of Consumer Expectations.

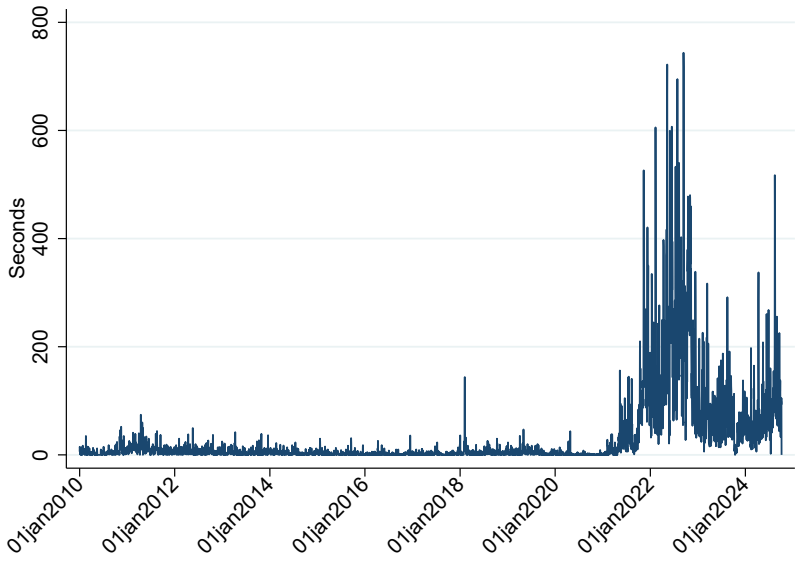
probability distributions. Figure 1 plots the daily median inflation expectation series.

2.2 Cable Television Data

The Stanford Cable TV News Analyzer allows researchers to write queries to compute the length of time that words are spoken on the three major cable news stations: CNN, Fox, and MSNBC Hong et al. 2021. The dataset underlying the Analyzer, provided by the Internet Archive's TV News Archive, includes nearly 24-7 video coverage of these stations, with accompanying transcripts, beginning on January 1, 2010.

Our primary measure of interest from this dataset is the number of seconds per day that the word "inflation" is heard on cable television on each of the three stations. Note that for text searches, the recorded time is only the time in which the word or

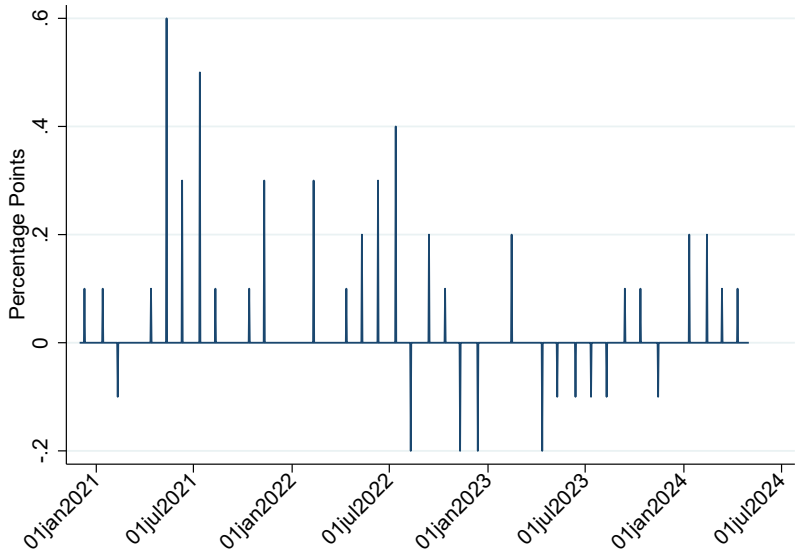
Figure 2: Cable Television Inflation Coverage



Notes: Figure shows the seconds per day that the word "inflation" is said on Fox, CNN, and MSNCB, combined.

phrase is being spoken, not the time of the whole discussion of the topic. Thus, if the word "inflation" takes roughly one second to say, then each second of coverage corresponds to one mention of inflation. Figure 2 shows this daily measure from January 1, 2010 to October 5, 2024. Most days prior to 2021 feature minimal mentions of inflation: 24% of days have zero mentions. On 69% of days, inflation is mentioned for at most 4 seconds. Average coverage is 4 seconds per day. From 2021 through 2024, coverage of inflation is much higher. Only 2% of days have zero mentions of inflation, and on 6% of days, inflation is mentioned for at most 4 seconds. Over the sample period we use in our subsequent analysis, average coverage is 99 seconds per day, with a standard deviation of 112 seconds.

Figure 3: Inflation Surprise Series



Notes: Daily inflation surprise series. We compute the difference between the CPI release and the Blue Chip Forecast as the inflation surprise. Data from January 21, 2021 to May 1, 2024.

2.3 Inflation Surprise Series

Our inflation surprise series measures the surprise content on each CPI release date. The series is zero on days without a CPI release. On release dates, the surprise is defined as the percentage point difference between headline year-over-year CPI and the most recent Blue Chip Forecast for its value. Figure 3 presents the inflation surprise series over our sample period. As shown, the largest positive surprise occurred on May 12, 2021, when it was reported that April CPI inflation was 0.6 percentage points higher than expected. Inflation continued to surprise forecasters to the upside for most of 2021 and the first half of 2022, with some negative surprises occurring in late 2022 and in 2023.

We validate the properties of our inflation surprise series in Appendix A. Table A.1 demonstrates that the series is uncorrelated with other macroeconomic shock

measures, such as monetary policy surprises and oil supply news surprises. Table A.2 shows that the series cannot be forecasted using macroeconomic or financial variables, reinforcing its exogeneity.

3 Coverage of Inflation News

This section documents patterns of news coverage around CPI releases. While we think that the response of news to CPI reports is interesting in its own right, these results will also be important for motivating the instrumental variables strategy that we will use in the next section.

