Teach, don't give?
Mental models, understanding and communication*

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Abstract: Do heterogeneous macroeconomic beliefs come from different mental models of the economy? Recent evidence suggests that they do, raising the question of how institutions like central banks can best influence expectation formation. Our incentivised experiment finds substantial heterogeneity in households' mental models which largely differ from those economists typically consider. We show that pedagogical interventions explaining economic mechanisms can coordinate their mental models such that consumers then make predictions akin to experts, even months after the intervention. Our results suggest that rather than *giving* households specific information to influence expectations, *teaching* them yields better understanding and can boost trust in institutions.

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1 Introduction

Macroeconomic expectations are a central driver of economic dynamics in theoretical models and a focal point for policymakers. Yet, unlike the representative-agent assumption of standard rational-expectations models, survey evidence reveals substantial heterogeneity in beliefs within and across households (Fofana et al., 2024; Mankiw et al., 2003; Kohlhas and Walther, 2021), firms (Coibion et al., 2018; Kohlhas and Walther, 2021), and professional forecasters (Broer and Kohlhas, 2024; Coibion et al., 2022; Kohlhas and Walther, 2021). Such disagreement has meaningful implications for the transmission of monetary and fiscal policies. In particular, it is a challenge for central banks that rely on communication to guide and coordinate inflation expectations, viewing them as crucial for price stability and monetary policy transmission (Dong et al., 2024; Falck et al., 2021; Clarida et al., 1999; Woodford, 2003; Galí, 2008; Candia et al., 2020). But beyond differences in information or cognition, these disagreements reflect fundamentally divergent mental models of the economy, leaving expectations uncoordinated and qualitatively divergent.[1] This raises the central question of our paper: can communication serve not only to manage expectations, but also to shape and coordinate the mental models households use to form them and to understand the economy?

We answer this question using a large-scale, incentivized experiment designed to measure and influence three core components of households' economic understanding: (i) how they assess macroeconomic developments (the *assessment function*), (ii) how they believe monetary policy responds to these developments (the *reaction function*), and (iii) how they think monetary policy actions transmit through the economy (the *transmission function*). Participants first report their prior beliefs about these functions through incentivized prediction tasks. They are then randomly assigned to one of several pedagogical interventions, ranging from standard central bank communications to educational videos that explain the mechanisms of monetary policy. Finally, participants state their posterior beliefs in response to new but parallel scenarios. This design not only documents heterogeneity in households' mental models of the assessment, reaction, and transmission functions but also provides the first causal evidence that communication can reshape and align those models, demonstrating that communication is not just a vehicle for transmitting outlooks but a policy instrument that shapes the very frameworks households use to interpret the economy.[2]

[1] Most existing research explains belief heterogeneity as the product of differences in information (Coibion and Gorodnichenko, 2012, 2015) or cognitive ability (D'Acunto et al., 2019; D'Acunto et al., 2022). We argue that these factors are insufficient: as emphasized by Andre et al. (2022), households may rely on fundamentally different subjective models of how the economy operates.

[2] Our work is related to Hommes et al. (2023), who test pedagogical interventions to influence public knowledge of public finance.

Consistent with recent work on subjective models and narratives in economics (Shiller (2017), Graeber et al. (2024b), Graeber et al. (2024a), Andre et al. (2022), Andre et al. (2023)), we document substantial heterogeneity in households' understanding of the monetary policy process. Roughly two-thirds of participants correctly identify the central bank's reaction function, and most grasp the effects of supply shocks. But demand shocks are far less understood, consistent with survey evidence that households often link inflation and unemployment positively (Weber et al., 2022; Coibion et al., 2023). The transmission mechanism is especially contentious: nearly 40 percent hold Neo-Fisherian expectations (believing higher rates raise inflation), even as 80 percent correctly predict their contractionary impact on activity.

We next randomly assign participants to one of several pedagogical interventions that differ in format but convey identical information about economic relationships. Treatments range from standard central bank communications to explainer videos that walk through the full monetary policy process. These interventions substantially coordinate household mental models toward those used by economists. Understanding of demand shocks improves markedly: after treatment, households predict their effects on inflation and unemployment with much greater accuracy. Knowledge of the transmission mechanism also rises sharply, particularly the links between interest rates, inflation, and unemployment. Treated households resemble the expert sample in Andre et al. (2022) in both predictions and reasoning. Free-text explanations confirm this shift: participants begin to describe the transmission mechanism using the same causal language emphasized in our interventions and characteristic of both academic economists and policymakers.

All treatments — including an active control explaining basic central bank functions — substantially increased perceived central bank credibility, consistent with Dräger and Nghiem (2025). Correct understanding of the transmission mechanism was associated with credibility ratings 0.46 points higher on a 1–5 scale, suggesting that improved comprehension of economic mechanisms directly contributes to credibility gains. Notably, these effects only emerge under a granular credibility measure disaggregating dimensions following Blinder (2000); when measured by a single composite question, treatments had no discernible impact. This highlights the nebulous nature of credibility as a concept, which makes improvements difficult to detect, while also underscoring the importance of detailed, multi-dimensional measurement.

We tested whether improvements in understanding and credibility persist over time and whether re-exposure strengthens learning. We re-elicited beliefs in three follow-up waves at three, six, and twenty weeks after the initial experiment. At three and twenty weeks, participants received no new information. At six weeks, we re-treated the FOMC group with the

educational video, which let us measure both durability and reinforcement.

The results show strong persistence. Three weeks after treatment, participants who received the Educational Text or Video retained much higher accuracy, especially in predicting how interest rates affect inflation and how demand shocks influence unemployment and inflation. By six weeks, the video treatment continued to deliver durable gains, while the text treatment's advantage narrowed because controls improved. Credibility gains also persisted, with treated groups rating the central bank significantly higher than controls.

Re-treatment magnified these effects. When the original FOMC group received the Educational Video at the six-week follow-up, their accuracy in predicting the effect of interest rates on inflation rose another 10 percentage points relative to the control—essentially a repeat of the video's initial impact. Re-exposure thus reinforced and extended learning, not merely preserved it.

Improvements persist through our twenty-week follow-up. Two-thirds of participants in the educational treatments correctly predicted the effects of interest rates on inflation and unemployment, compared to just half at baseline. These gains matched the immediate post-treatment effects, while the control group exhibited more moderate gains.[3] Educational communication not only reshaped households' mental models of the economy but also sustained central bank credibility over the medium term.

The rest of the paper proceeds as follows: Section 2 details the experimental design, Section 3 outlines the key results, and Section 4 concludes.

2 Experimental Design

Our experiment is designed to measure and potentially influence the assessment, reaction, and transmission functions. This requires three elements: a baseline measure of households' mental models, an intervention to shift those models, and a method for re-eliciting them with parallel but distinct scenarios to avoid simple recall. We also incorporate repeated survey waves to study the persistence of treatment effects.

