

Czech Household Inflation Expectations: Preliminary Results

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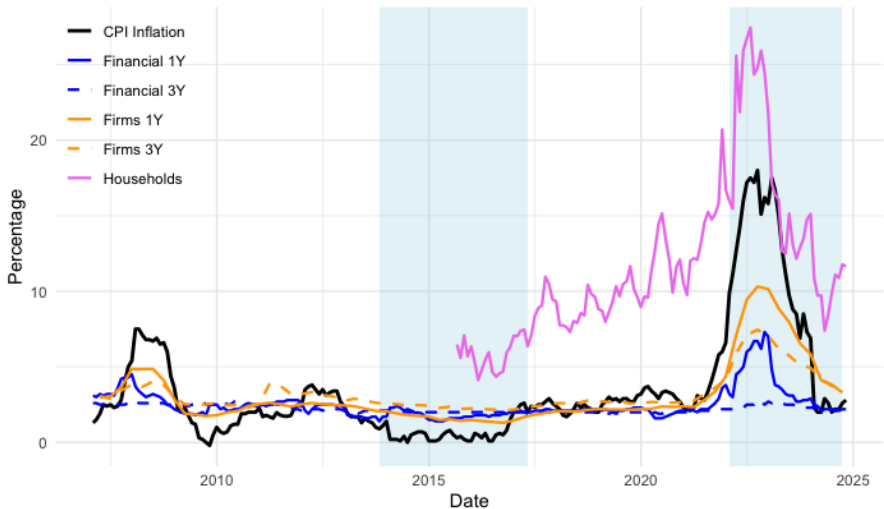
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Introduction

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- Since 2007, quantitative household inflation expectations have not been available in the Czech Republic, and the Czech National Bank relied on financial market inflation expectations to assess their anchoring.
- However, the recent inflation surge, largely unexpected, showed that the decade of low inflation is not enough to sustain inflation close to the central bank target when facing large external shocks and that anchoring of inflation expectations shall not be taken for granted.
- Following this experience, and against the backdrop of findings in the growing body of literature pointing to the importance of knowledge of the full distribution of inflation expectations and their drivers of inflation expectations, we conducted a new survey in 1/2024-6/2024.

Inflation Expectations and CPI Inflation: 2007 - 2024



The Survey

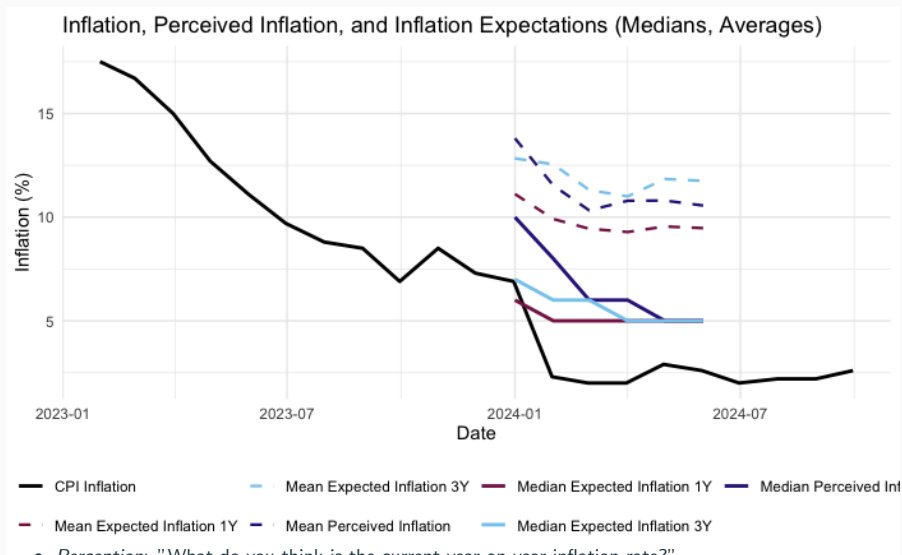
- Main goal: Learn about inflation expectations, their drivers, and understanding of inflation from a detailed survey that will permit identification of mutual links between expectations, and a rich set of additional indicators (demography, education, employment status, confidence in central bank, knowledge of inflation target, etc.).
- Survey questions closely followed the ECB Consumer Expectations Survey, and the FRB NY survey questionnaire from Armatier et al. (2022).
- Direct and indirect questions: perceived inflation, point forecasts, density forecasts of inflation expectations at 1Y and 3Y horizon; expected unemployment, both subjective risk and unemployment rate; expected wage growth and desired wage growth when taking inflation in mind.
- First and last surveys with questions on the confidence in the central bank, awareness of inflation target, belief in interest rate policy, expected impact of supply shock on prices and a possibility of monetary policy to deal with supply shocks.

The Survey

- IPSOS online panel, $n=1000$, representative (gender, age, region, education).
- IPSOS provides incentives to finish the survey (mitigation of the attrition problem).
- Rotation of participants random - participants were allowed to self-select to continue in the next round.
- Pilot in December 2023 ($n=150$).
- Survey was available one week after the Czech Statistical Office published the inflation rate of the previous month.

