

We Think That They Think: Political Affiliation and Higher-Order Beliefs

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Motivation: Higher-Order Beliefs

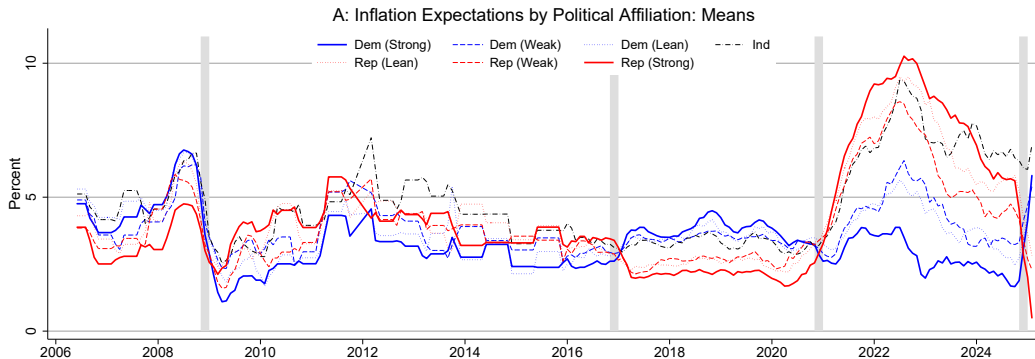
- How do agents form **higher-order beliefs**? (I think that you think...)
- Higher-order beliefs are crucial for coordination/strategic decisions, particularly in cases where **disagreement is high**
- More generally, theories of expectation formation make **strong predictions** about higher-order beliefs
- But almost no **empirical measures** of higher-order beliefs outside of the lab
 - Coibion et al (2021): higher-order inflation beliefs on average the same as own beliefs (NZ firm managers)

Motivation: Inflation Expectations and Political Affiliation

- US consumer inflation expectations offer interesting setting to study higher-order beliefs: [wide-spread disagreement](#), often along [party lines](#)

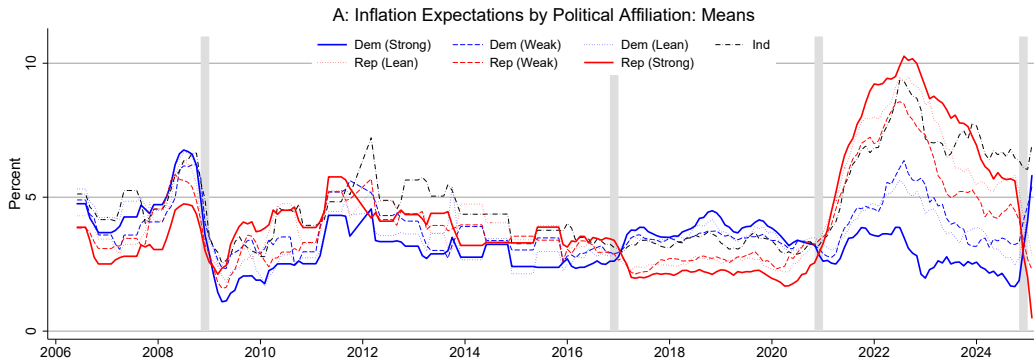
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- This paper:** conduct surveys eliciting inflation forecasts of US households; also ask higher-order beliefs for the typical households across the political spectrum

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Findings

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- Individuals believe their **own forecasts are more moderate** than their own party
- Partisan patterns in higher-order beliefs:
 - Higher-order perceptions are **extremely similar** across party lines
 - **Key exception** immediately preceding presidential election
 - No partisan disagreement in higher-order beliefs in **conditional presidential scenarios**
 - But partisan differences arise in **policy counterfactuals** (tariffs)

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 - No partisan disagreement in higher-order beliefs in **conditional presidential scenarios**
 - But partisan differences arise in **policy counterfactuals** (tariffs)
- **Information** from partisan sources:
 - **“Low-spin” news compresses** the distribution of beliefs towards the information
 - **“High-spin” stories shift** the entire distribution for respondents of both parties, albeit more for individuals aligned with the source

Testing Models of Expectation Formation

- Democrats and Republicans hold different expectations – and they know it
- \implies models of simple private signals, naive misperceptions, or standard level-k models cannot explain the data
 - Need to generate strong, predictable patterns in actual and perceived disagreement
- Perceived disagreement is larger than actual disagreement
- \implies simple “agree to disagree” models also fail
 - Need to generate divergence between perceived and actual disagreement
- Perceived within-party disagreement is sizable and predictable
 - Need to generate predictable perceived disagreement even within groups

Implications: Real Consequences?

Beyond the scope of this paper, but...