Our initial experimental wave proceeds in four stages. In Stage 1, participants completed incentivized prediction tasks in hypothetical scenarios, revealing their baseline mental models

[3]Participants in our control group exhibit improvement over time, which is consistent with Kim and Binder (2023).

of the economy. In Stage 2, participants completed a brief, incentivized cognitive assessment designed both to distract from the prior-elicitation tasks and to control for heterogeneity in cognitive ability. Each correct answer within the 60-second limit earned $0.02. In Stage 3, we randomly assigned subjects to one of four treatments: an active control that provided information about the Federal Reserve's purpose and functions, or one of three pedagogical treatments— a standard FOMC statement, an educational text, or an educational video—that conveyed equivalent economic content in different formats. In Stage 4, participants reported posterior beliefs through a new set of hypothetical scenarios that were parallel to, but distinct from, those used in Stage 1. Throughout the experiment, we also elicited perceptions of central bank credibility, allowing us to assess how improvements in economic understanding affect trust in the institution. Figure 1 summarizes the structure.

We studied persistence through follow-up waves at three, six, and twenty weeks after the initial experiment. At three weeks, we re-elicited mental models and credibility without retreatment. To avoid confounding recall with belief updating, this wave was restricted to belief elicitation and excluded perception questions. For the reaction function, we used scenarios involving interest rate decreases, where treatment effects were strongest in the initial wave. For the transmission function, as in the baseline, we randomized between interest rate increases and decreases.

At six weeks, we implemented a targeted retreatment strategy. Subjects who had received only the FOMC statement showed the weakest persistence, so we re-exposed this group to the educational video, which had generated the most durable effects at three weeks. All other subjects—those in the control group, those who initially viewed the video, and those who received the educational text—received no additional treatment.

At twenty weeks, we again re-elicited mental models and credibility without retreatment, similar to wave 2 in our three-week follow-up, providing a test of the durability of learning over a substantially longer horizon.

Our main response variables across all experimental waves are subjective judgments about hypothetical scenarios. Because these responses lack objectively correct answers, we could not apply marginal incentives via scoring rules common in forecasting experiments. Instead, we implemented a marginal incentive scheme designed to reward effort rather than alignment with a benchmark. This encouraged careful attention without biasing participants toward particular economic views. For each subjective function we elicited, participants received a $0.25 bonus if their free-response explanation, collected immediately after each hypothetical

scenario, both restated their prediction accurately and provided a coherent rationale, regardless of the prediction itself. We emphasized that there were no right or wrong answers, and illustrated payable responses with diverse examples to avoid directional bias.

To ensure scenario comprehension, we embedded attention checks throughout the experiment. Participants who failed two attention checks were removed from the study without payment. Additionally, following **?**, we announced upcoming comprehension questions about treatment content, with monetary rewards for correct responses, to maintain attention during the information intervention phase.

Our one caveat to these effort-based marginal incentives is that we used a single real-world prediction task when eliciting subjects' reaction functions. For real-world reaction function tasks, where objectively correct answers exist, we implemented performance-based incentives. Participants received \$0.25 for correctly predicting the Federal Reserve's actual policy decision based on historical FOMC statements. We randomly selected one of two such predictions for payment. We maintained this incentive structure consistently across all four waves of the experiment, with one exception: we did not include real-world prediction tasks in our follow-up waves.

2.1 Sample and Implementation

We recruited 1,094 U.S. participants through Prolific for the initial wave of our experiment, launched in October 2024. The sample broadly matches U.S. demographics on gender and age, though it is more educated and somewhat less racially diverse than the population at large.

We recontacted these original participants for all subsequent follow-up waves. Retention was high: 75.5% of the original sample returned at three weeks, 71.8% at six weeks, and 65.1% at twenty weeks. Attrition was broadly balanced across treatment groups, with the exception of the Augmented FOMC condition, which was re-treated with a video at the six-week follow-up and experienced somewhat lower return rates at that point: asking these participants to spend extra time watching the educational video led to additional attrition. Full details on treatment assignment and follow-up participation are shown in Table 1.

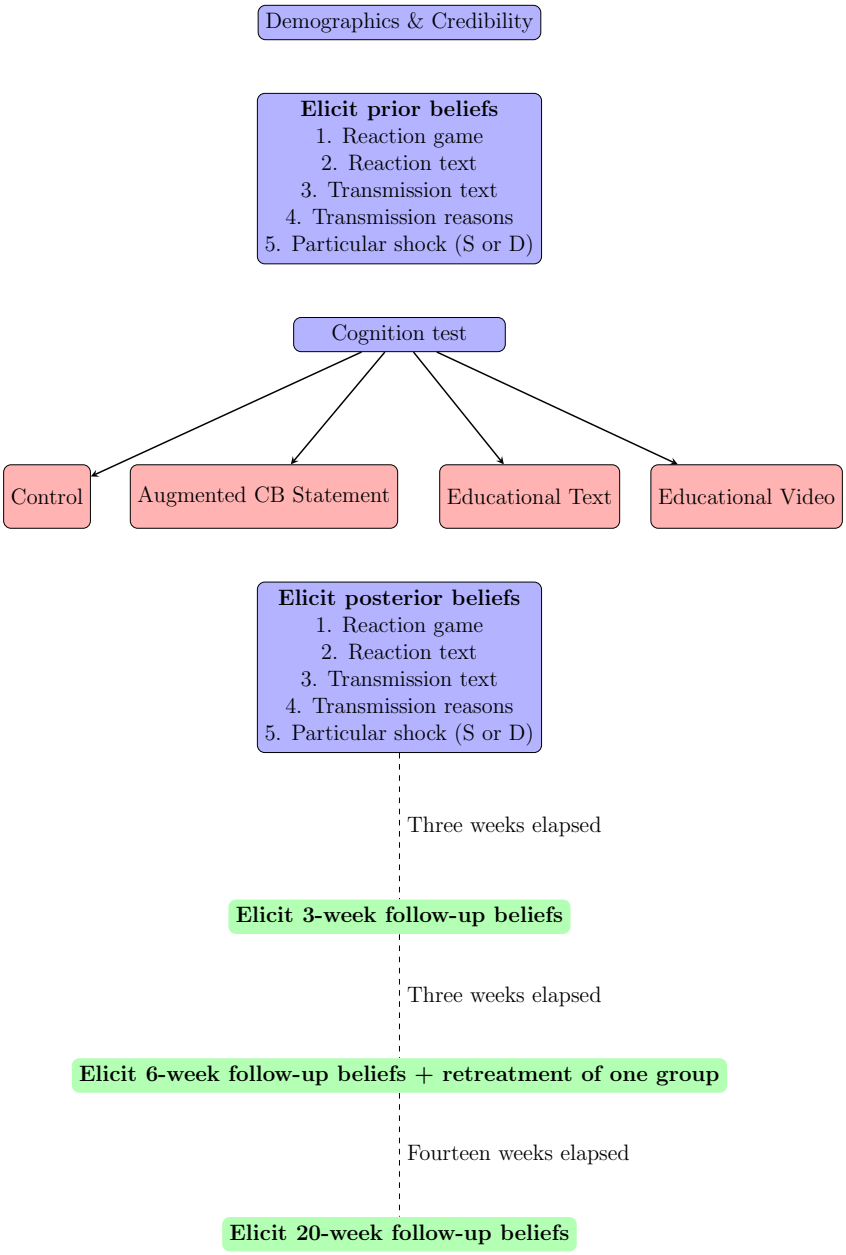


Figure 1: Experimental Design Overview

Table 1: Treatment Assignment and Follow-up Participation

Treatment	Initial Wave	3-Week	6-Week	20-week
Control (CB Function)	268	199	195	171
% of original	–	74.3%	72.8%	63.8%
Augmented FOMC	250	188	164	167
% of original	–	75.2%	65.6%	66.8%
Educational Text	293	219	217	182
% of original	–	74.7%	74.1%	62.1%
Educational Video	283	220	210	192
% of original	–	77.7%	74.2%	67.8%
Total	1094	826	786	712
% of original	–	75.5%	71.8%	65.1%