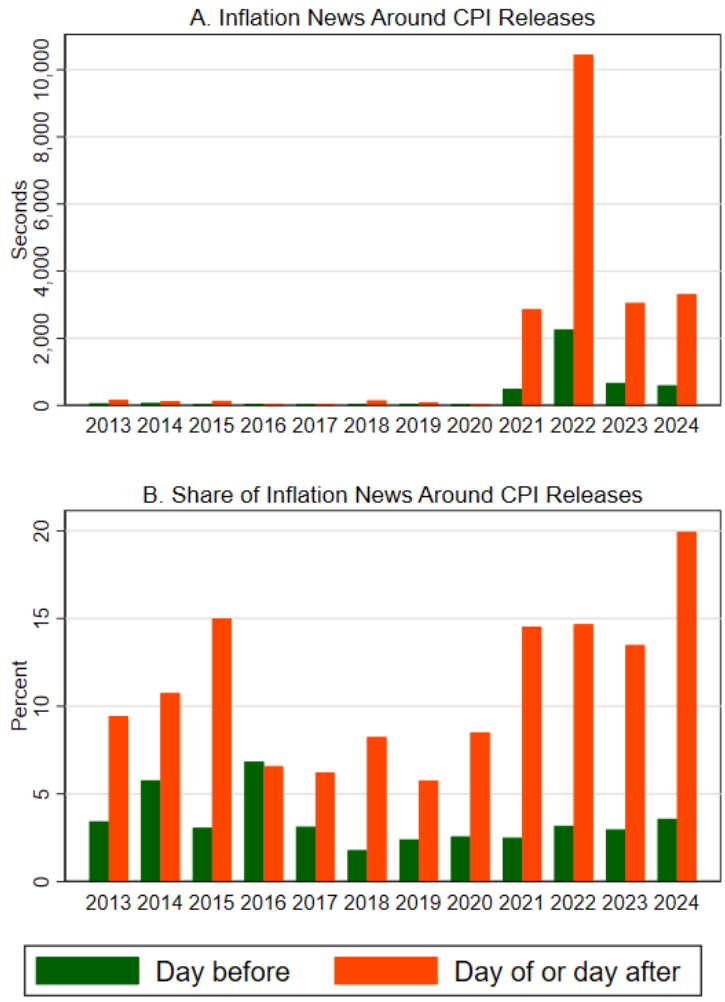
3.1 CPI Releases as Focal Point of Inflation Coverage

Inflation coverage on cable television frequently occurs on or near CPI release dates. In fact, the two highest coverage dates in our sample, May 11, 2022 and September 13, 2022, are both associated with CPI releases.

Figure 4 shows how the volume and share of coverage that occurs around release dates has changed over time. Before 2021, cable news coverage of inflation was relatively sparse. The little inflation coverage that did occur was somewhat more likely to occur on or after a CPI release. Since there are 12 CPI releases per year, 3.3% of days are CPI release dates. If more than 6.6% of inflation news occurs on the day of or after a CPI release, than those dates account for a disproportionate share of inflation coverage.

Beginning in 2021, not only did the total news coverage of inflation rise, but the share of coverage that occurred near CPI releases also rose. Almost 15% of inflation news occurred on the day of or immediately following a CPI release in 2021, 2022, and 2023. In 2024, CPI releases became an even larger focal point of inflation news, with 20% of inflation mentions occurring on the day of or following a release. These results motivate our focus on the years 2021 through 2024 as our sample period.

Figure 4: Inflation Coverage Around CPI Release Dates



Notes: The figure depicts inflation coverage around CPI release dates, using data from the Stanford Cable TV News Analyzer. Panel A shows the number of seconds spent discussing inflation on the day before and the day of and after the release. Panel B expresses this coverage as a share of coverage for the month

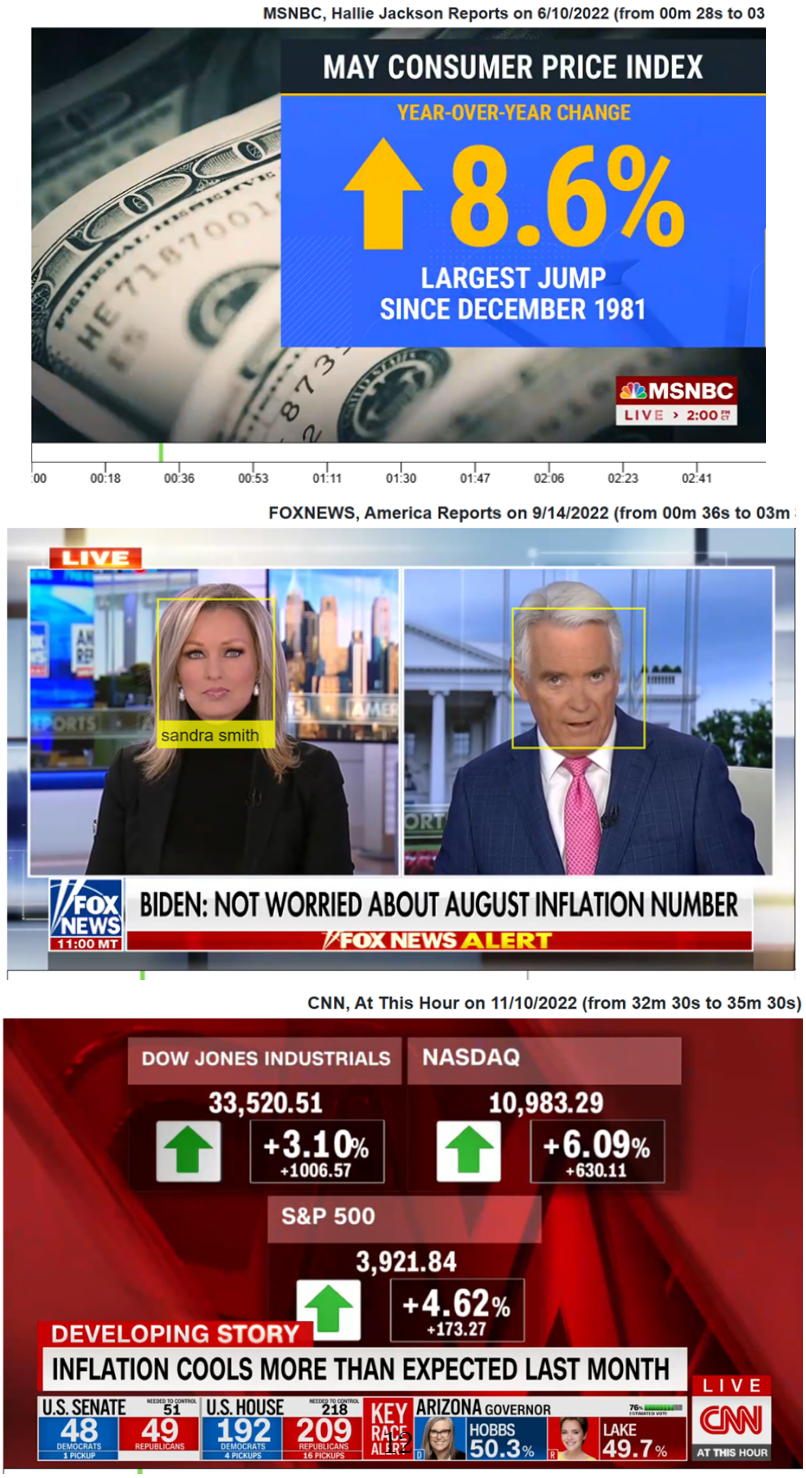
3.2 News Coverage of Inflation Surprises

Moreover, the cable news reports often mention the CPI reports and the direction of surprise in the report. For example, following the release of the May 2022 CPI report, which was 0.3 percentage points higher than expected, the MSNBC program "Hallie Jackson Reports" referred to "this morning's worse than expected read on inflation, now 8.6. There were hopes today that it would bring signs that price spikes were easing. Instead, they got worse, led by that record surge in gas prices."