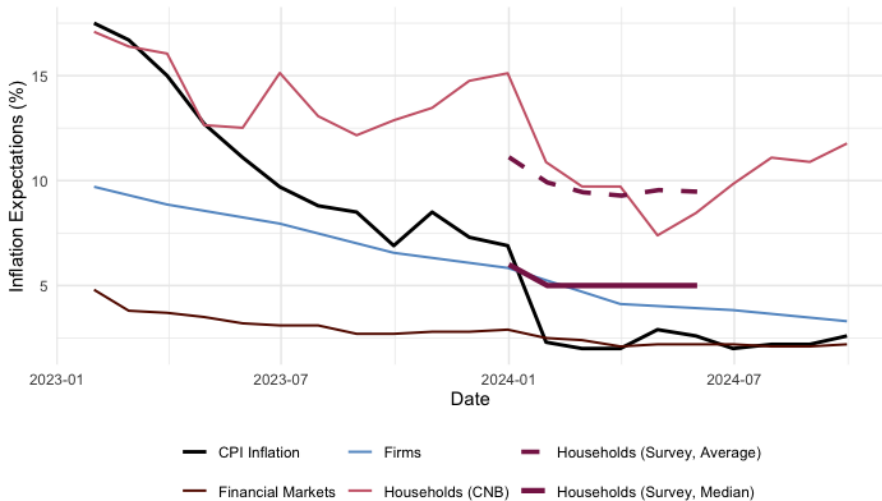
Evolution of inflation expectations

Actual, perceived and expected inflation rates

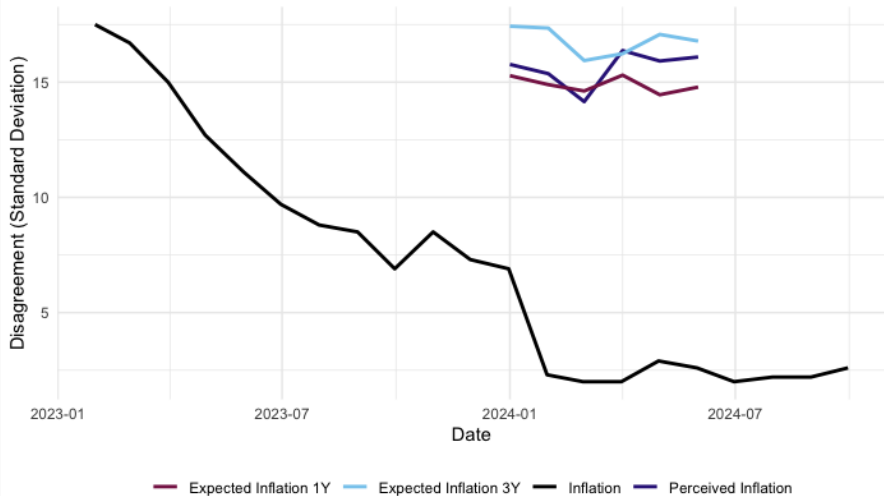


- *Perception*: "What do you think is the current year-on-year inflation rate?"
- *Expectation 1Y*: How high do you expect year-on-year inflation for the year?
- *Expectation 3Y*: How high do you expect annual inflation in 3 years?

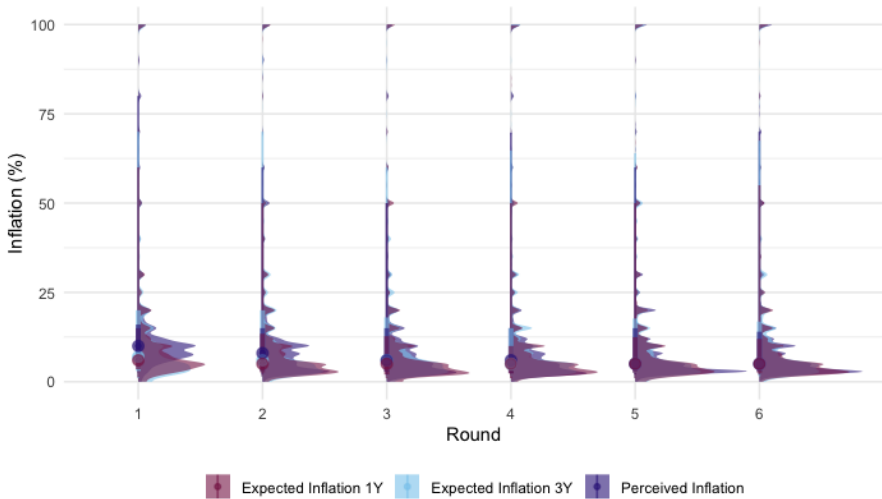
Inflation Expectations 1Y ahead: Financial Markets, Firms, Households (CNB), Households (Our Survey)



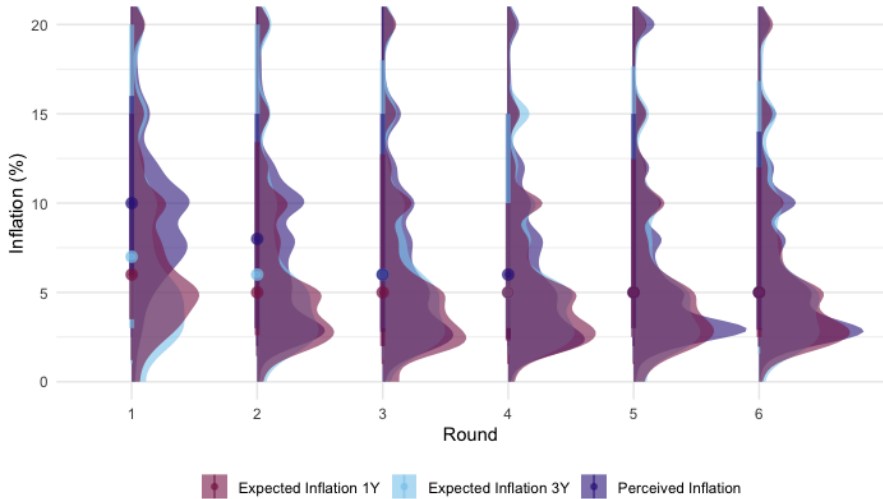
Disagreement in Perceived and Expected Inflation



Distributions of Perceived Inflation and Inflation Expectations



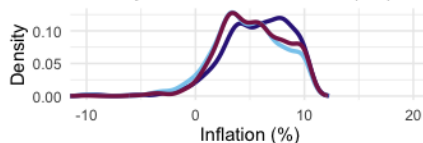
Distributions of Perceived Inflation and Inflation Expectations (Zoomed In)



Density forecasts vs point forecasts

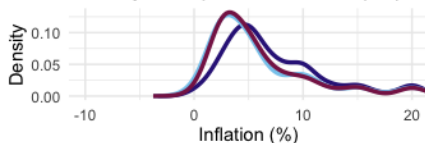
Consistency of Inflation Expectations: Densities of Individual Means and Expectations

Density of Individual Means (1Y)



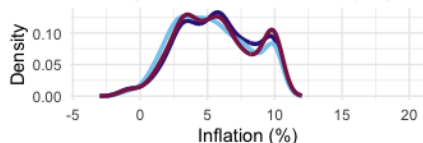
Round Round 1 Round 3 Round 6

Density of Expected Inflation (1Y)



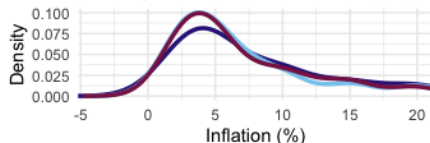
Round Round 1 Round 3 Round 6

Density of Individual Means (3Y)



Round Round 1 Round 3 Round 6

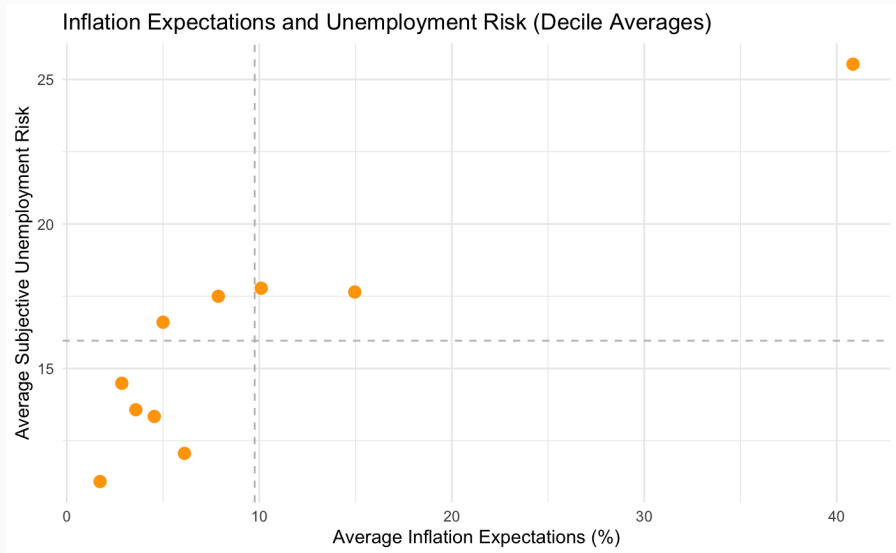
Density of Expected Inflation (3Y)