Notes: The Augmented FOMC treatment in the 6-week follow-up was retreated with a video while the other treatments were not retreated in the follow-up.

2.2 Eliciting Beliefs

Our experimental design follows a Bayesian learning framework similar to McMahon and Rholes (2024), where we elicit baseline beliefs (priors), randomly assign subjects to information treatments, and measure updated beliefs (posteriors). We apply this framework. We illustrate the framework of our experiment in Figure 1.

While we maintain this basic structure throughout, the specific elicitation approach varies across functions to accommodate their distinct features. We detail the measurement strategy for each function below.

2.2.1 Assessment Function

Initial Wave

We elicit subjective assessment functions using incentivized prediction tasks based on hypothetical vignettes, following Andre et al. (2022). The vignettes focus on fundamental macroeconomic disturbances that are central to the literature yet easy to describe without technical jargon: supply shocks (oil and food prices) and demand shocks (government spending and tax rates).

Each vignette begins by establishing a baseline of normal economic conditions by provid-

ing eight periods of historical economic information before introducing a specific shock that occurs at the end of period 8. Participants then predict the resulting changes in inflation and unemployment for period 9, which we interpret as forecasts of averages over the next year. We embed attention checks throughout scenario descriptions to ensure engagement and comprehension.

We first randomly assign participants to either supply or demand shock scenarios. This initial assignment determines whether a participant sees supply or demand shocks throughout the experiment. Within these broad categories, we then randomize:

1. Which specific shock a participant will encounter when we elicit priors (e.g., oil prices versus food prices for supply shocks, or government spending versus tax rates for demand shocks)
2. Whether participants see positive or negative shocks when we elicit priors (e.g., an increase versus a decrease in government spending)

Between prior and posterior elicitations, we vary the shock type and its direction to ensure changes in the assessment function capture learning about economic mechanisms rather than familiarity with the previous scenario. For example, participants assigned to demand shocks who first see a positive government spending shock later predict responses to a negative tax shock. Participants assigned to supply shocks who begin with a positive oil price shock later evaluate a negative food price shock. We list all possible shock combinations in Table 2.

Table 2: Assessment Function Shock Paths

Assignment	Prior Elicitation	Posterior Elicitation
Supply Shocks	*Path 1:* Oil (+)	Food (-)
	Path 2: Oil (-)	Food (+)
	Path 3: Food (+)	Oil (-)
	Path 4: Food (-)	Oil (+)
Demand Shocks	*Path 5:* Gov't Spending (+)	Tax Rate (-)
	Path 6: Gov't Spending (-)	Tax Rate (+)
	Path 7: Tax Rate (+)	Gov't Spending (-)
	Path 8: Tax Rate (-)	Gov't Spending (+)

Notes: This table shows all possible paths through the assessment function elicitation. The (+) and (-) indicate positive and negative shocks respectively. For example, Oil (+) represents an increase in oil prices, while Tax Rate (-) represents a decrease in tax rates. Each participant is randomly assigned to one path at the start of the experiment.

Follow-up Waves

We maintained ollow-ups maintained the initial wave's incentive structure: effort-based rewards for hypothetical scenarios and comprehension-based payments for attention checks.

In the three-week follow-up, we re-elicited mental models from all initial participants without retreatment, focusing exclusively on core belief elicitation to avoid confounding recall with belief updating. For participants initially assigned to supply shocks, we switched between oil and food price scenarios relative to their posterior scenario from the initial wave. Similarly, for those assigned to demand shocks, we alternated between government spending and tax rate scenarios. We omitted perception questions to maintain a clear focus on belief persistence rather than recall accuracy.

The six-week follow-up maintained this framework but incorporated selective retreatment. Based on the three-week results showing weaker persistence among participants who initially received only the augmented FOMC statement, we retreated this group using the explanatory video format that had demonstrated the strongest (initial wave) and most durable (three-week follow-up) effects. All other participants – those in the control group, those who initially viewed the video, and those who received the educational text – proceeded directly to belief elicitation without retreatment. This selective approach allows us to examine both the natural decay of treatment effects and the potential benefits of targeted reinforcement for groups showing weaker persistence.

2.2.2 Reaction Function

Initial Wave

We measure participants' understanding of monetary policy responses through two complementary approaches: hypothetical scenario analysis and real-world policy prediction. This dual approach allows us to assess both abstract understanding of policy principles and practical interpretation of existing central bank communication issued by the FOMC following real-world policy decisions.

For hypothetical scenarios, participants evaluated an abrupt change in steady-state economic conditions and predicted how policymakers would change monetary policy in response to that change. Each scenario presented specific changes in key economic indicators – inflation and unemployment – and asked participants to predict whether the Federal Reserve would increase, decrease, or leave rates unchanged. Following each prediction, participants provide written explanations for their reasoning. We incentivize effort rather than specific answers by

rewarding comprehensive explanations regardless of the predicted policy direction.

Similar to our approach to eliciting subjective assessment functions, we alternated hypothetical scenarios around treatment. If a subject evaluated a scenario that standard economic

The real-world component presents participants with actual Federal Reserve statements from past FOMC meetings and asks them to predict the associated policy decision. Unlike the hypothetical scenarios, these predictions have objectively correct answers, allowing us to implement performance-based incentives. Participants receive \$0.25 for each correct prediction. This approach tests participants' ability to interpret actual central bank communication and extract policy signals.

Follow-up Waves

In the three-week follow-up, we focus exclusively on scenarios involving interest rate decreases, where we observed strong and statistically-significant treatment effects in our initial experimental wave. For hypothetical scenarios, we present economic conditions that would warrant rate decreases according to conventional monetary policy frameworks. To maintain consistency while preventing mechanical learning, some participants see scenarios identical to their posterior scenarios from the initial wave, while others encounter new but structurally similar scenarios. We omit real-world prediction tasks and perception questions to focus solely on testing the durability of understanding. As in the initial wave, we incentivize detailed explanations rather than specific predictions to maintain focus on understanding rather than recall.