On September 14, 2022, the August CPI report came in 0.2 percentage points higher than expected. "America Reports" on Fox News reported, "We begin with President Biden brushing off August inflation report insisting the economy is still strong despite high prices hammering families nationwide," and referred to the "higher than expected inflation number." The same day, "Newsroom" on CNN reported on "Tuesday's inflation numbers, driving home the reality that the Fed still has a long way to go to get inflation under control."

A negative inflation surprise occurred on November 10, 2022, with CPI inflation 0.2 percentage points lower than expected. CNN's "At This Hour" reported, "Finally, we get some good inflation news. This might be one of the most positive economic developments we've seen all year. Month over month, we saw prices go up by 0.4. That is encouraging because it was supposed to get worse than that and it didn't. That was flat. Year over year, consumer prices up 7.7. Normally, that is terrible news but we're obviously not in normal times now." Another negative CPI shock occurred on July 12, 2023, when the CPI report was 0.1 percentage points lower than expected. CNN reported on the "better than expected inflation report we got in the U.S." with "consumer price index showing that inflation slowed to to 3% on an annual basis making June the 12th straight month that inflation has slowed. Let's look at some of the categories. Gas from a year ago down 27, used cars 5, meat fractionally, but airfare off almost 19." Examples of screenshots from some of these video clips appear in Figure 5.

Figure 5: Examples of Cable TV Inflation Coverage



Notes: Examples of screenshots from the Stanford Cable TV News Analyzer. These images are from MSNBC on June 10, 2022, Fox News on September 14, 2022, and CNN on November 10, 2022.

3.3 Dynamic Response of News to Inflation Surprises

To estimate the dynamic causal effect of inflation surprises on cable news coverage of inflation, we apply a local projections (LP) framework following Jordà 2005. Specifically, we estimate:

$$news_{t+h} = c^h + \alpha_1^h |surprise|_t + \alpha_2^h \mathbb{1}_{\text{release}} + \sum_{j=1}^{p} \Phi_j^h \mathbf{X}_{t-j} + \varepsilon_{t+h}, \quad h = 0, \ldots, H, \quad (1)$$

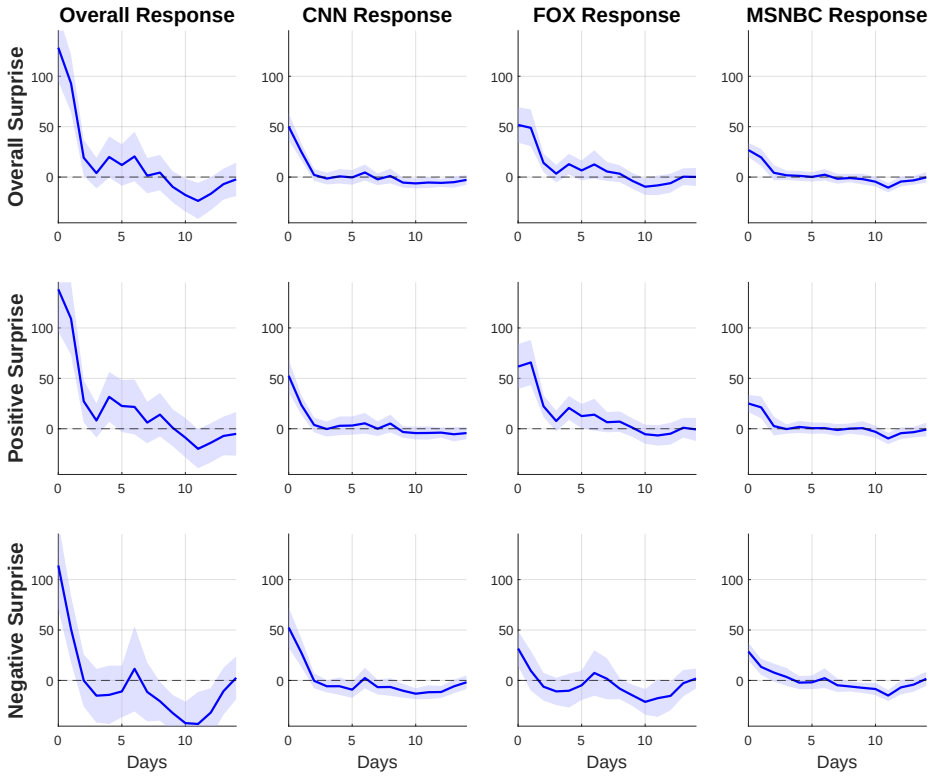
where $news_t$ measures the total daily news coverage of inflation in seconds. We employ two sources of "supply-driven" variation, $|surprise|_t$ is the absolute value of the inflation surprise series, while $\mathbb{1}_{\text{release}}$ is an indicator for CPI release dates. Our control set includes up to 30 lags of $news_t$ and daily inflation expectations, π_t^{exp}, to account for persistence in both news coverage and expectations.[4] We estimate this model for a maximum horizon of 14 days, capturing the immediate impact on inflation news coverage. The impulse response function (IRF) is given by the sequence of coefficients $\{0.1 \times \alpha_1^h + \alpha_2^h\}_{h=0}^H$.

We estimate Equations (1) for total news coverage and separately for CNN, Fox News, and MSNBC. The first row of Figure 6 presents the impulse response functions, normalizing the response to a 0.1 percentage point inflation surprise on a CPI release day. That is, on a CPI release day with a 0.1 percentage point inflation surprise, total news coverage increases significantly by approximately 128 seconds. Recall that this means that the actual word "inflation" is spoken for an additional 128 seconds, or 1.1 standard deviations. We find that the extensive margin—the mere occurrence of a CPI release day—accounts for about 85% of this on-impact response, while the size of the inflation surprise explains the remainder. Notably, this response is short-lived, dissipating within two to three days.

Breaking down the responses by news channel, CNN and Fox News contribute nearly equally to the on-impact increase in coverage, while MSNBC plays a smaller role.