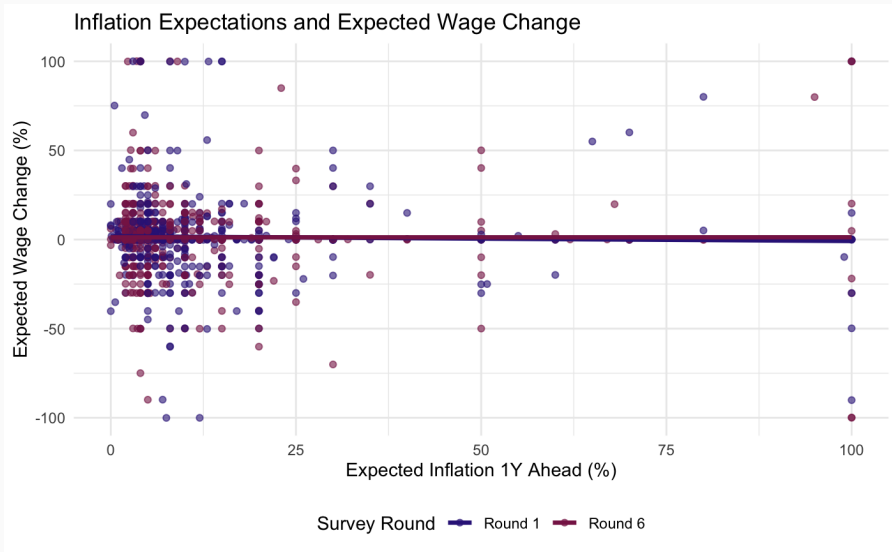
Round Round 1 Round 3 Round 6

Are inflation expectations consistent with the stagflationary interpretation?