The six-week follow-up preserves this framework but introduces targeted retreatment. For participants initially assigned to the FOMC statement treatment, who showed the weakest persistence at three weeks, we first present the explanatory video before proceeding to belief elicitation. This selective retreatment targets only the group showing significant decay in treatment effects, while leaving other groups—the control group, those who initially received the video, and those who received the educational text—untouched. To ensure comparable measurement across groups and waves, we maintain the same incentive structure: payments for detailed explanations of predictions regardless of their direction, but no real-world prediction tasks. This design allows us to examine whether reinforcement through a different communication channel can strengthen treatment effects that showed signs of decay while maintaining measurement consistency with earlier waves.

2.2.3 Transmission Function

To measure how participants understand policy transmission, we present scenarios describing unexpected changes in interest rates The scenarios explicitly direct participants to focus on the effects of the policy change rather than its motivation. Participants then predict the subsequent changes in inflation, unemployment, and economic activity. In an interest rate rise scenario, the respondents receive the following instructions:

Scenario: Federal Reserve raises interest rates.
Imagine that the Federal Reserve unexpectedly increases interest rates by 1 percentage point in the United States and holds them elevated for 12 months (e.g interest rates are increased from 4% to 5% and kept there for 12 months). We would like you to ignore why they might have done this. Instead, we are interested in how you think this increase in interest rates would affect the economy over these 12 months (relative to them being left unchanged). Please select your answers below:

2.3 Central Bank Credibility

We elicit participant perceptions of central bank credibility prior to and following the information treatments in the first wave. We have two ways of measuring credibility; a single-question measure, and a multi-question measure. We use two measures so that participants are not being asked identical questions in the prior and the posterior. We randomly allocate participants to each type of measure in the prior. They are then provided the alternative in the posterior.

The single-question measure simply asks participants "How credible do you find the Federal Reserve?" where they have a likert scale of 5 options from "Not credible" to "Very credible". This question has the benefit of being easy and fast for participants. However, it may also aggregate over too many concepts and requires participants to have a good idea of what credibility means. Indeed, different participants may have different views of what credibility is.

The multi-question measure addresses some of these concerns. The questions are motivated by the various components of central bank credibility discussed in Blinder (2000). We build 5 statements for participants that are answered on a likert scale from 1 to 5, where 1 means 'completely disagree' and 5 means 'completely agree'. The 5 statements were elements that we

considered most pertinent and relevant for the public from the suggestions in Blinder (2000):

1. The Federal Reserve consistently fights inflation
2. The Federal Reserve communicates clearly and transparently
3. The Federal Reserve takes actions that benefit the economy
4. The Federal Reserve keeps inflation low
5. The Federal Reserve follows a clear rule when setting policy

2.4 Information Treatments

After we elicit prior beliefs, we provide participants with one of four randomly assigned information treatments; 3 treatments and 1 active control. Appendix F contains the full text of the information treatments. In general, we aimed to ensure that the complexity and reading time of the information texts were similar across the different treatments. Table 3 shows the word count and various reading metrics of the four treatments.

Table 3: Comparison of Treatments on Readability Measures

Measure	Control	Educational Text	Educational Video	Augmented FOMC Statement
Wordcount	511	636		455
Easily Understood by Age Group	18-19	18-19		18-19
Flesch-Kincaid Grade Level	11.6	11.1		12.5
Gunning Fog Index	14.7	14.6		16.2
Flesch Kincaid Reading Ease	36.1	47.2		43.7
Smog Index	11.2	10.8		12.2
Automated Readibility Index	10.8	11.7		12.8
Coleman Liau Index	16.1	14.6		13.5
% Complex Words	27.59	19.81		20.44

2.4.1 Active Control

The active control information includes factual information about the broad role of the Federal Reserve including payments policy, financial stability, monetary policy, and financial supervision. It is mostly taken directly from the Federal Reserve's own 'The Fed Explained'

publications. The text also includes the inflation target of the Federal Reserve - this is done in an identical way across all information treatments. Therefore, while this text may provide some informational content about other areas and responsibilities of the Federal Reserve, it does not detail any of the three key mechanisms that we are interested in. It does, however, contain information about the central bank to ensure the control group did not perceive that they had been given completely useless information unrelated to the beliefs we were eliciting from them. That is, we did not want to make it possible for participants to guess that they were in a control group. Furthermore, we wanted to ensure the control text was as contextually and semantically complex as the treatments.

2.4.2 Educational text

We constructed the educational text to include and discuss three key features:

1. Inflation and prices are primarily affected by supply and demand. We provided examples of how a tornado might cause a reduction in supply and how a reduction of tax rates might cause an increase in demand.

2. The Federal Reserve aims to stabilise the economy and so if an imbalance occurs that causes inflation to rise or fall, they will raise or lower interest rates to try and bring the economy back to balance.

3. The reasons why the Federal Reserve expects interest rates to bring the economy back to balance by managing demand. We walk through an example that higher interest rates should make loans more expensive for businesses and consumers, as well as increasing the incentive for consumers to save. This should all lead to lower demand and therefore bring the economy back to balance. We also cover the opposite situation where interest rates are reduced.

2.4.3 Educational video

We constructed an educational video that used an almost identical transcript to the educational text treatment. The difference was the visual and audio medium. In addition to this transcript:

- We incorporated visuals showing scales that link demand and supply of goods to prices and inflation.
- We incorporated visuals showing when inflation was above a specified target, the Federal Reserve would raise rates and vice verce.
- We incorporated visuals showing the transmission mechanism that had been written in the transcript. These can be thought of as visually showing a DAG as well as writing it out in the transcript.

2.4.4 Augmented FOMC statement

We started wtih the exact FOMC statement from July 2023 where interest rates were increased at the meeting. We then modified this statement to incorporate more pedagogical explanations about the economic mechanisms that were implicitly being assumed of the reader. We aimed to weave the educational text into a regular statement so that a non-regular reader could engage and understand the key messages. For example, the statement usually starts by stating the facts about inflation, economic activity and unemployment. In this statement, after the facts about inflation being above 2 percent, the economy expanding at a moderate place and the unemployment rate remaining low, we add:
"this signals to the Federal Reserve that there is an imbalance of demand relative to supply in the economy. There is more overall demand for goods and services than the economy can currently produce and supply, which can lead to relative shortages and faster price rises — higher inflation".

We then provided some explanation for readers about why the Federal Reserve would change interest rates:
"The Federal Reserve uses changes in interest rates to manage imbalances in the economy by influencing demand. Therefore, given the current and expected state of the economy, the Federal Reserve has decided to increase interest rates. Higher interest rates are expected to slow down demand in the economy and reduce the relative shortages. A closer balance of demand and supply should lead to prices growing more slowly and thus inflation brought back down towards the target rate of 2 percent".