- US currently characterized by strong partisanship patterns **regionally, sectorally, ...**
- Partisan disagreement in inflation expectations therefore has **distributional consequences** along these dimensions
 - Since inflation beliefs causally affect economic decisions (Coibion et. al. 2019, ...)
 - See empirical evidence regarding regional inflation (Binder, Kamdar, & Ryngaert 2024)
- In any situation with coordination or strategic complementarities, **perceived disagreement \implies amplification**
 - Eg, wage or price setting
- Our results additionally show **over-estimation** of partisan disagreement \implies **further amplification**
 - Testing and quantifying these effects in future work

Survey Details

Overview of the Three Survey Waves

Survey waves featured a common core of questions:

- Point and distributional expectations for one-year-ahead inflation
- [Second-order beliefs about what typical Ds, Rs, and Is](#) expect inflation to be
- Demographic profile

Wave 1: July and September 2023 — Information Treatments (N=1,779)

- Fielded in a time without large political developments
- [Control](#) groups and [treatments that varied based on news source and spin](#)

Wave 2: November 2024 — Presidential Election (N=1,205)

- Fielded before and after the election
- Conditional vignettes: own & second-order forecasts [if Trump wins vs. if Harris wins](#)

Wave 3: April 2025 — Liberation Day Tariffs (N=613)

- Fielded after tariff announcement; before and after the 90-day pause
- Conditional vignettes: own & second-order forecasts under [low \(0–5%\) vs. high \(>5%\) avg tariffs](#)

Example Second-Order Inflation Expectations

Let's begin with questions about your beliefs about the **typical Democratic voter**. We know this is difficult. Please provide us your best estimates.

Over the next 12 months, do you think that the **typical Democratic voter** expects inflation (prices in general to go up) or deflation (prices in general to go down)?

- ☐ Inflation
- ☐ Deflation (the opposite of inflation)

What do you think the **typical Democratic voter** expects the rate of inflation to be over the next 12 months?

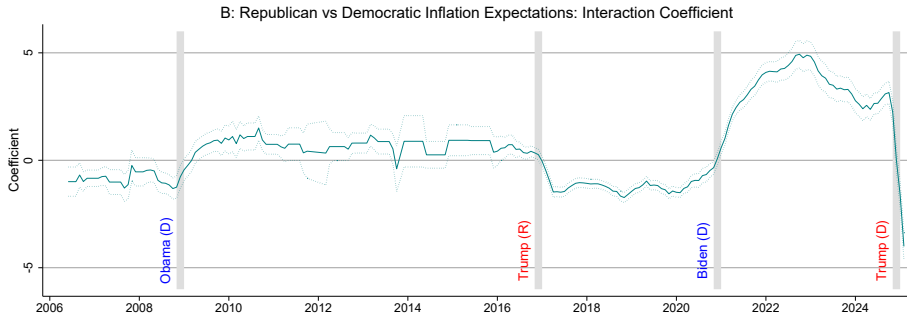
Empirical Results

Definitions

- Population average inflation expectation $\hat{\pi}_{t+1}^P$ across parties $P = \text{Republicans (R), Democrats (D), Independents (I)}$. **Partisan gap**: $\hat{\pi}_{t+1}^R - \hat{\pi}_{t+1}^D$

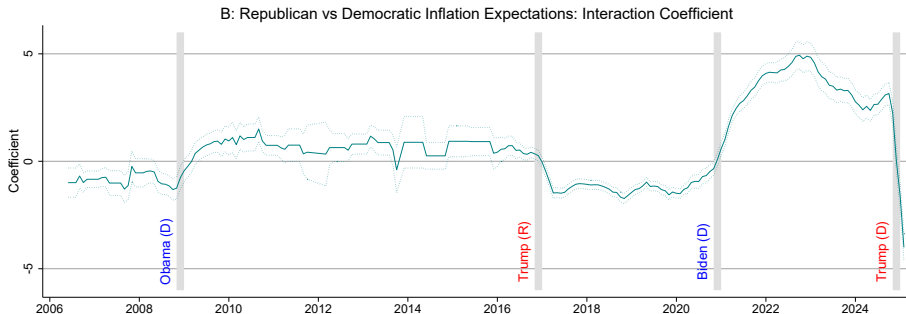
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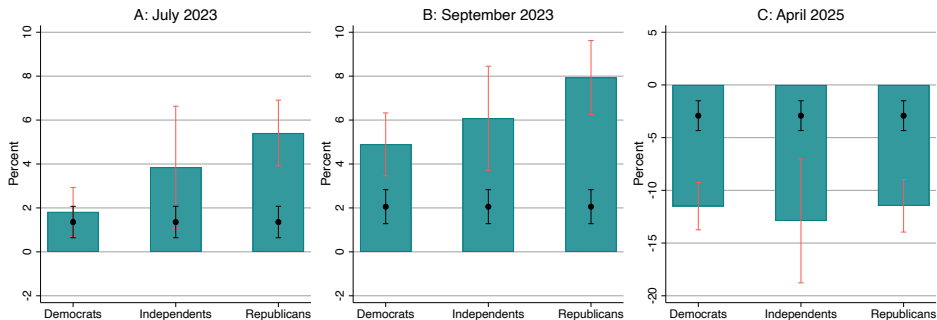
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- “Higher-order belief of the partisan gap” $\hat{\pi}_{t+1}^{i,GAP} \equiv \mathbb{E}_t^i[\hat{\pi}_{t+1}^R] - \mathbb{E}_t^i[\hat{\pi}_{t+1}^D]$
- “Higher-order belief of own-party gap” $\hat{\pi}_{t+1}^{i,OWN} \equiv \mathbb{E}_t^i[\hat{\pi}_{t+1}^{P(i)}] - \mathbb{E}_t^i[\pi_{t+1}]$