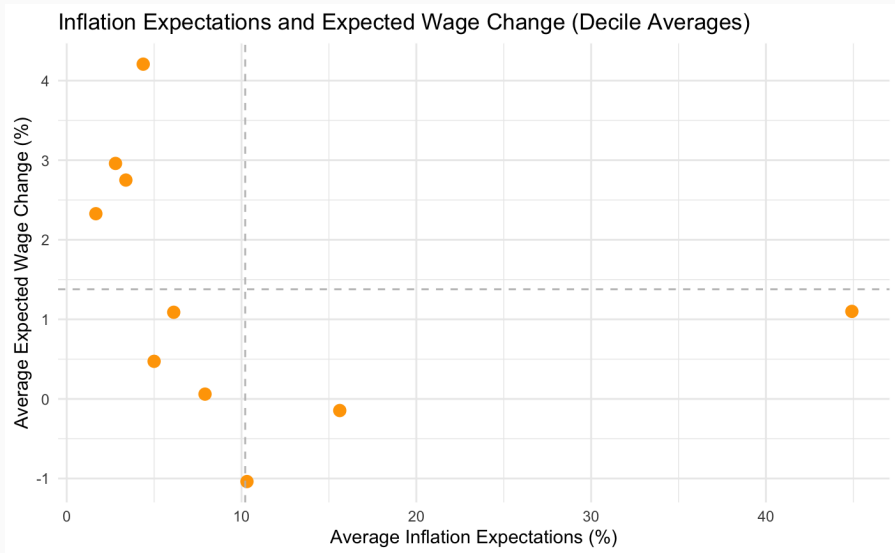
Inflation and unemployment expectations



Inflation expectations and expected wage change

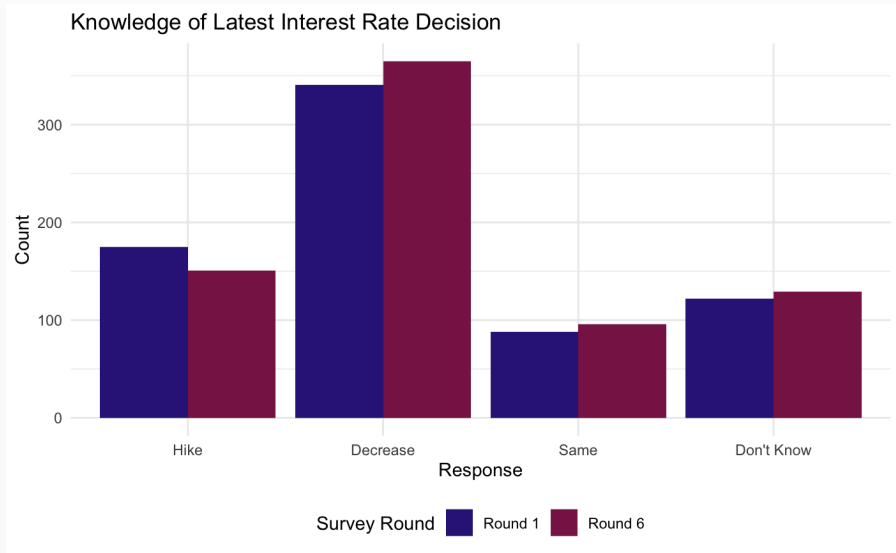


Inflation expectations and expected wage change

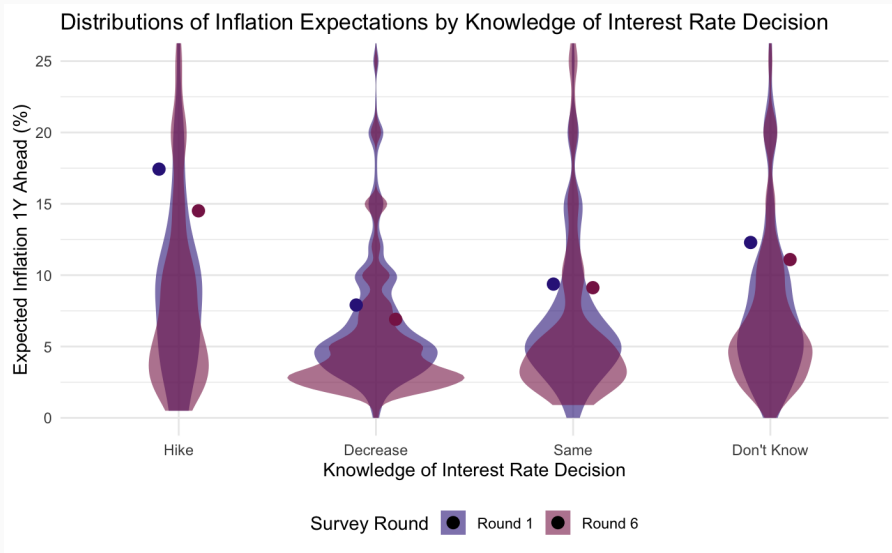


Understanding monetary policy and inflation

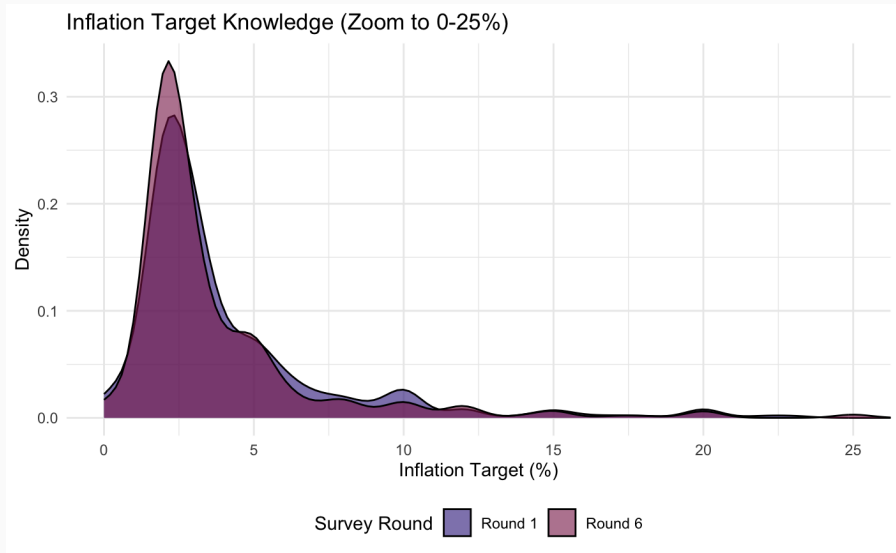
Knowledge of monetary policy decisions and inflation expectations



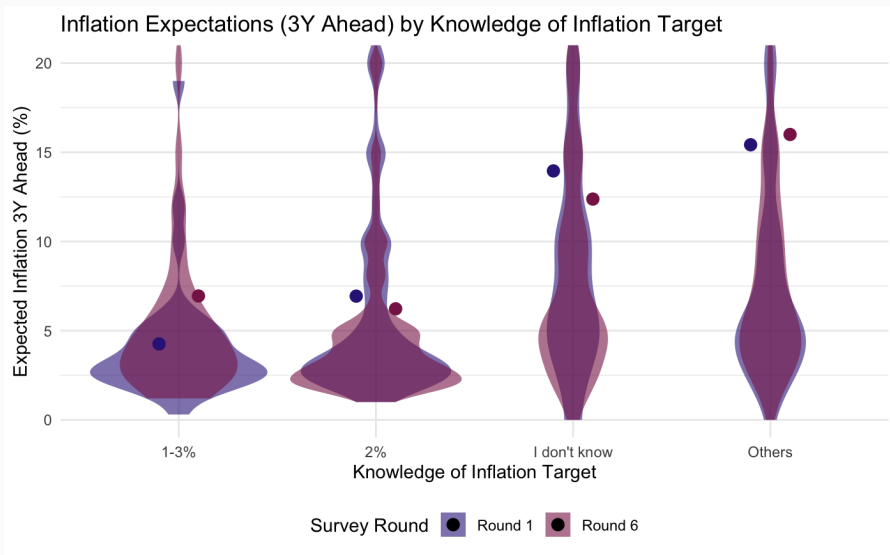
Knowledge of monetary policy decisions and inflation expectations



Knowledge of inflation target and inflation expectations



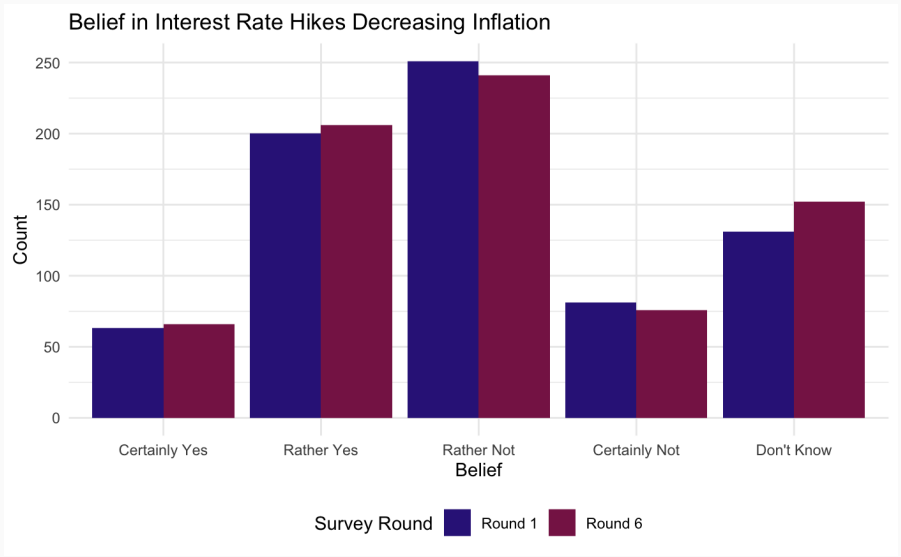
Knowledge of inflation target and inflation expectations



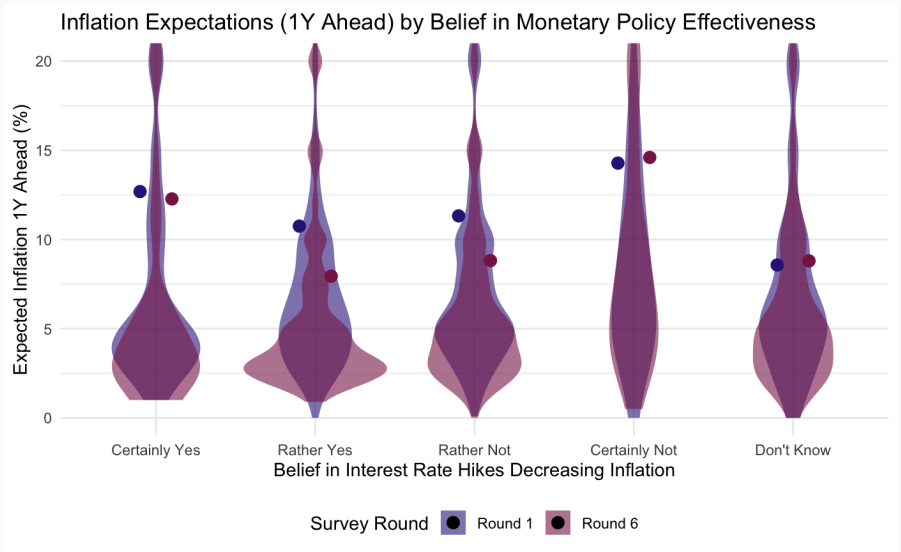
Again, knowing inflation target decreases inflation expectations!