Finally, we then explain to participants how this action is expected to help:
"There are several ways that higher interest rates are expected to slow down demand in the

economy. Higher interest rates encourage households to save more and spend less of their income. Additionally, businesses may be less willing to invest in expanding their business (such as buying a new factory or tractor) due to the higher cost of repaying the loan. As a result, both household consumption and business investment would decline, causing a decrease in overall demand in the economy and bringing it closer to balance with the capacity of the economy to supply goods and services.
A related channel that operates in the other direction is that businesses, faced with higher business costs from higher interest rates, might wish to raise prices to maintain profits. However, due to the reduced consumer spending, firms raising prices risk losing customers. As a result, this channel is quite limited and the other effects typically dominate leading prices to increase less or even fall.

At the beginning of the information text, we informed participants that they were given a modified version of the Federal Reserve statement from that month.

3 Results

In this section, we present the results of households' predictions of the effects of macroeconomic shocks. We again break this in to the three fundamental macroeconomic mechanisms and then we discuss central bank credibility.

3.1 Assessment function

Table 4: Confusion Matrix - Demand Side Shocks

	Wrong posterior	Right posterior
Wrong prior	47%	23%
Right prior	13%	18%

Table 5: Confusion Matrix - Supply Side Shocks

	Wrong posterior	Right posterior
Wrong prior	35%	30%
Right prior	24%	27%

Figure 2 and 3 show that in their prior beliefs, households mostly agree on the directional response of inflation and unemployment to a change in the price of oil and food (typical supply

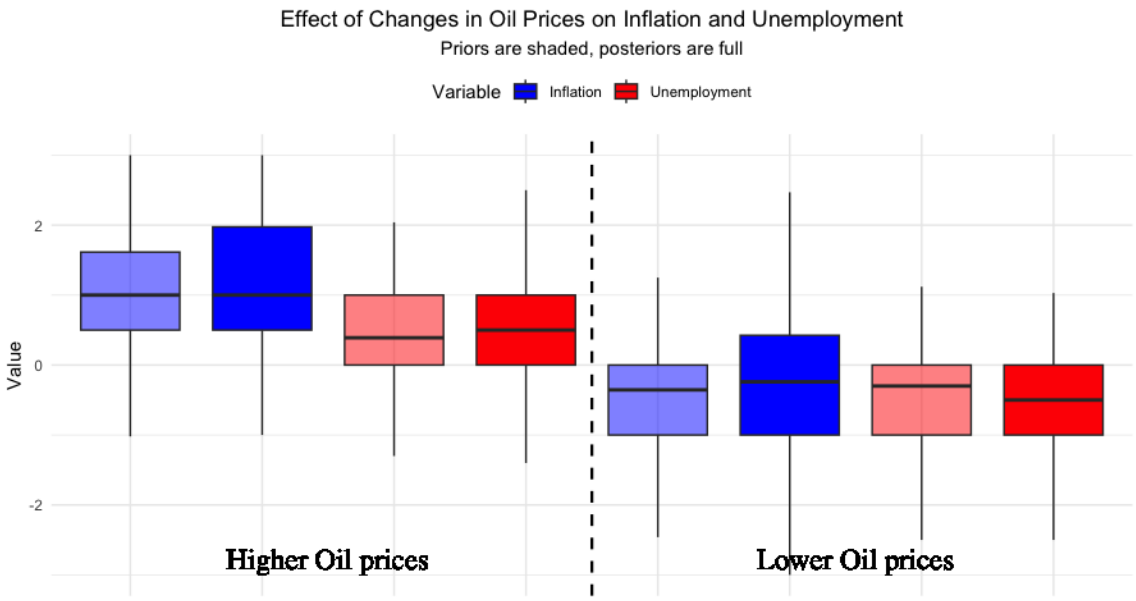


Figure 2: Household predictions of inflation and unemployment

shocks). Furthermore, the households predict a strong positive co-movement between inflation and unemployment when they are provided with scenarios that represent supply shocks. Figure 4 and 5 illustrate that around 50% of households accurately predict the responses of both inflation and unemployment to the supply shocks. This predicted co-movement is perhaps not so surprising given previous work has postulated that households hold a supply-side view of the world (Weber et al., 2022; Coibion et al., 2023).

In line with these previous findings, households do not predict a *negative* co-movement between inflation and unemployment when faced with changes in government spending and taxes (typical demand shocks). Figure 6 and 7 show that before treatment, household beliefs are very dispersed and, in particular, many households do not see links between the shocks and inflation and unemployment. Figure 8 and 9 show that only around 1/3 of households accurately predict the responses of both inflation and unemployment to demand shocks — much lower than supply shocks.

Since the prior beliefs of households about supply shocks largely conformed to the typical macroeconomic view, at least in direction, the treatments did not have identifiable effects. As such, the prior accuracy and posterior accuracy were statistically indistinguishable. Households predicted a positive co-movement between inflation and unemployment in response to an oil price and food price increase. Following the treatments, households continued to expect this co-movement.