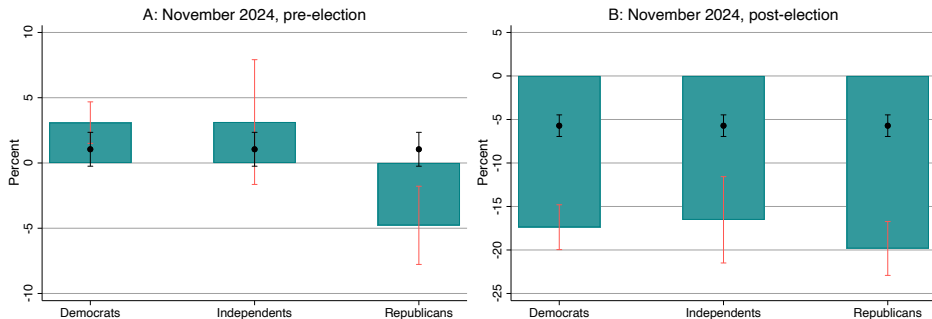
Higher-Order Beliefs of the Partisan Gap

- Partisan gap (in black): positive under Biden and negative under Trump
- Respondents of all political affiliations **understand the sign** of the partisan gap, but **overestimate its magnitude** (blue bars and orange intervals)



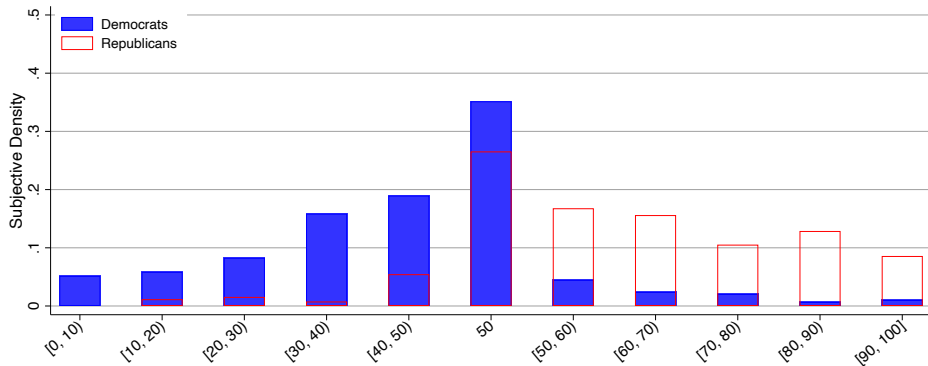
Higher-Order Beliefs of the Partisan Gap, 2024 Election

- Prior to the election:
 - The actual partisan gap is moderately positive
 - Republicans: $\hat{\pi}_{t+1}^{i,GAP} < 0$ while Democrats: $\hat{\pi}_{t+1}^{i,GAP} > 0$
- Following Trump's election:
 - The actual partisan gap turns sharply negative
 - Both Republicans and Democrats: $\hat{\pi}_{t+1}^{i,GAP} \ll 0$, overestimating the magnitude