[4]The choice of 30 lags follows existing studies using daily macroeconomic data, such as Jacobson, Matthes, and Walker 2023.

Figure 6: Dynamic Responses of News Coverage



Notes: This figure shows the estimated dynamic effects of CPI surprises and release dates on news coverage in seconds. The shaded area represents the 90% confidence interval based on heteroskedasticity and autocorrelation consistent (HAC) standard errors, approximated with the delta method. The on-impact effect is normalized to correspond to a 0.1 ppt inflation surprise.

Coverage on CNN and MSNBC returns to baseline within two days, whereas FOX News coverage remains elevated for an additional day, suggesting a slightly more persistent response.

3.4 Asymmetric Response of Coverage to Positive and Negative Surprises

The flexibility of local projections also allows us to test for asymmetric effects depending on whether inflation surprises are positive or negative. We modify equation

1 and separately estimate the impact of positive surprises and negative surprises. Let $\mathbb{1}^{+}_{\text{release}}$ denote CPI release dates with non-negative surprises, and $\mathbb{1}^{-}_{\text{release}}$ with non-positive surprises. Then we estimate:

$$news_{t+h} = c^h_+ + \alpha^h_{1,+}|\max(0, surprise)|_t + \alpha^h_{2,+}\mathbb{1}^{+}_{\text{release}} + \sum_{j=1}^{p} \Phi^h_{j,+}\mathbf{X}_{t-j} + \varepsilon_{t+h}, \quad (2)$$

and

$$news_{t+h} = c^h_- + \alpha^h_{1,-}|\min(0, surprise)|_t + \alpha^h_{2,-}\mathbb{1}^{-}_{\text{release}} + \sum_{j=1}^{p} \Phi^h_{j,-}\mathbf{X}_{t-j} + \varepsilon_{t+h}. \quad (3)$$

These specifications allow for different coefficients for positive and negative values of the surprise series, following prior research on asymmetric effects in government spending multipliers (Barnichon, Debortoli, and Matthes 2022; Ben Zeev, Ramey, and Zubairy 2023). The second and third rows of Figure 6 show the responses to positive and negative surprises. Both lead to an immediate increase in news coverage, but of different magnitudes: on release days with a 0.1 percentage point positive surprise, news coverage rises by approximately 138 seconds, whereas after a negative surprise, the increase is 114 seconds. This asymmetry is almost entirely driven by Fox News, which maintains elevated coverage of a positive surprise for an additional day. Beyond this immediate effect, the persistence of media coverage also differs. Coverage following negative inflation surprises fades more quickly, turning statistically significantly negative after 9 days and remaining so for approximately five days. This reversal suggests that while negative surprises initially receive attention, media outlets reduce coverage more rapidly than in response to positive inflation shocks.

These results are consistent with broader patterns in media reporting, where negative economic news (in our case, a positive inflation surprise, during a period of high inflation) tends to receive more coverage (Altheide 1997; Harrington 1989; Soroka 2006; Soroka 2012; Heinz and Swinnen 2015). This asymmetry likely reflects both supply-driven and demand-driven explanations. On the supply side, the media may

choose to focus on negative news in its role as "watchdog," in order to hold the government and companies accountable for errors and bad outcomes (Merrill and Lowenstein 1971). On the demand side, risk-averse consumers may benefit more from learning about bad news than good news (McCluskey, Swinnen, and Vandemoortele 2015). People may also demand negative news more than positive news because of loss aversion (Kahneman and Tversky 1979) or a variety of other psychological, neurological, or evolutionary biological reasons (Rozin and Royzman 2001; Herwig et al. 2007; McDermott, Fowler, and Smirnov 2008).

Our results, in addition to contributing to the literature on media coverage of economic conditions, also lend themselves to the construction of a useful instrument for inflation news coverage. Recall that we wish to study the effects of news coverage on inflation expectations, but face endogeneity and reverse causality issues. We have now shown that CPI release dates, which have exogenous and pre-determined timing, significantly increase news coverage, and moreso when they are associated with larger inflation surprises. We will use these insights to construct our instrument for news coverage in the next section.

4 Empirical Strategy and Results

This section outlines our empirical strategy for estimating the dynamic causal effects of inflation news coverage on daily household inflation expectations, and presents our results. We employ a local projections instrumental variables (LP-IV) approach, following Stock and Watson 2018, which enables us to flexibly trace the response of expectations to exogenous variation in media coverage induced by CPI release dates and inflation surprises. As demonstrated in Section 3, these have a strong impact on news coverage, making them well-suited for identifying causal effects.

4.1 LP-IV Framework

The LP-IV method allows us to estimate impulse responses flexibly without imposing strong structural assumptions. We implement this framework by instrumenting

inflation-related media coverage with CPI surprises and scheduled CPI announcement dates, which provides the following IV regression:

$$\pi_{t+h}^{\text{exp}} = \beta_0^h + \beta_1^h \hat{news}_t + \sum_{j=1}^{p} \Gamma_j^h \mathbf{X}_{t-j} + u_{t+h}, \quad h = 0, \ldots, H, \tag{4}$$

where π_t^{exp} represents median one-year-ahead household inflation expectations, and $\mathbf{X}$ includes lagged controls for expectations and media coverage. We instrument for $news_t$, the total seconds of inflation coverage on day t, using two instruments: the absolute value of the CPI surprise on day t and an indicator that takes value 1 if t is a CPI release date. That is, $\hat{news}_t$ are the fitted values from the following first-stage regression:

$$news_t = c + \alpha_1 |surprise|_t + \alpha_2 \mathbb{1}_{\text{release}} + \sum_{j=1}^{p} \Phi_j \mathbf{X}_{t-j} + \varepsilon_t \tag{5}$$

Instrument relevance: As shown in Section 3, CPI surprises and release dates lead to an immediate increase in inflation news coverage, with effects dissipating after two to three days. This provides a strong first-stage relationship, with a first-stage F-statistic of 33.66, well above the conventional threshold for weak instrument concerns.

Instrument exogeneity: The validity of our instruments requires that they affect inflation expectations only via media coverage. Since CPI release dates are predetermined and the magnitude of the surprise is *ex ante* unpredictable, the surprise series is unlikely to be correlated with other unobserved shocks. Additionally, given that inflation news coverage reacts immediately to CPI releases—before households can update their expectations—concerns about simultaneity bias are mitigated. To further ensure exogeneity, we control for past expectations and past media coverage, preventing confounding effects from forward-looking expectation adjustments.