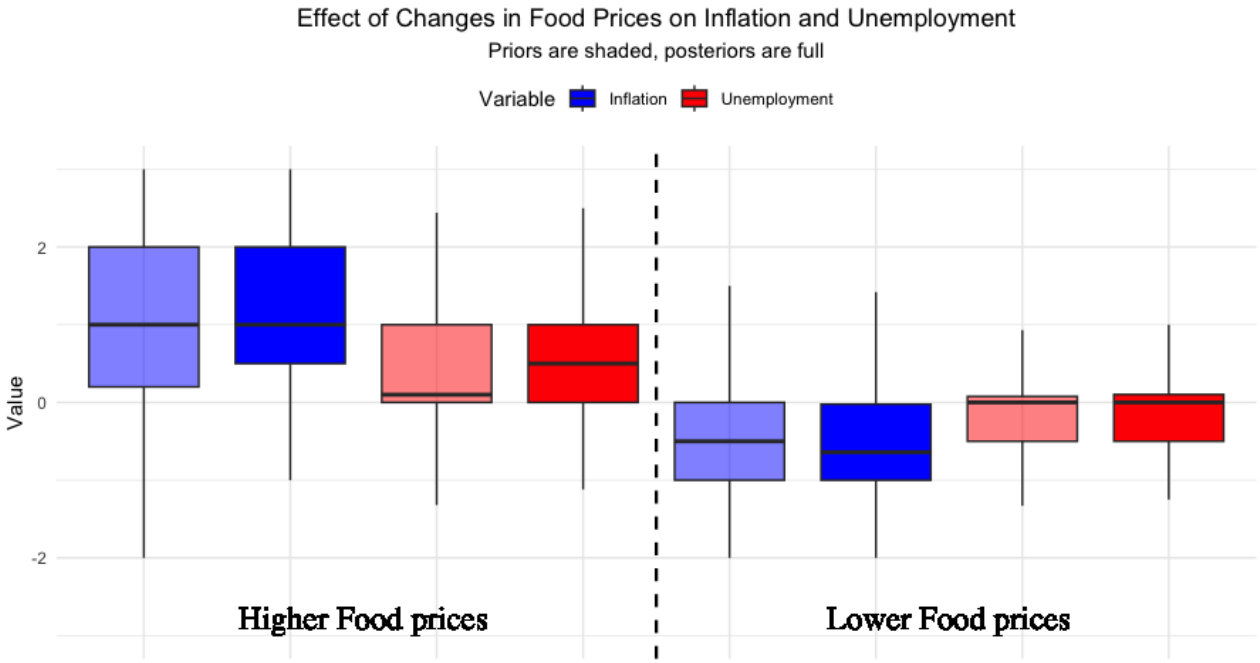


Figure 3: Household predictions of inflation and unemployment

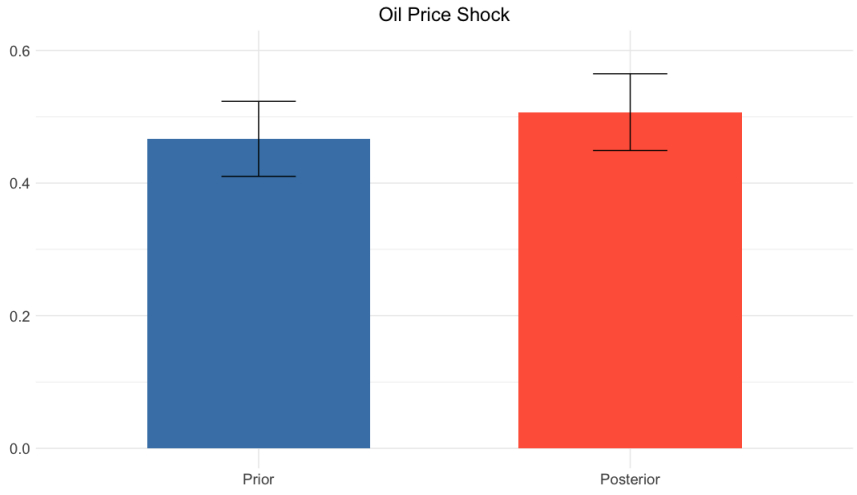


Figure 4: Impulse Response Accuracy



Figure 5: Impulse Response Accuracy

In contrast, household predictions were relatively inaccurate when provided with demand shocks. Figure 8 and 9 show that predictions of the effect of a demand shock improved in accuracy following the treatments.

In particular, the Educational Text and Educational Video treatments led to improved understanding relative to the control group. We measure understanding by participants who accurately predicted both the inflation and unemployment directional response to the shocks. The Educational Text treatment led to a 15 percentage point improvement in accuracy relative to the control group — from a base level of understanding around 30% in the prior. The Educational Video treatment led to an 8 percentage point improvement in accuracy — although the relatively wide standard errors meant this was not statistically significant.

3.2 Reaction function

The expected response of the central bank to economic developments (the reaction function) was considered in two ways, as discussed in the design. The results are split into the hypothetical scenario and the real-world scenarios provided to participants.