Understanding transmission of monetary policy

Belief that raising interest rates decreases inflation

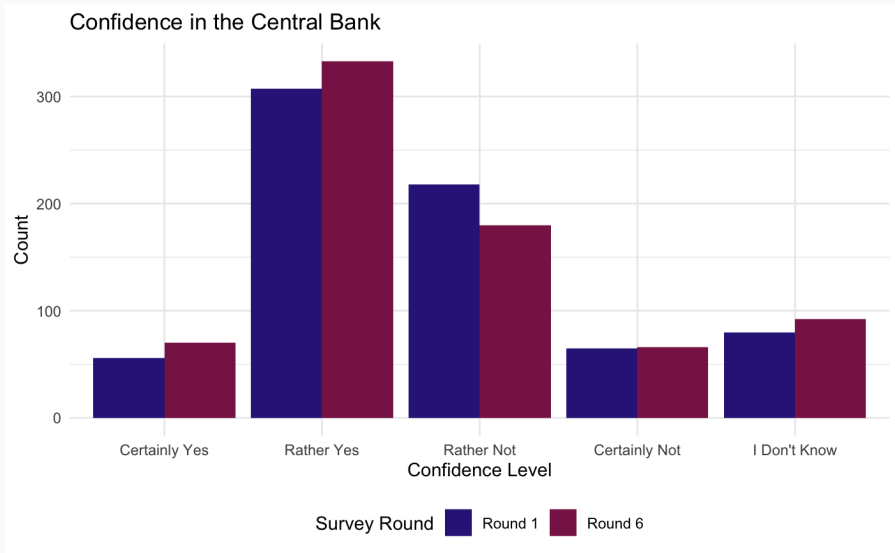


Belief that raising interest rates decreases inflation

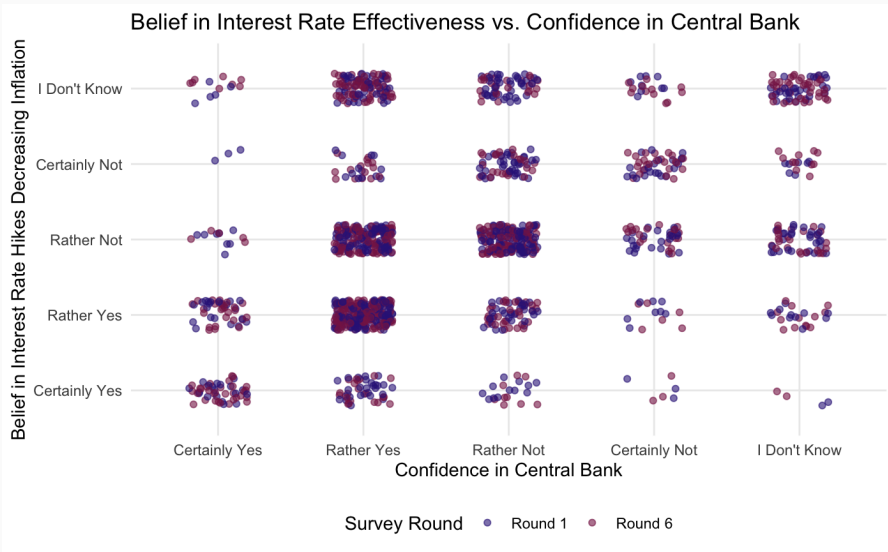


Confidence in the Czech National Bank

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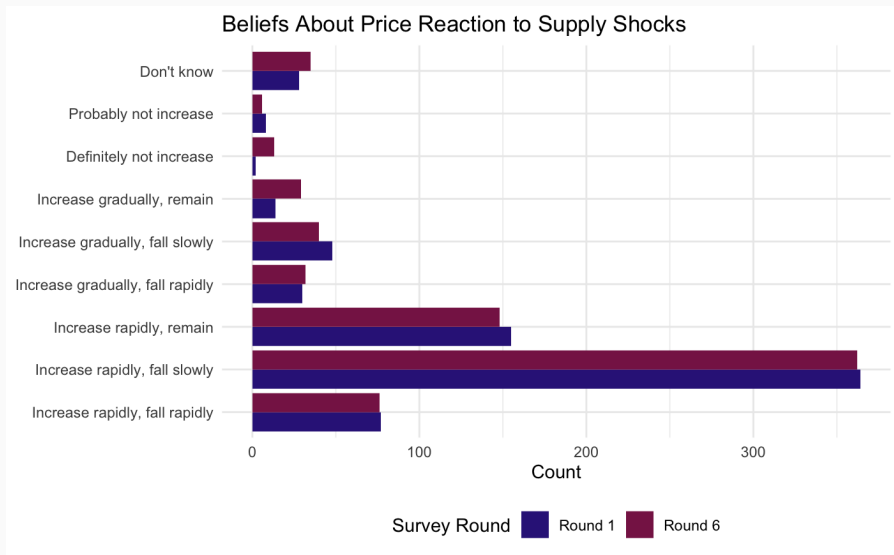
Confidence in the CNB and interest rate policy



**Supply shocks: Expectations about
prices and preferred monetary policy
action**

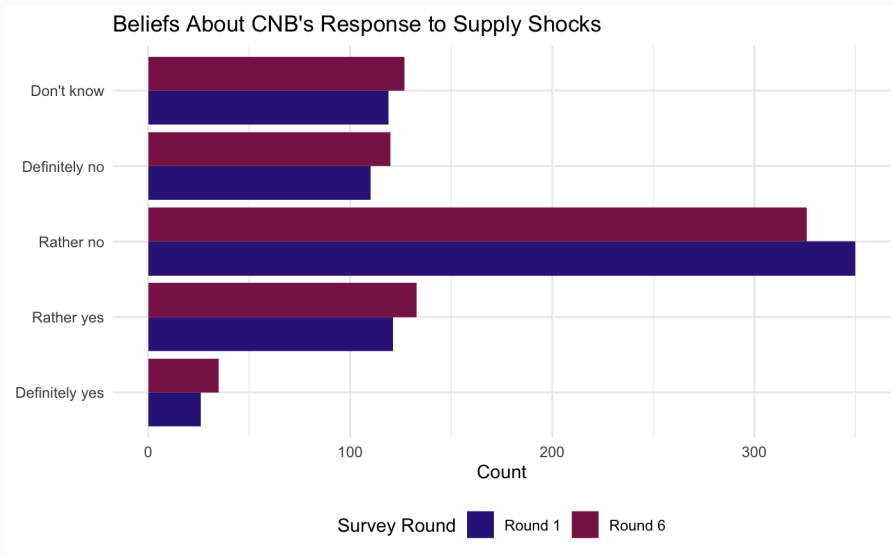
Supply shocks: Expectations about prices and preferred monetary policy