Smooth Local Projections: The impulse responses could be computed using OLS estimates with robust heteroskedasticity and autocorrelation-consistent standard

errors. However, we account for the fact that our daily data is subject to transitory noise (Binder, Campbell, and Ryngaert 2024), leading to excess variability in the estimates in unrestricted local projections. To address this issue, we follow Barnichon and Brownlees 2019 and apply the smooth local projections methodology. Specifically, we approximate the sequence of coefficients $\{\beta_1^h\}_{h=0}^H$ using a B-spline basis function expansion, which smooths the response while preserving flexibility:

$$\beta_1^h \approx \sum_{k=1}^{K} b_k B_k(h), \tag{6}$$

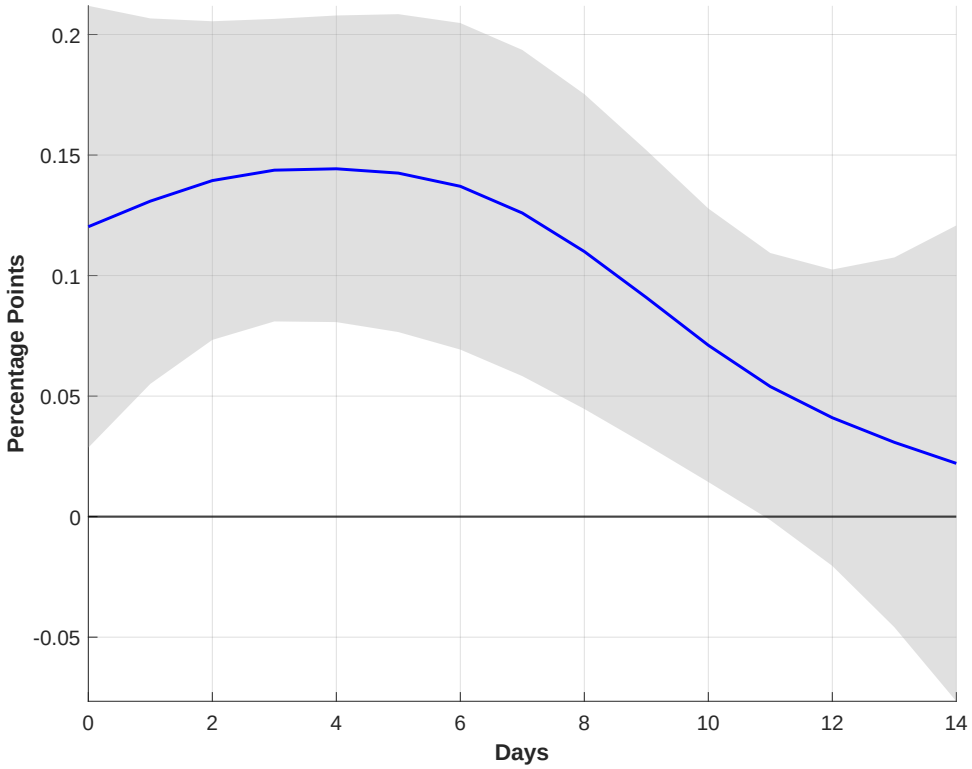
where $B_k(h)$ are B-spline basis functions that span the forecast horizon. The coefficients b_k are estimated using a generalized ridge estimator, where the penalization parameter λ controls the degree of smoothing. As λ increases, the smoothed impulse response function approximates a polynomial of a given order, enforcing smoothness across horizons. Following Barnichon and Brownlees 2019, we select λ using k-fold cross-validation to balance variance reduction and model flexibility. For our baseline specification, we present results where the estimated impulse response is shrunk toward a linear function, implying a high degree of smoothing with $\lambda = 1000$.[5]

4.2 Baseline Results

We estimate the effect of inflation news coverage on household inflation expectations by estimating Equation 4 for horizons up to 14 days. Specifically, we analyze how a 0.1 percentage point inflation surprise on a CPI release date—transmitted through an exogenous increase in inflation news coverage—affects inflation expectations.
Figure 7 and Table 1 illustrates the smoothed dynamic response of inflation expectations to an exogenously induced 128-second increase in inflation news coverage, corresponding to a 0.1 percentage point inflation surprise on a release date. Households significantly increase their inflation expectations in response to news, with the effect ranging between 0.1 and 0.15 percentage points. The response follows a hump-shaped pattern, a typical feature in the transmission of news shocks to

[5]Section B in the Appendix provides a series of robustness checks and a discussion for this choice.

Figure 7: Dynamic Response of Household Inflation Expectations



Notes: This figure presents the smoothed IV-estimated response of inflation expectations. The shaded area represents the 90% confidence interval, based on Newey West standard errors. The on-impact effect is normalized to a 128-second increase in inflation news coverage, corresponding to the coverage induced by a 0.1 percentage point inflation surprise on a CPI release date.

subjective expectations (Coibion and Gorodnichenko 2012), before gradually fading out around 11 days after the shock.

4.3 Asymmetric Effects

Our baseline model assumes a symmetric response of household inflation expectations to news coverage. However, prior research (Soroka 2006; Gambetti, Maffei-Faccioli, and Zoi 2022) suggests that consumers react more strongly to negative than to positive news. In our context, this implies that households should respond more to reports of

Table 1: Baseline Results: Response of Inflation Expectations to News Chatter

	Days After CPI Release														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
β_1	0.120	0.131	0.139	0.144	0.144	0.143	0.137	0.126	0.110	0.091	0.071	0.054	0.041	0.031	0.022
	(0.056)	(0.046)	(0.040)	(0.038)	(0.039)	(0.040)	(0.041)	(0.041)	(0.040)	(0.037)	(0.034)	(0.034)	(0.037)	(0.047)	(0.060)

Notes: The table presents the dynamic response of inflation expectations (in percentage points) when news stations increase chatter by 128 seconds on CPI release days with an inflation surprise. Standard errors are in parentheses.

rising inflation than to news of a slower price increase. To test for such asymmetries, we extend the LP-IV framework in Equation (4) by estimating separate responses for positive and negative inflation surprises.