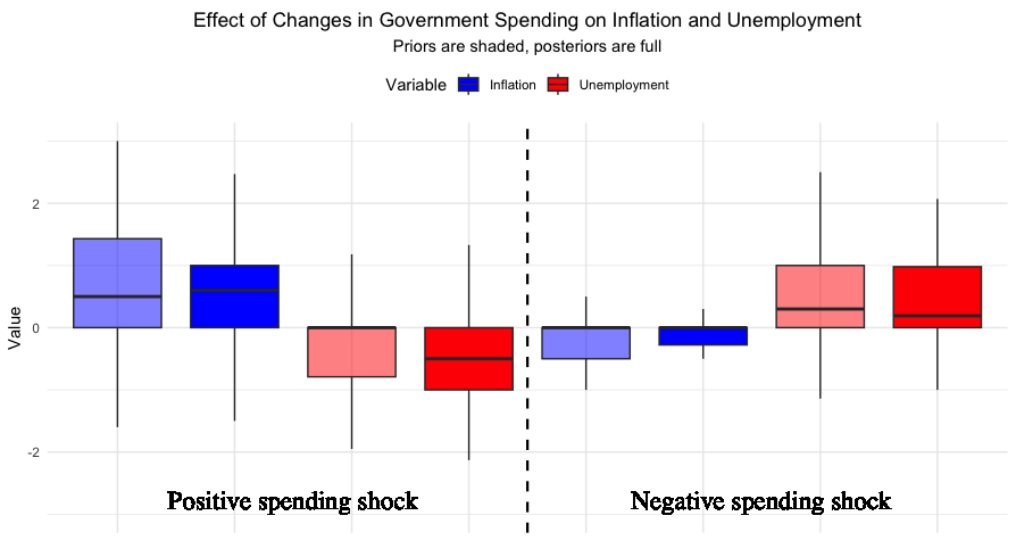


Figure 6: Household predictions of inflation and unemployment

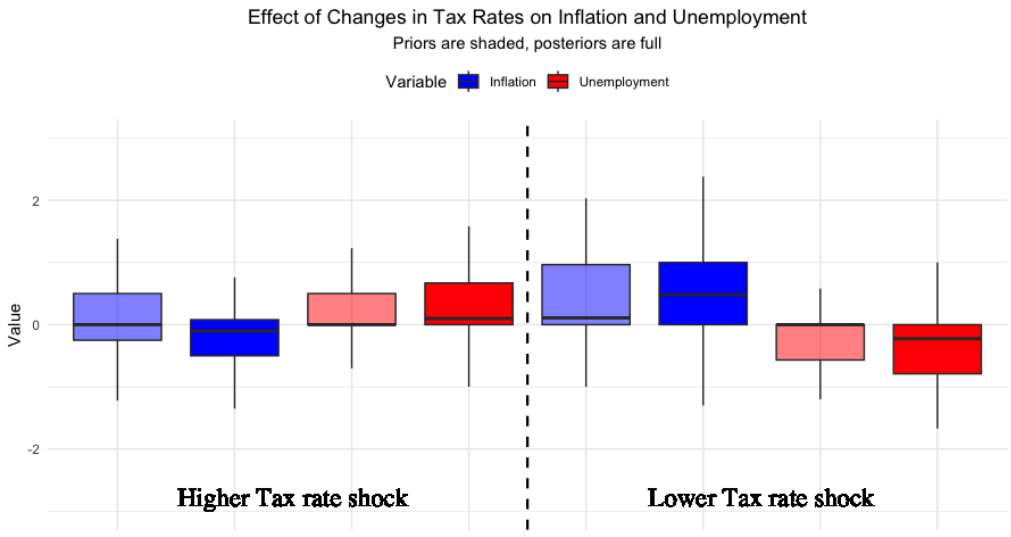


Figure 7: Household predictions of inflation and unemployment

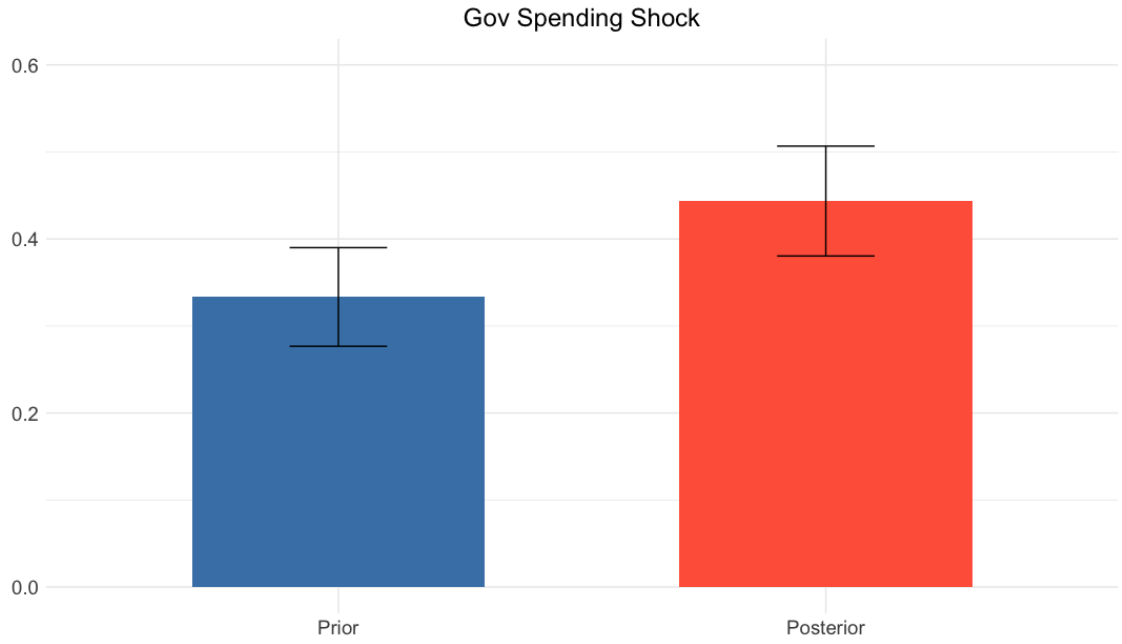


Figure 8: Impulse Response Accuracy

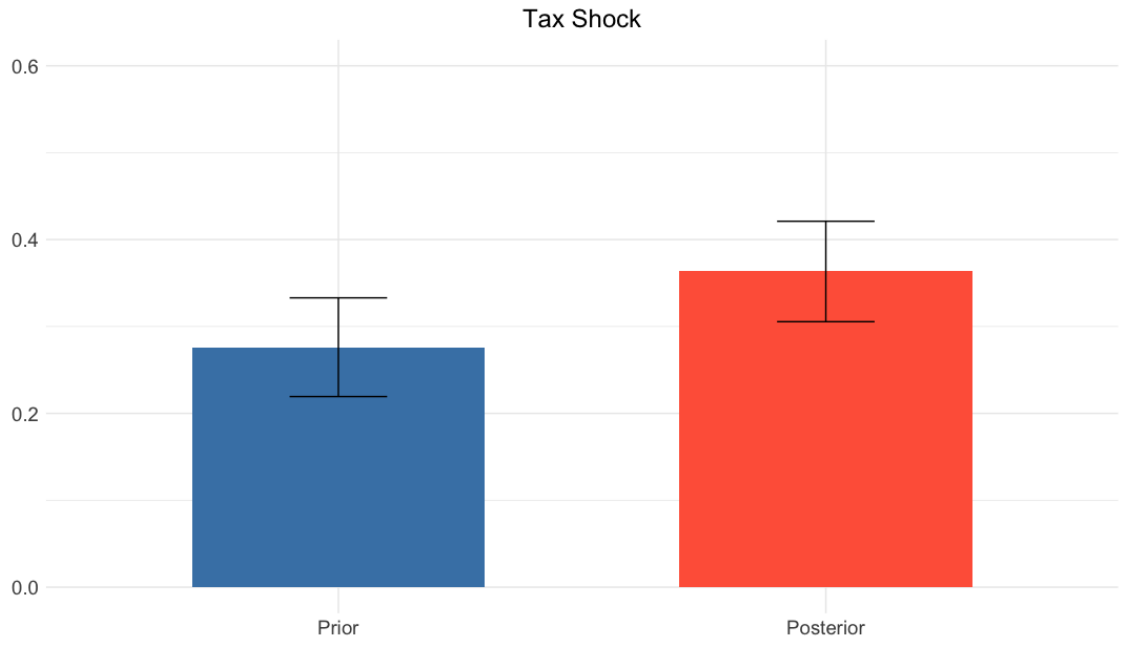


Figure 9: Impulse Response Accuracy

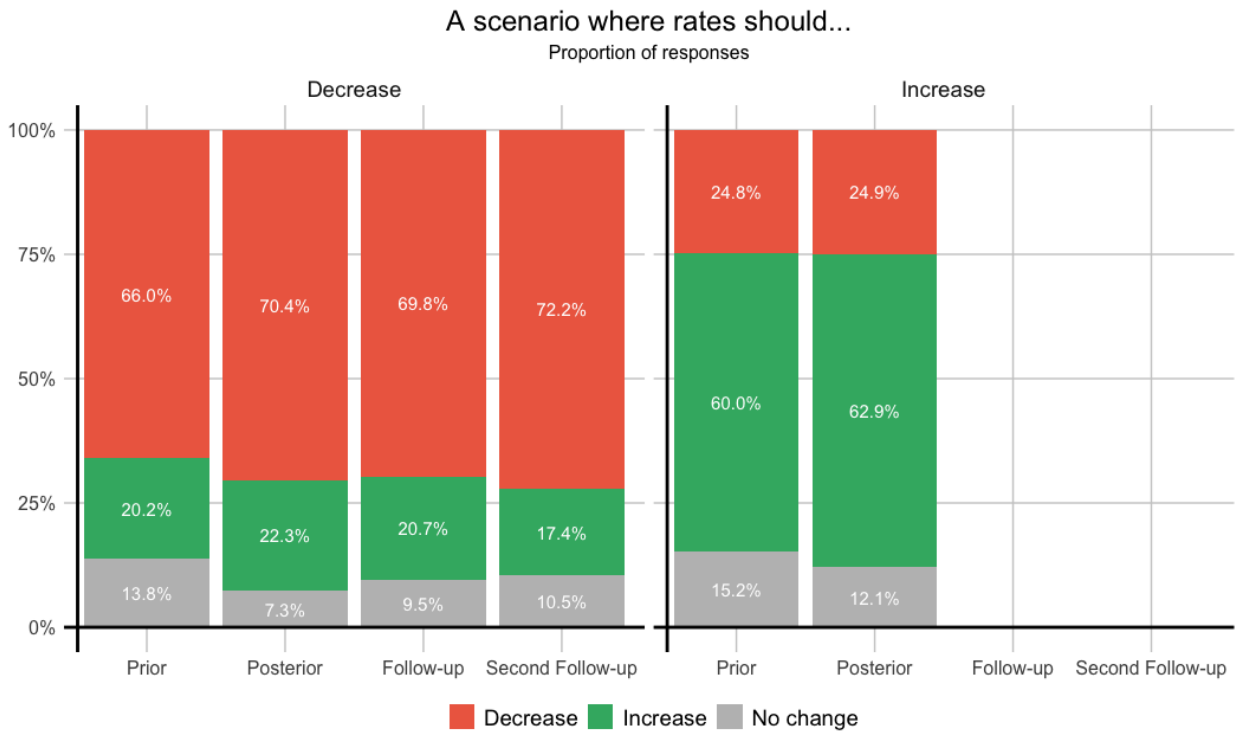


Figure 10: Reaction function predictions

3.2.1 Hypothetical vignette

Figure 10 shows that around two-thirds of households correctly predicted the likely path of interest rates when we elicited their prior beliefs. There was some asymmetry in this. Households were more correct when faced with a scenario that suggested lowering interest rates than with one that required raising rates (66% vs 60%) despite symmetrical scenarios. This suggests that the average household has an innate preference for lower interest rates — in line with findings from Binetti et al. (2024).

Following the information provision, household beliefs moved towards the conventional economic wisdom and toward the information they were provided.

In addition to the actual predictions of households becoming more accurate, participants also perceived that they understood more about why the Federal Reserve changes interest rates. Figure 11 shows that these improvements in understanding were different across the treatment groups. Around 25% of the control group felt their understanding of the reaction function improve over the course of the first wave. Some of this may have been exposure to Federal Reserve statements they had never seen before as well as the elicitation process. Furthermore, the information the control received also had a very brief statement that the

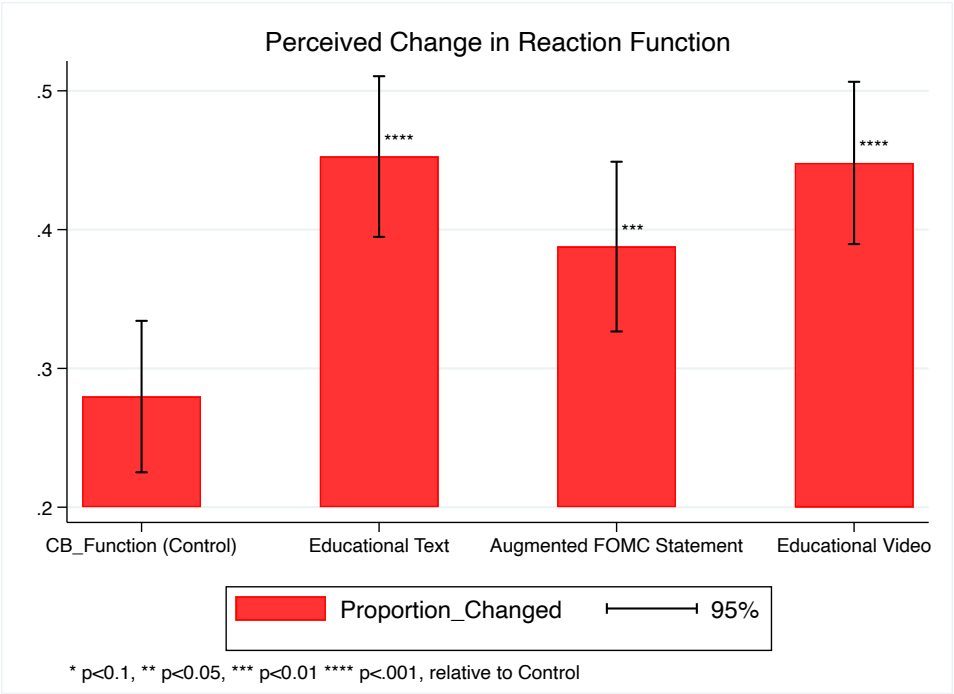


Figure 11: Perceived changes in understanding of reaction function