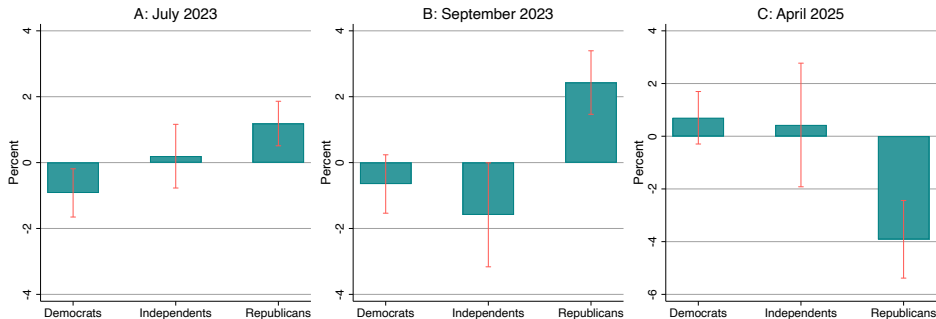
Subjective Probability of Trump Winning

- **Potential explanation:** respondents believed that the candidate aligned with their party would be elected
 - **Caveat:** we don't know higher-order beliefs regarding election outcome probabilities



Higher-Order Beliefs of Own-Party Gap

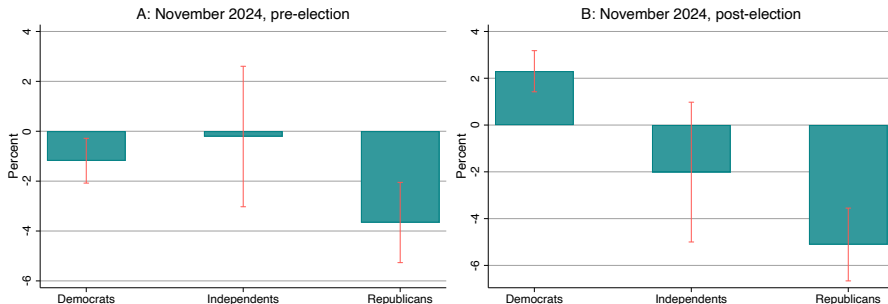
- How do respondents view their own beliefs relative to the perceptions of their party?
- In 2023, actual partisan gap is positive. **Own-party gaps:**
 - Democrats believed fellow Democrats held even lower expectations $\Rightarrow \hat{\pi}_{t+1}^{i,OWN} < 0$
 - Republicans believed fellow Republicans had even higher expectations $\Rightarrow \hat{\pi}_{t+1}^{i,OWN} > 0$
- Patterns reverse in 2025
- Respondents view themselves as more “moderate” than their own party



Higher-Order Beliefs of Own-Party Gap, Election

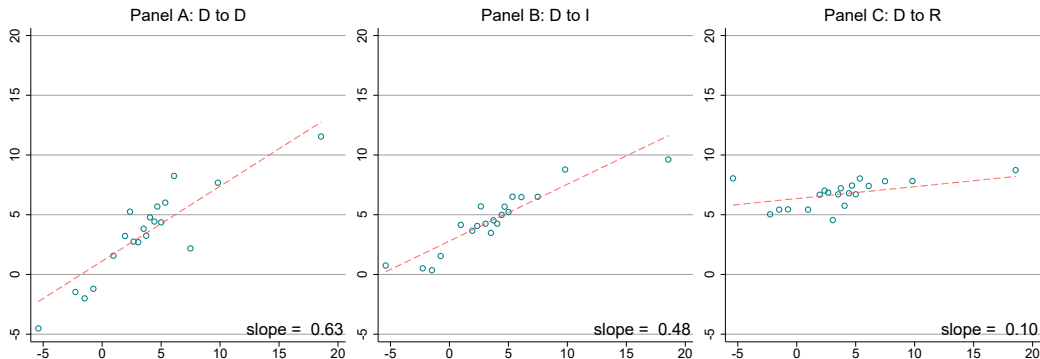
- Again, the 2024 pre-election wave looks different
- Both Democrats and Republicans exhibit **negative own-party gaps**
- Recall the subjective beliefs regarding the presidential outcome. **Potential explanation:**

- Democrats think Harris will win $\implies \hat{\pi}_{t+1}^{i,GAP} > 0$ and $\hat{\pi}_{t+1}^{i,OWN} < 0$
- Republicans think Trump will win $\implies \hat{\pi}_{t+1}^{i,GAP} < 0$ and $\hat{\pi}_{t+1}^{i,OWN} < 0$



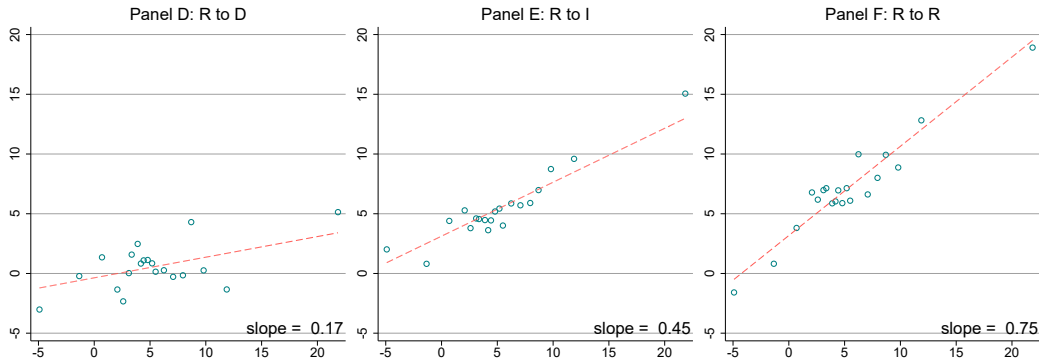
Association Between Own- and Higher-Order Beliefs, 2023: Democrats