First, we estimate the effect of an increase in news coverage using the positive surprises as an instrument:

$$\pi^{\text{exp}}_{t+h} = \beta^h_{0,+} + \beta^h_{1,+} \hat{news}^+_t + \sum_{j=1}^{p} \Gamma^h_{j,+} \mathbf{X}_{t-j} + u_{t+h}, \quad h = 0, \ldots, H. \tag{7}$$

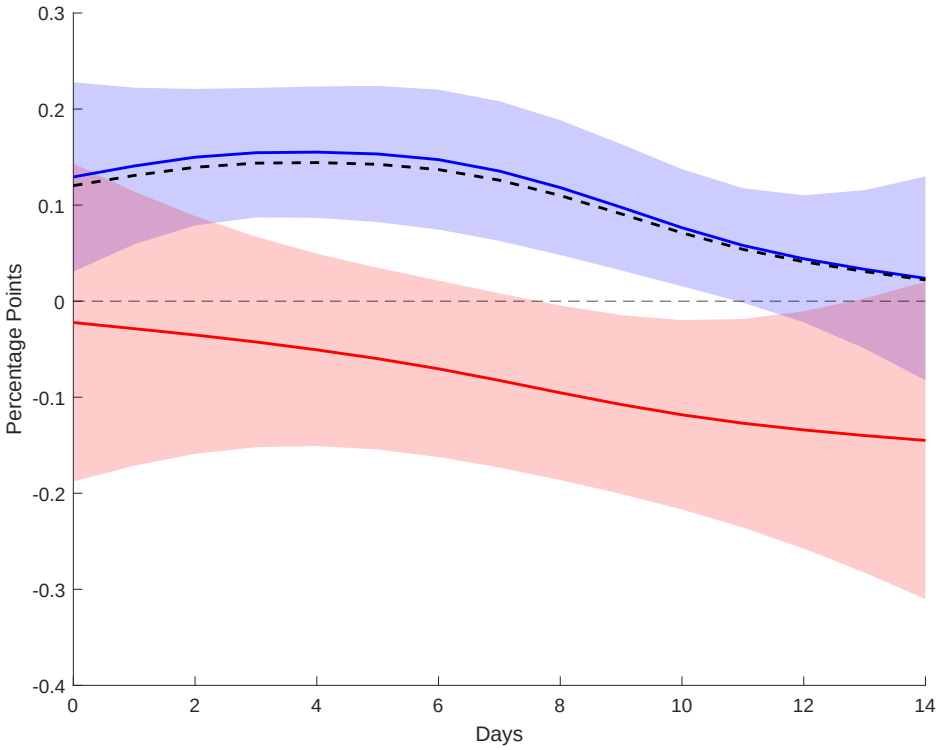
where the instrumented news variable $\hat{news}^+_t$ is obtained from the first-stage regression, using the absolute value of positive CPI surprises and an indicator variable for release days with non-negative surprises. Similarly, we estimate the effect of an increase in news coverage using the negative surprises as an instrument:

$$\pi^{\text{exp}}_{t+h} = \beta^h_{0,-} + \beta^h_{1,-} \hat{news}^-_t + \sum_{j=1}^{p} \Gamma^h_{j,-} \mathbf{X}_{t-j} + u_{t+h}, \quad h = 0, \ldots, H. \tag{8}$$

Figure 8 and Table 2 present the LP-IV estimated dynamic effects of positive and negative CPI surprises on household inflation expectations, using the smooth local projections methodology as previously described. Our results provide clear evidence of asymmetric responses. Inflation expectations rise immediately and persistently following a positive inflation surprise, remaining elevated for at least 10 days. In contrast, after a negative surprise, expectations exhibit a delayed response, initially showing little reaction before declining several days later.

Notably, as seen in Figure 6, news coverage itself turns negative around days 9–11

Figure 8: Dynamic Response of Inflation Expectations: Positive vs. Negative Surprises



Notes: The figure presents the LP-IV impulse responses of inflation expectations. The blue line represents responses to positive CPI surprises, while the red line represents responses to negative surprises. The black dashed line indicates the baseline response. Shaded areas denote 90% confidence intervals, based on Newey-West standard errors.

following a negative inflation surprise. However, the response of inflation expectations remains weak, suggesting that delayed media coverage may not substantially amplify the downward adjustment as previously expected.

Table 2: Asymmetric Response of Inflation Expectations to News Chatter

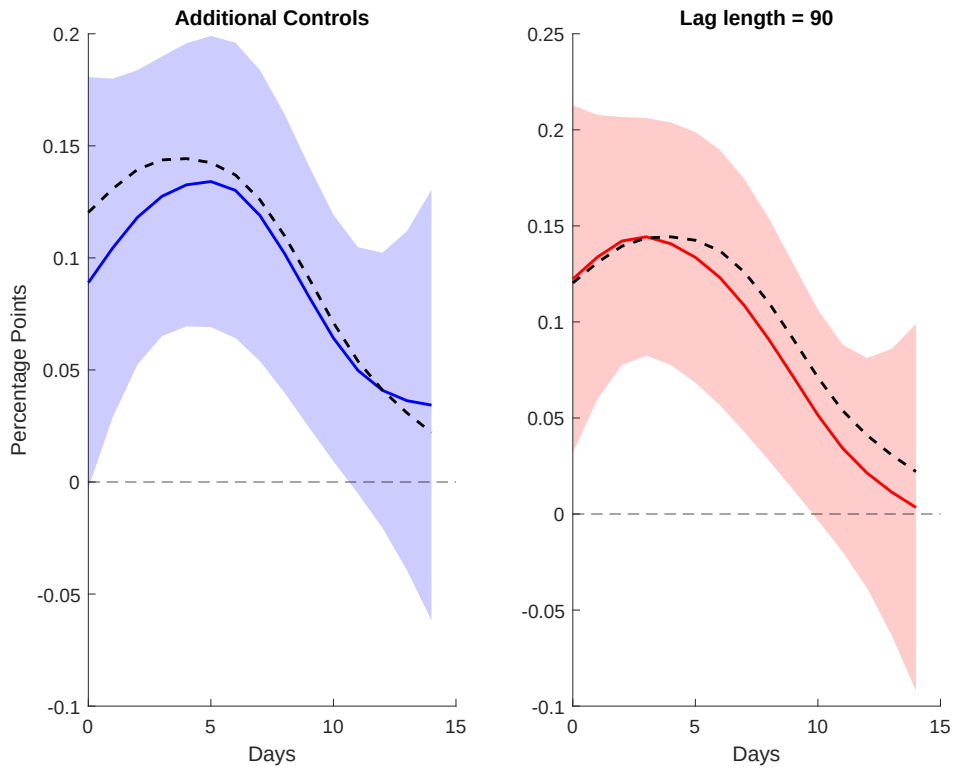
	Days After CPI Release														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
$\beta_{1,+}$	0.129	0.140	0.150	0.155	0.155	0.153	0.147	0.135	0.118	0.098	0.076	0.058	0.044	0.033	0.024
	(0.060)	(0.050)	(0.043)	(0.041)	(0.041)	(0.043)	(0.044)	(0.044)	(0.043)	(0.040)	(0.037)	(0.036)	(0.040)	(0.050)	(0.065)
$\beta_{1,-}$	-0.022	-0.029	-0.035	-0.042	-0.051	-0.060	-0.070	-0.083	-0.095	-0.108	-0.118	-0.127	-0.134	-0.139	-0.145
	(0.101)	(0.087)	(0.075)	(0.067)	(0.061)	(0.058)	(0.056)	(0.055)	(0.055)	(0.057)	(0.06)	(0.066)	(0.075)	(0.087)	(0.100)

Notes: The table presents the dynamic response of inflation expectations (in percentage points) when news stations chatter on a release day with a positive or negative CPI surprise and increase news mentions by 138 and 114 seconds, respectively. Standard errors are in parentheses.