If fuel prices were to increase dramatically due to a short-term oil supply disruption or refinery shutdowns, do you think that prices in general would:



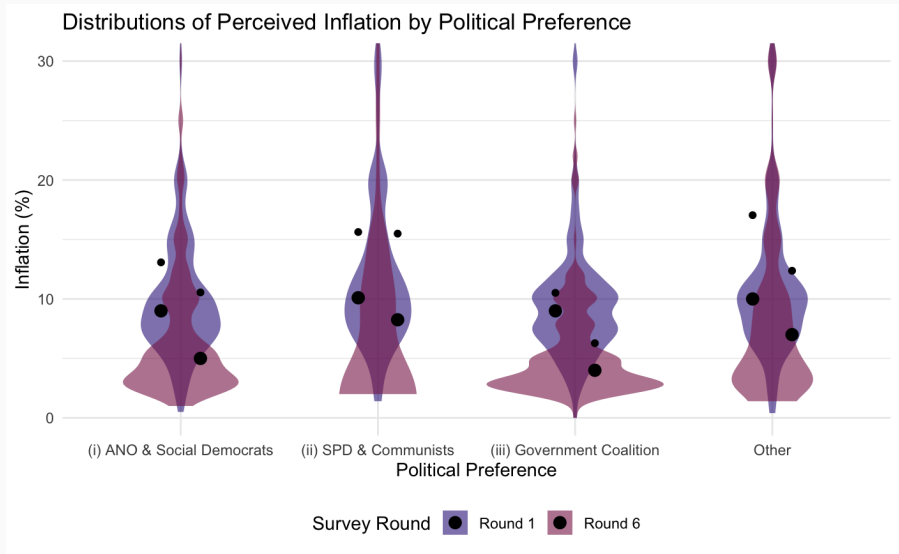
Supply shocks: Expectations about prices and preferred monetary policy

Do you think that the CNB's increase in interest rates in response to rising prices due to oil price increase will reduce inflation?

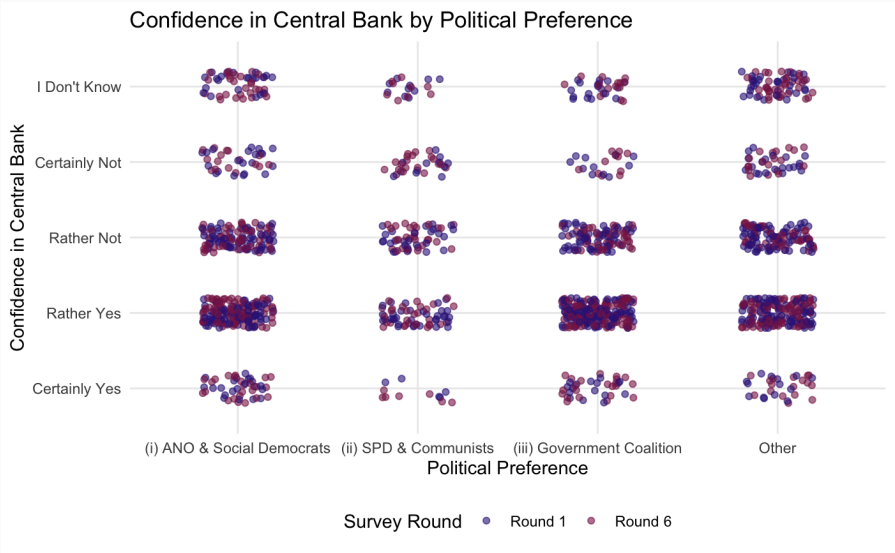


Partisan division

Partisan division



Partisan division



Reactions to the inflation surge of 2022-2023

Round 1

Q11. Which of the following applies to you in the last 12 months? In response to high inflation, have you:

1 Saved more due to pessimistic outlook 2 Saved more due to high interest rates on savings 3 Saved more due to high prices of basic food and energy 4 Saved more for another reason 5 Saved less due to fear that money is losing its value 6 Saved less due to tight family budget 7 Saved less for another reason 8 I have not changed my behavior 99 Don't know (no answer)

Q12. In the next 12 months, you personally plan to:

1 Save more due to pessimistic outlook 2 Save more due to high interest rates on savings 3 Save more due to high prices of basic food and energy 4 Save more for another reason 5 Save less due to fear that money is losing its value 6 Save less due to tight family budget 7 Save less for another reason 9 Invest more due to higher appreciation of money 8 I do not plan to change my behavior 99 Don't know (no answer)

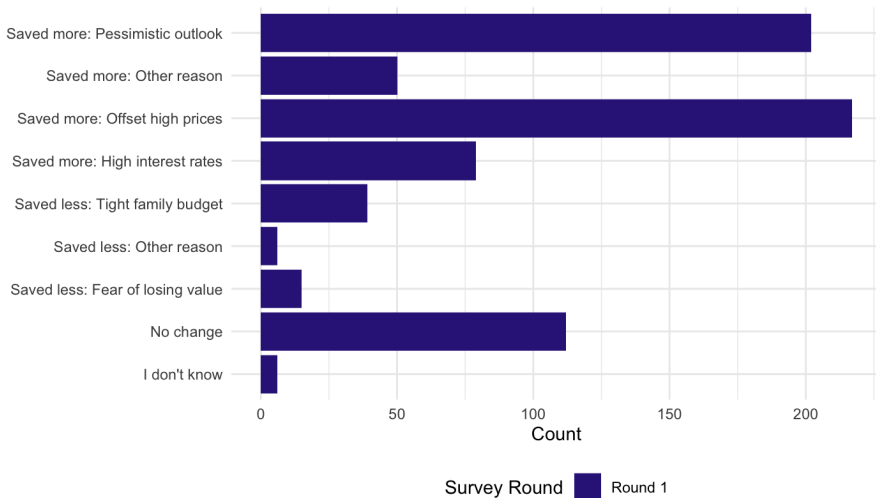
Q11. Which of the following is true for you with regard to the past 5 months? Since the beginning of the year, have you:

1 Spent more due to increased income 2 Spent more due to refunded energy bills 3 Spent more due to cheaper food 4 Spent more due to cheaper loans 5 Spent more due to falling savings rates 6 Spent more for another reason 7 Spent less due to tight family budget 8 Spent less for another reason 9 I have not changed my behavior 99 Don't know (no answer)