- Democrats' own expectations (x-axis) are plotted against their higher-order beliefs of average Democrats, Independents, and Republicans (y-axis)
- The relationship between own-beliefs and higher-order beliefs is strongest within party and weakens as we move to the other side of the political spectrum



Association Between Own- and Higher-Order Beliefs, 2023: Republicans

- The same story holds for Republican beliefs: **the relationship between own-beliefs and higher-order beliefs is strongest within party** and weakens as we move to the other side of the political spectrum



Takeaways

- Respondents understand the sign of the partisan gap, but overestimate its size
 - The one exception: before the election when most people think their candidate will win
- Respondent's believe their own expectations are more moderate than the average within their own party
- Respondent's own expectations are most strongly associated with their higher-order beliefs of their own party and less strongly associated with their higher-order beliefs of the opposing party

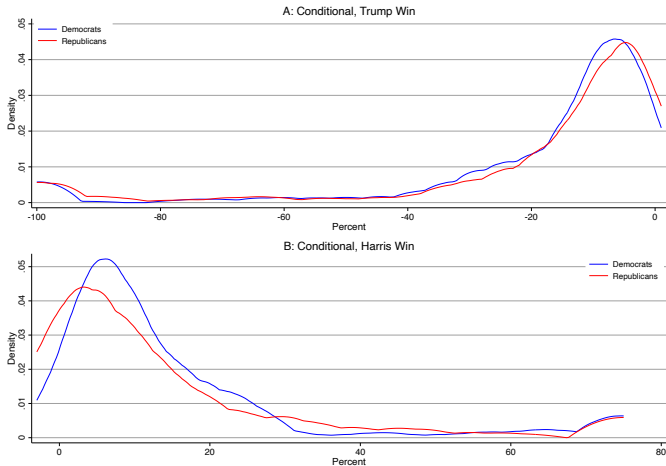
Empirical Results: Conditionals

Examining Mechanisms of Higher-Order Beliefs: Conditional Beliefs

- In 2024 and 2025 waves, asked respondents for own- and higher-order beliefs in various conditional scenarios
 - 2024, pre-election: conditional on Trump vs. Harris wins
 - 2024, post-election: hypothetical if Harris had won
 - 2025: conditional on low vs. high tariff regimes
- Election and policy counterfactuals help elucidate the mechanisms behind perceptions of the partisan gap
 - Presidency clearly plays an outsized role in driving partisan expectations
 - Current tariffs a major salient pillar of current administrations' economic policy
- Additionally, may shed light on the partisan disagreement regarding the partisan gap preceding the 2024 election

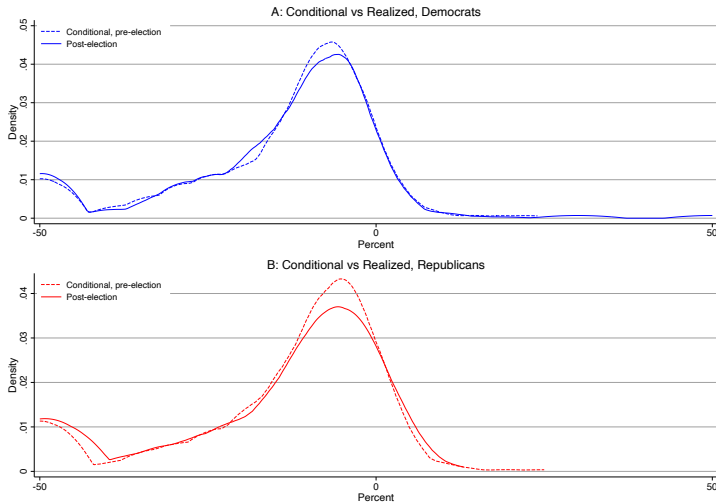
Higher-Order Beliefs of the Partisan Gap, Conditional on Election Outcome

- Conditional on a **Trump victory**, both Republicans and Democrats perceive a **large negative partisan gap**; vice versa conditional on a **Harris victory**
- \implies no higher-order partisan differences **conditional on the election outcome**