5 Robustness Analysis

To validate our results, we conduct robustness checks along multiple dimensions. First, we expand the set of control variables by incorporating additional macroeconomic and financial data. Specifically, we augment the baseline specification in Equation (4) with the daily S&P 500 Index, the WTI Oil Price, and the VIX, a measure of market volatility. Second, we test the sensitivity of our findings to the choice of lag length by increasing it from 30 to 90 days. Figure 9 presents these robustness checks alongside the baseline results. Additional robustness analyses related to our smooth LP approach are provided in Appendix Section B.

Figure 9: Dynamic Response of Inflation Expectations: Robustness Checks



Notes: The figure displays smoothed LP-IV impulse responses of inflation expectations. The blue line represents the response from a model with additional controls, while the red line corresponds to a model with a longer lag specification. The black dashed line shows the baseline response. The black dashed line indicates the baseline response. Shaded areas denote 90% confidence intervals, based on Newey-West standard errors. All responses are normalized to imply a 128 second increase in news coverage on impact.

6 Conclusions

This paper provides new evidence on the effects of news coverage of inflation on inflation expectations. In particular, we showed that CPI release dates act as exogenous drivers of inflation news coverage.

Using our instruments in an LP-IV model, we find that increased news coverage of inflation significantly raises household inflation expectations, with effects peaking within the first few days and gradually fading thereafter. Importantly, we document a key asymmetry: while positive CPI surprises generate a strong and persistent response in expectations, negative surprises elicit a much weaker, insignificant, response. This suggests that inflationary news exerts a greater influence on household expectations than disinflationary news, potentially due to differences in media coverage intensity or asymmetric information processing by households.

Our findings contribute to the growing literature on the role of the media in shaping macroeconomic expectations and highlight the importance of high-frequency data in understanding the transmission of economic news. Future research could explore whether these asymmetries persist across different media channels or economic environments.

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A Diagnostic Measures for the Instrument

Table A.1: Correlations of the Inflation Surprise Series with Other Shock Measures

Shock Measure	**Source**	**Correlation**	**p-value**	**Sample**
Monetary Policy	Bauer and Swanson 2023	-0.003	0.9211	Jan 1, 2021 - Dec 31, 2023
	Nakamura and Steinsson 2018	-0.0039	0.8932	Jan 1, 2021 - May 1, 2024
Uncertainty	Baker, Bloom, and Davis 2016	-0.0258	0.3682	Jan 1, 2021 - May 1, 2024
Oil supply news	Känzig 2021	-0.0009	0.9763	Jan 1, 2021 - May 1, 2024

Notes: The table shows the correlation of the inflation surprise series with a range of different shock measures from the literature. For all series, we compute the Pearson correlation coefficient, the p-value corresponds to the test whether the correlation is different from zero. All shock measures, with the exception of Bauer and Swanson 2023, are available at the daily frequency for the sample period from Jan 1, 2021 to May 1, 2024. Bauer and Swanson 2023 is available up until December 2023.

Table A.2: Granger causality tests

Variable	p-value
S&P 500	0.8439
Geopolitical risk	0.8350
CBOE Volatility Index: VIX	0.0932
WTI Oil Price	0.4793

Notes: The table shows the p-values of a series of Granger causality tests of the inflation surprise series using a selection of macroeconomic and financial variables. The lag order is set to 90 days to capture longer-run relationships. Non-stationary series are made stationary by taking first differences. The regressions include a constant term.

B Details on the Smooth Local Projection Method

We implement the Smooth Local Projections (SLP) approach developed by Barnichon and Brownlees 2019 using the `SmoothLP` package provided by Bousquet 2024. This method smooths the sequence of impulse response coefficients by approximating them using a B-spline basis function expansion, which increases precision while preserving the flexibility of local projections.

B.1 Key Parameters

To smooth the impulse responses, three key parameters must be specified:

- K: The number of cross-validation folds.
- λ: The penalty parameter that controls the degree of smoothing.
- r: This choice implies the polynomial degree, $r-1$, to which the impulse response function (IRF) is shrunk as λ grows.

For our baseline specification, we consider different numbers of sample splits K and evaluate models with $r = 2, 3, 4$, allowing the impulse response to shrink toward a linear, quadratic, or cubic polynomial, respectively. We test a vector of λ values ranging from 0.1 to 1000.

Following Barnichon and Brownlees 2019, we employ K-fold cross-validation, a resampling procedure, to evaluate a set of possible values for λ and select the one that minimizes the average mean squared error (MSE).

To determine the optimal number of sample splits K, we evaluate MSE across different values, ranging from $K = 2$ to $K = 80$, for various choices of r. We find that setting $K = 11$ yields the lowest MSE, though the choice of K does not alter the fact that for $r = 2$, the model consistently selects a high λ, minimizing the average MSE by enforcing stronger smoothness.

B.2 K-Fold Cross-Validation

The cross-validation procedure follows these steps:

1. The dataset is split into K equally sized folds.
2. The model is trained on $K - 1$ folds, leaving one fold as the test set.
3. The MSE is computed on the left-out test fold.
4. This process is repeated across all K folds, ensuring each serves as the test set once.
5. The average MSE across folds is computed for each candidate λ.
6. The optimal λ is chosen as the one that minimizes the average MSE.

This procedure ensures that the penalization parameter λ is selected objectively to balance smoothness and model flexibility. In our baseline case, this resampling procedure selects $\lambda = 1000$ for $r = 2$ and $K = 11$. However, in the next section, we present results based on alternative choices to assess the robustness of our findings.

B.3 Robustness

Figure B.1 presents four alternative impulse responses compared to our baseline specification. Each figure also includes the baseline estimate (red dashed line) for reference.