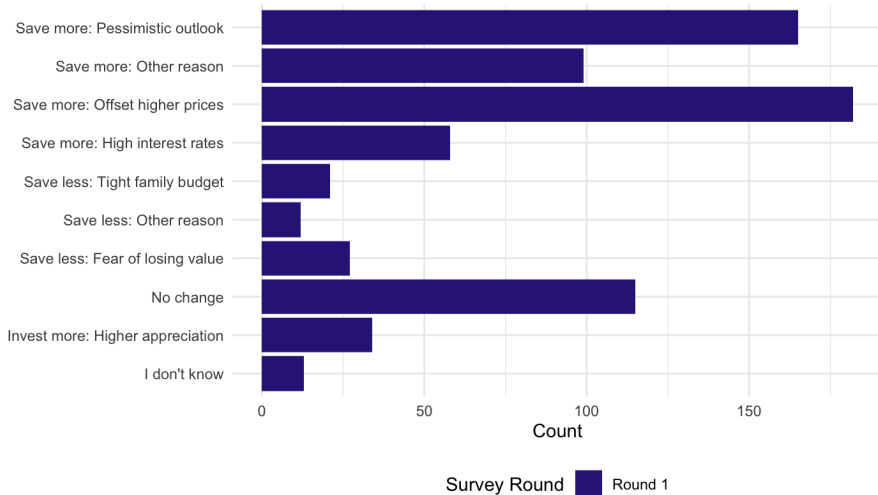
Q12. In the next 12 months, you personally plan to:

1 Save less due to an optimistic outlook for income growth 2 Save less due to falling interest rates on savings 3 Save less due to lower prices of basic food and energy 4 Save less for another reason 5 Save more due to growing household income 6 Save more because money is no longer losing value as much 7 Save more because I will have more left 8 Save/save more for another reason 9 Invest more due to higher appreciation of money. 10 I do not plan to change my behavior 99 Don't know (no answer)

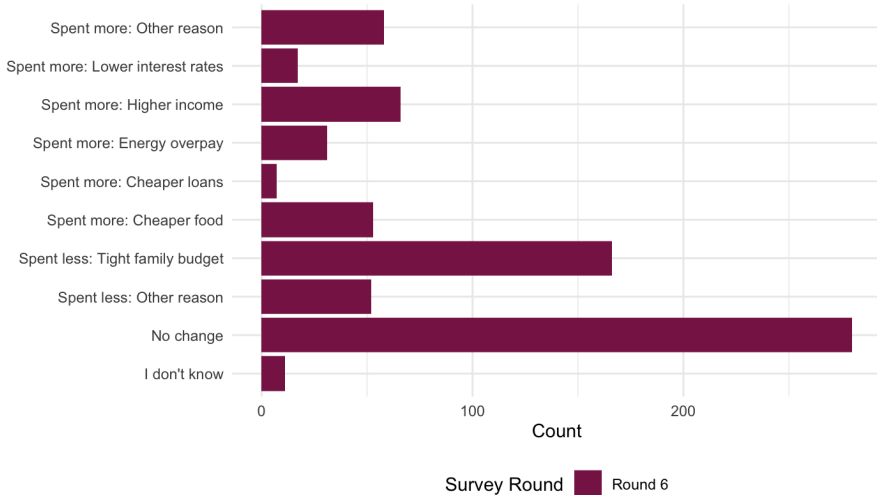
Responses to High Inflation (Last 12 Months)



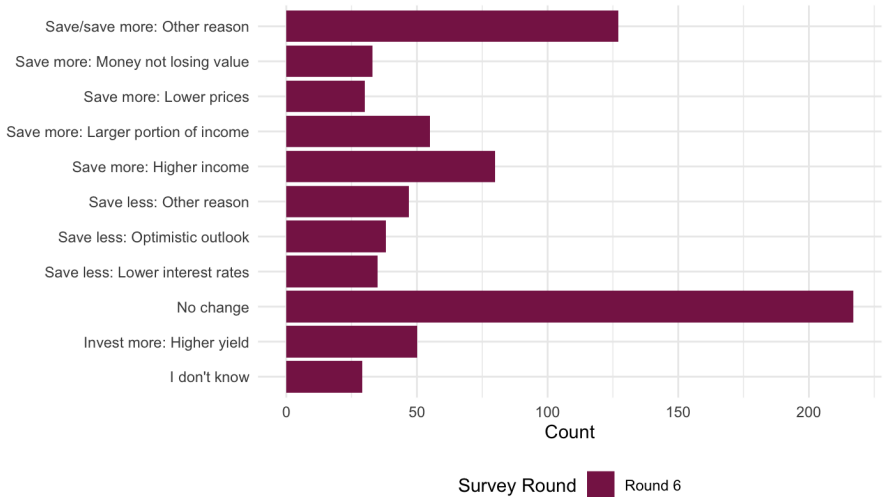
Future Savings Plans (Next 12 Months)



Spending Behavior (Past 5 Months)

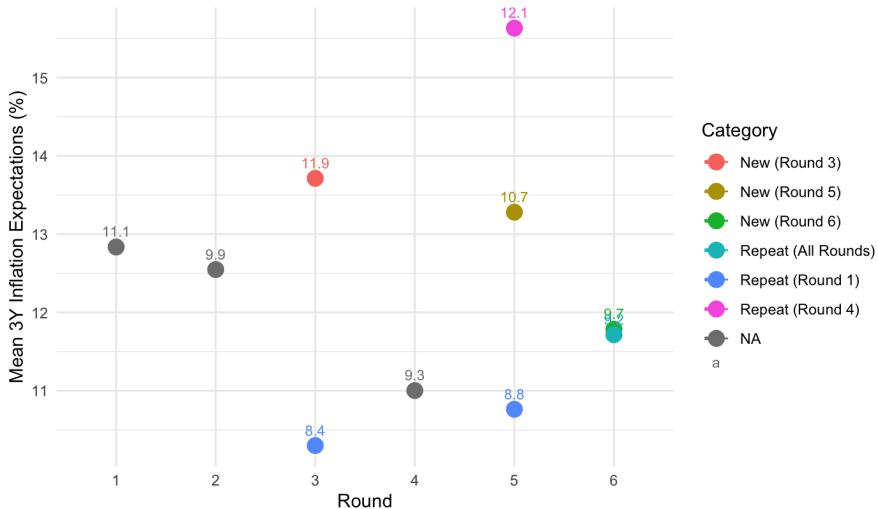


Future Savings Plans (Next 12 Months)