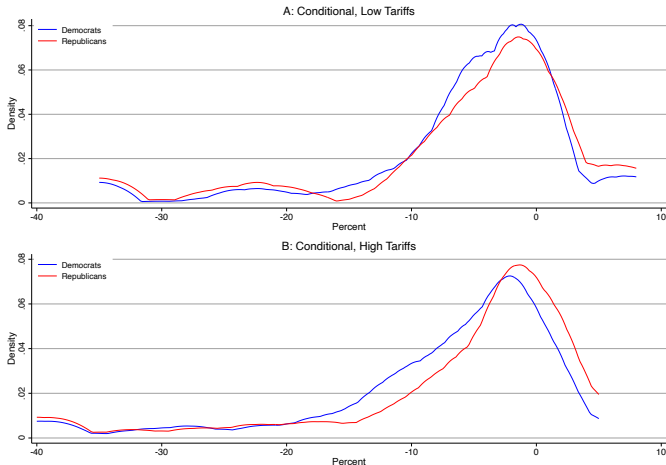
Conditional and Realized Higher-Order Beliefs of the Partisan Gap

- Pre-election beliefs of the partisan gap conditional on Trump vs. post-election
- **Highly similar** (supports the use of vignettes and hypotheticals in survey research)



Higher-Order Beliefs of the Partisan Gap, Conditional on Tariffs

- Conditional on low tariffs: **small partisan disagreement**
- Conditional on high tariffs: **significant partisan disagreement**



Takeaways

- Typically we find **minimal partisan disagreement about higher-order beliefs**
- The exception in the lead-up to the 2024 election disappears once we **condition on the realization of the election**
 - Consistent with our explanation based on disagreement regarding the election outcome probabilities
- **High-tariff scenario exception**: this setting may be **less familiar or more difficult** to reason through \implies greater partisan disagreement
- **Consistency in reported higher-order beliefs** across ex-ante conditional vs. hypothetical vs. realized
 - Supports the use of simple vignettes and hypotheticals in survey research
 - Andre et al. (2022), Colarieti et al. (2024), Jiang et al. (2024)

Empirical Results: Information Treatments

Treatments: Low-Spin, July 2023

On June 13, 2023, Fox Business reported the following:

Inflation cooled again in May [2023] to the lowest rate in two years, but a spike in the cost of used cars, rent and groceries kept prices uncomfortably high for millions of U.S. households. [...] Prices climbed 4% on an annual basis. Although inflation has cooled from a peak of 9.1%, it remains about more than double the pre-pandemic average and well above the Federal Reserve's 2% target rate.

On June 14, 2023, MSNBC reported the following:

Brand new data shows inflation fell to its lowest level in two years last month [May 2023] at just 4%. [...] Although that is much slower than the 9% that we saw last year, [...] economists are saying that's an encouraging sign. We'd like to get a little closer to 2%, so it's not mission accomplished just yet. But when you look at things like airline fares, they're going down. Gasoline prices also went down between April and May so all of those are welcome news I imagine to a lot of Americans.

Treatments: High-Spin, September 2023

On September 1, 2023, Fox News provided the following report on inflation:

Overall, inflation is up nearly 16% from January 2021, when Biden first took office, to last month. Groceries are up nearly 20%. “Real unemployment,” which includes those who are discouraged from looking for work or under-employed, spiked to 7.1%.

Steve Moore (Distinguished Fellow in Economics at The Heritage Foundation and former Economic Advisor to President Trump) said, “for 22 of the last 24 months, wages are behind what the rate of inflation [has been], and what that means is that the average family is about 5,000 dollars poorer today than they were when Joe Biden came into office.”

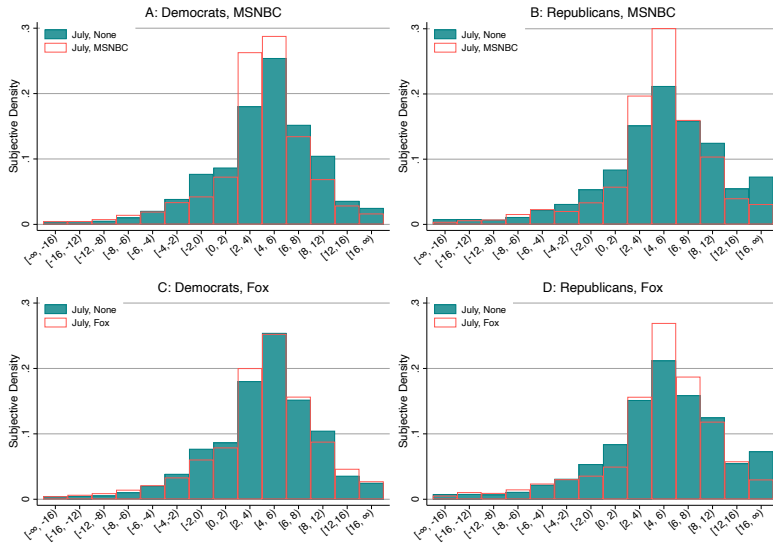
On August 16, 2023, MSNBC provided the following report on inflation:

Inflation has gone from 8.5% to 3.2%. Unemployment remains at nearly a 50 year low. Our economy has the lowest inflation rate and the strongest economic recovery of all the G7 nations. The prospect of a recession is diminishing due in part to strong consumer confidence. The ‘Bidenomics’ score card: 13.2M jobs created, 789,000 manufacturing jobs created, and unemployment at 3.5%.

Robert Reich (Professor of Public Policy at University of California Berkeley and Former Secretary of Labor for President Clinton) said, “the economy is great. It’s a ‘Goldilocks economy.’ I’ll tell you, I’ve been watching or participating in economic policy for at least 30 years, and I don’t recall an economy that is this good.”

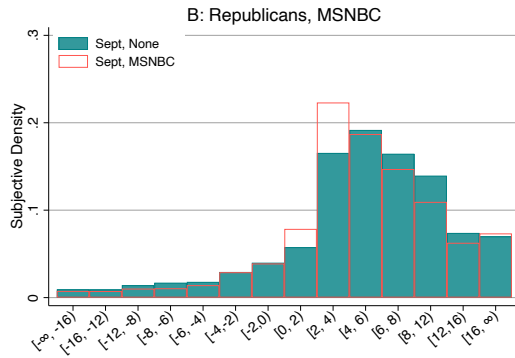
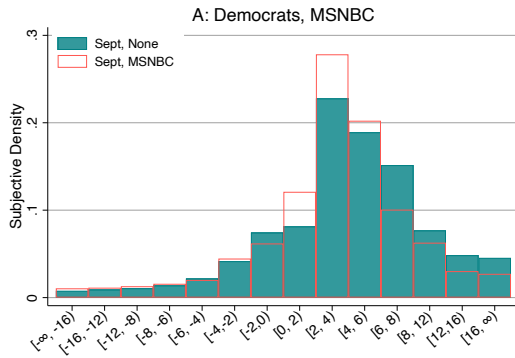
Subjective Densities, Low-Spin Treatments

- For **low-spin** treatments, expectations for both parties **compress to 4%**



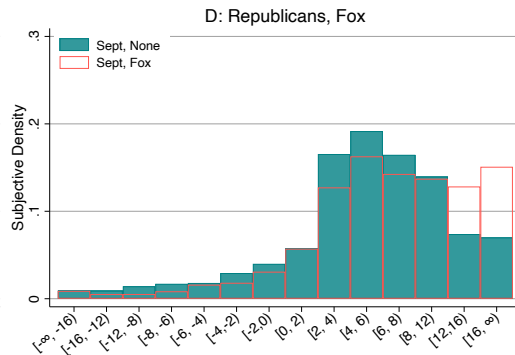
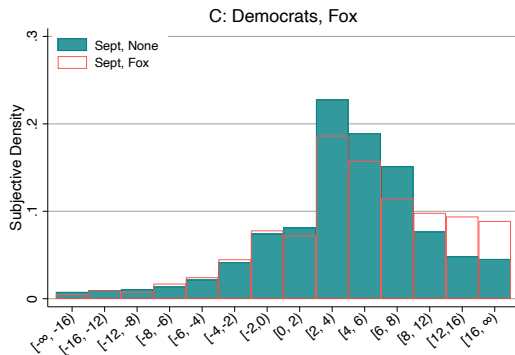
Subjective Densities, High-Spin MSNBC Treatment

- Democrats and Republicans who are shown the **MSNBC treatment** have **lower inflation expectations** than their control group counterparts
- **Democrats react more to the MSNBC treatment**, cutting their mean expectation by 0.92pp, while Republicans reduced theirs by 0.19pp



Subjective Densities, High-Spin Fox Treatment

- In response to the [Fox treatment](#), both Democrats and Republicans [increase their inflation expectations](#) (relative to the control)
- [Republicans react more to the Fox treatment](#), increasing their mean by 2.04pp, while Democrats increase by 1.11pp