Specifically, we implement the following robustness checks:

1. Unrestricted Local Projections: We estimate the IRF without any smoothing, using the standard LP-IV approach.

2. Quadratic Approximation ($r = 3$): Here, we approximate a quadratic polynomial, allowing for one turning point. In this case, the cross-validation procedure selects $\lambda = 1$.

3. Cubic Approximation ($r = 4$): We approximate a cubic polynomial, allowing for two turning points. The cross-validation procedure now selects $\lambda = 0.1$.

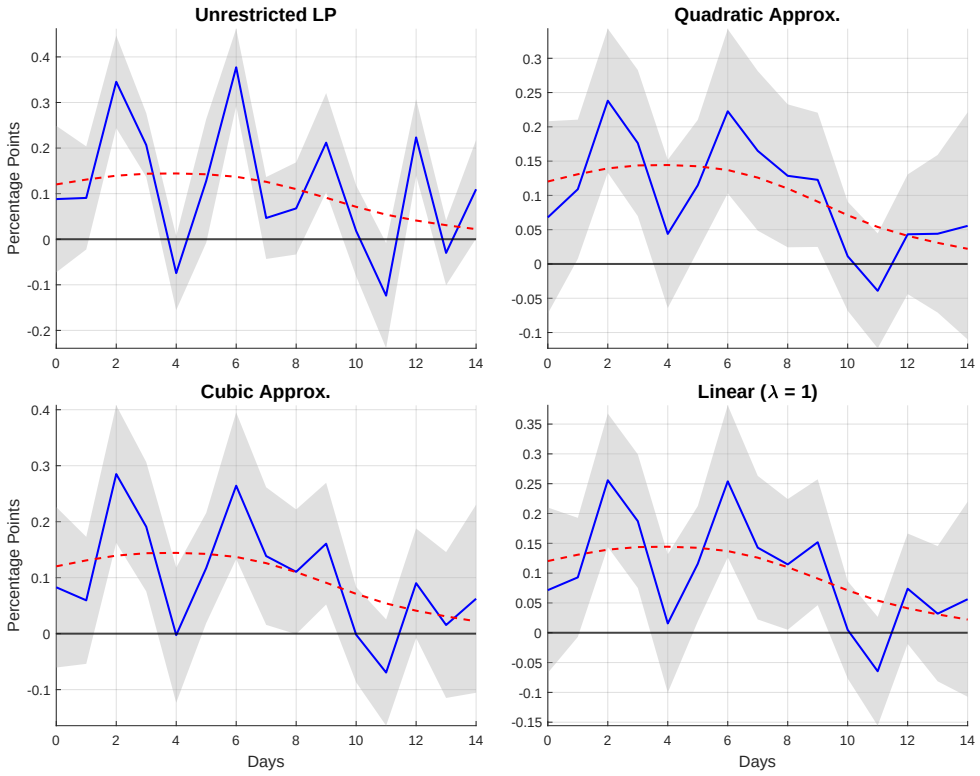
4. Low Smoothing ($r = 2, \lambda = 1$): We revert to our baseline polynomial order ($r = 2$) but force a low penalization level ($\lambda = 1$) to explore the sensitivity of the results.

Across all model specifications, we consistently find a significant increase in inflation expectations in the days following a CPI release surprise of 0.1 percentage points. Despite some models producing more jagged estimates, the overall pattern is confirmed. The effect appears to peak within a few days and gradually dissipates after approximately 9-10 days.

For the asymmetric case, we show in Figure B.2 the unrestricted LP-IV estimates together with the smoothed estimator.

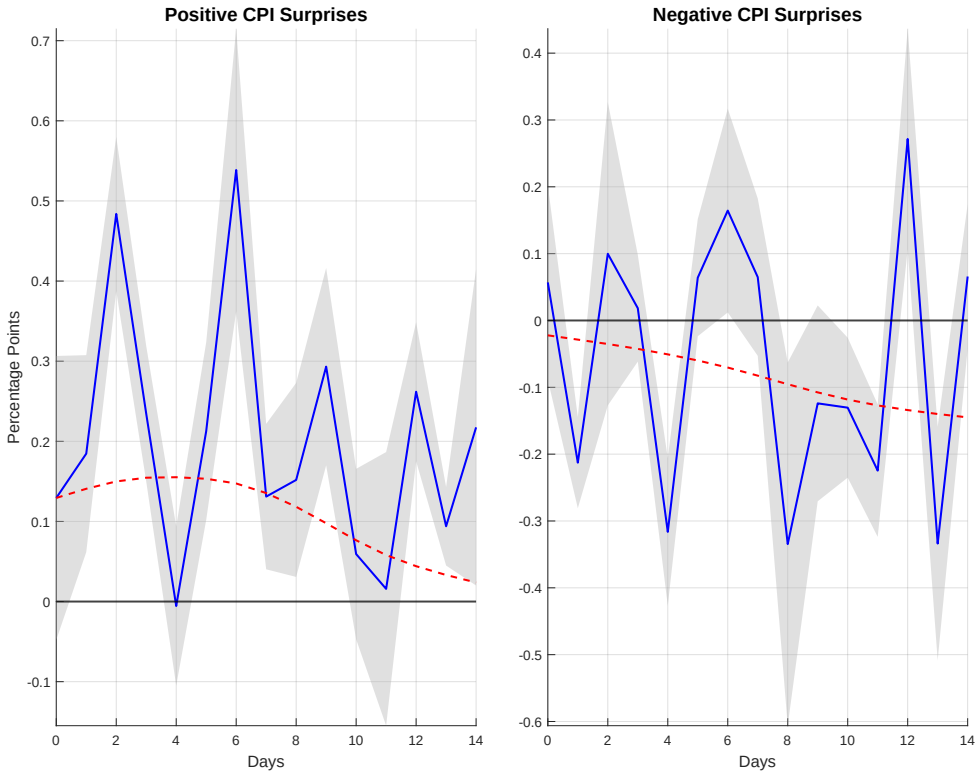
Overall, this figure confirms our baseline finding of the asymmetric effects on inflation expectations, depending on the sign of the surprises.

Figure B.1: Robustness: Dynamic Response of Household Inflation Expectations



Notes: This figure presents robustness checks of the smoothed IV-estimated response of inflation expectations. The shaded area represents the 90% confidence interval, computed using Newey-West standard errors. The unit is percentage points. The red dashed line represents our baseline impulse response.

Figure B.2: Robustness for the Asymmetric Case



Notes: This figure presents the unrestricted LP-IV estimation of positive and negative surprises, respectively. The shaded area represents the 90% confidence interval, computed using Newey-West standard errors. The unit is percentage points. The red dashed line represents our baseline impulse response.