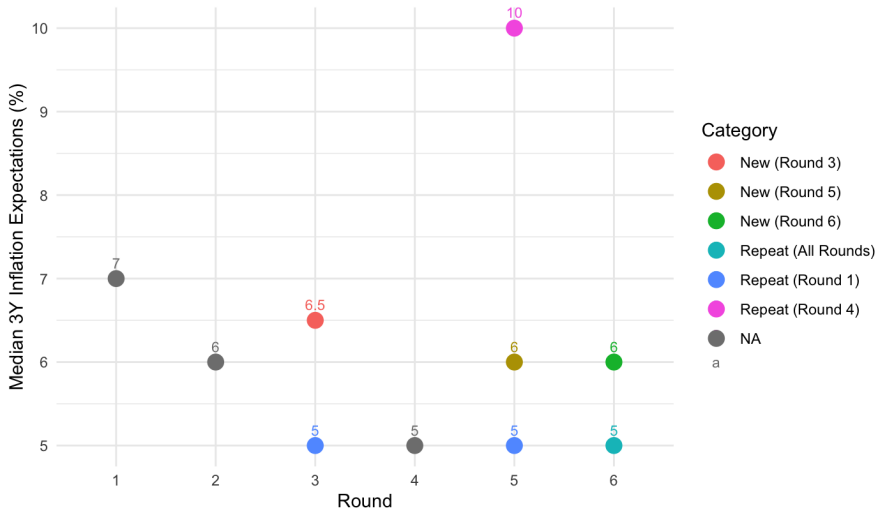


Learning from survey effect

Mean 3Y Inflation Expectations Across Rounds

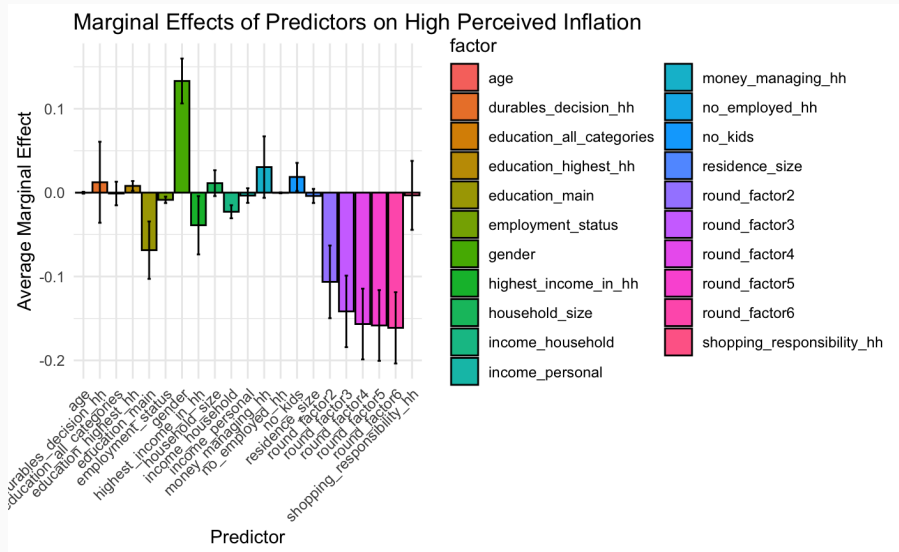


Median 3Y Inflation Expectations Across Rounds

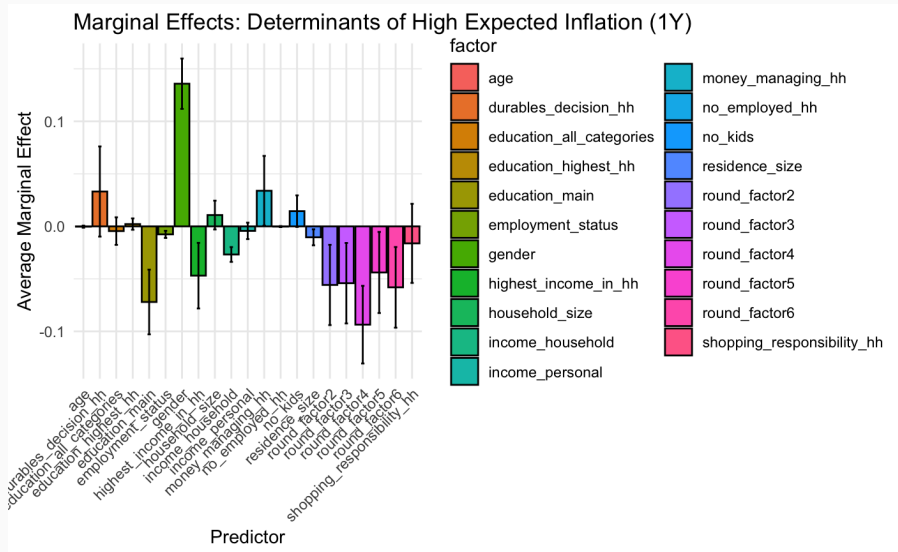


Marginal effects

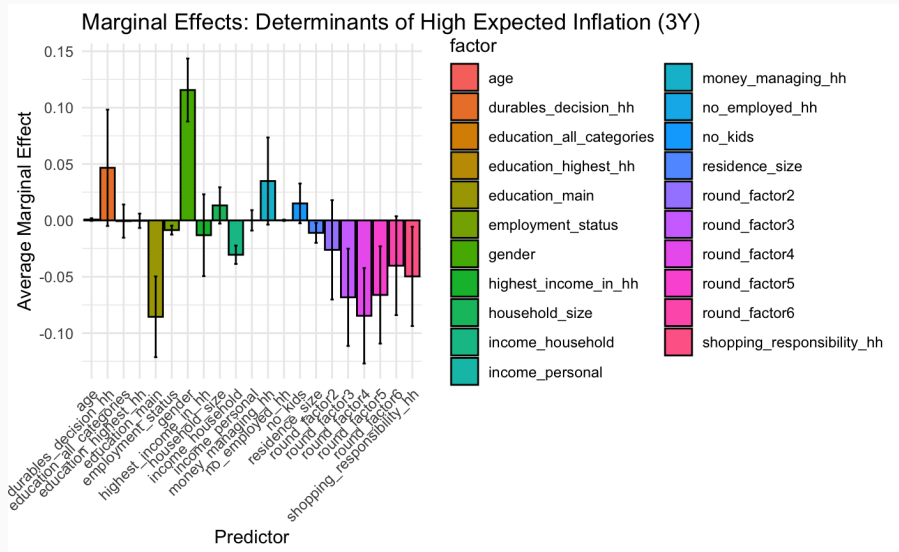
Determinants of high perceived inflation (above 10%)



Determinants of high one-year ahead inflation expectations (above 10%)



Determinants of high three-years ahead inflation expectations (above 10%)



Conclusions and Policy implications

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- The main characteristics in line with surveys from other countries: large dispersion, fat tails, bias is present, median much more informative than the average expectations.
- Perceived and expected inflation decreased with the disinflation; however, they remain significantly above the inflation target, and do not sign a tendency to re-anchor to the target.
- We confirm the stagflationary interpretation of inflation, consistently across alternative questions. Knowledge of inflation target is rather low, but this knowledge, as well as the knowledge of past interest rate decision is associated with lower inflation expectations, and anchoring of longer inflation expectations to the target.
- The confidence in the CNB remained high, but the belief in interest rate policy is limited.