Takeaways

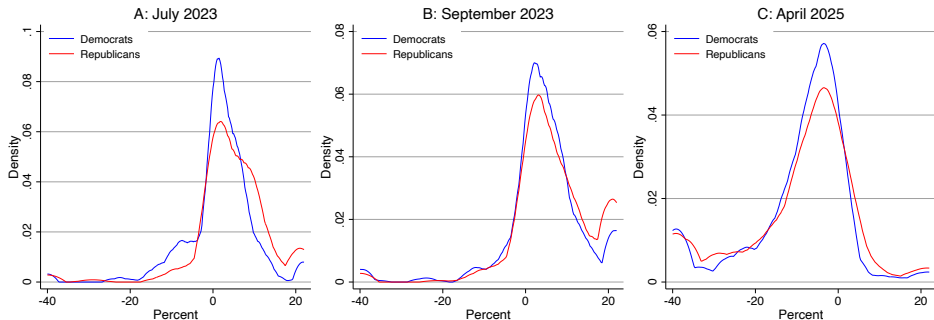
- Partisan information treatments help illuminate the role of **media** in shaping the partisan gap
- **Differential Exposure**: Democrats and Republicans consume news from different sources
 - Partisan “spin” of macro news in media aligns with political party in power
 - \implies partisan gap in expectations
- **Differential Responsiveness to High-Spin News**: both parties react to “high spin” information
 - However, respondents appear more sensitive to narrative aligned with own priors
 - \implies exacerbation of partisan gap (even if news consumption was the same)

Concluding Remarks

- New survey evidence reveals strong patterns in higher-order beliefs
- Individuals qualitatively understand the partisan gap in inflation expectations, but consistently overstate its magnitude
- Individuals view their own forecasts as more moderate compared to their own party
- Perceptions of the partisan gap are similar across the political spectrum with some notable exceptions
- Future work: testing and quantifying the real consequences

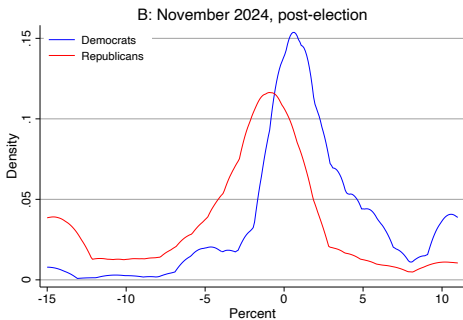
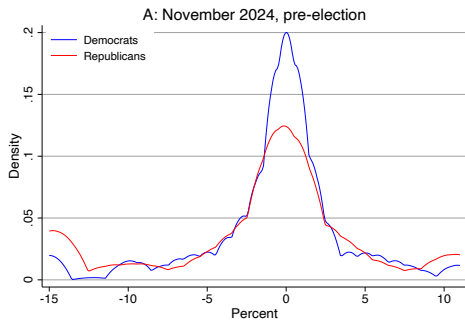
Higher-Order Beliefs of the Partisan Gap, Density

- The mode of the densities of the higher-order beliefs of the partisan gap tells a similar story as the averages ($\hat{\pi}_{t+1}^{i,GAP} > 0$ in 2023 and $\hat{\pi}_{t+1}^{i,GAP} < 0$ in 2025)
- Additionally show **fat asymmetric tails**:
 - 2023: fat right tail
 - 2025: fat left tail



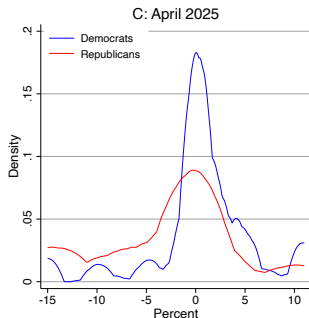
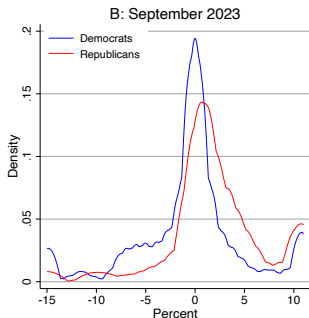
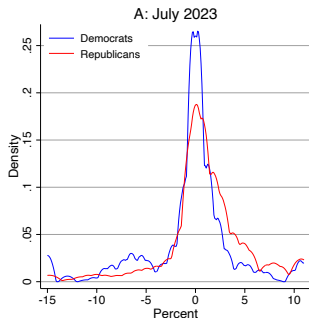
Higher-Order Beliefs of Own-Party Gap, Election Density

- Pre-election: fatter left tail and limited partisan difference
- Post election: Republicans have a fatter left tail and Democrats a fatter right tail; consistent with respondents viewing themselves as more “moderate” than their own party



Higher-Order Beliefs of Own-Party Gap, Density

- A non-negligible fraction of respondents report identical own- and higher-order beliefs regarding their own party $\Rightarrow \hat{\pi}_{t+1}^{i,OWN} \approx 0$
- In 2023, Republicans have a fatter right tail; and Democrats a fatter left tail
- In 2025, Republicans have a fatter left tail and Democrats a fatter right tail



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