Federal Reserve targets inflation and this may have been incremental information to some participants. Around 45% of participants who received the educational video and text felt they had a greater understanding of the Federal Reserve's reaction function. This is both large and statistically different to the control group. Furthermore, around 40% of the group that received the augmented FOMC statement perceived an improvement in their understanding — far more than the control group. These findings broadly align with those from the prediction tasks.

3.2.2 Real-world text

Participants were given FOMC statements from the past (removing explicit references to the decisions taken), and incentivized to guess which action the Federal Reserve took. Figure 12 shows that prior to any treatment, participants were only able to correctly predict the direction of the FOMC decision around 25% of the time. There were some differences across the two sample statements as one described a more confused economic situation than the other and, as such, was harder for participants to decipher. As well as being surprisingly low, these proportions are particularly noteworthy since participants were only given three options — random guessing would have been correct 33% of the time. Figure 12 illustrates that providing participants with pedagogical treatments does not improve their ability to correctly

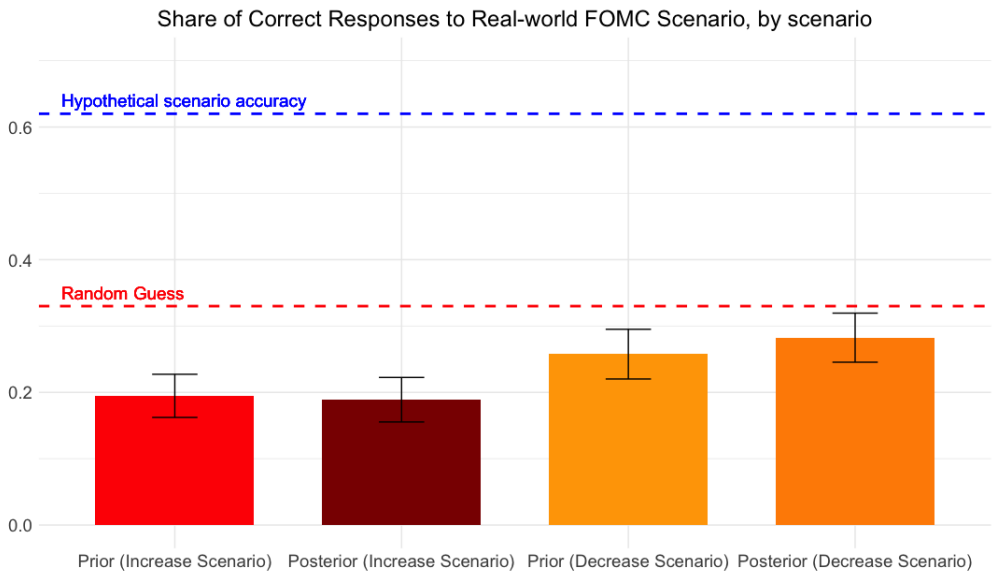


Figure 12: Understanding of reaction function from FOMC statement

identify the decision taken in the FOMC statements after receiving the information treatments. Furthermore, the various treatments do not have differential effects relative to the control — each has no effect on the share of correct responses.

However, it is interesting to note that when provided with stylized situations in the hypothetical scenarios, even before receiving information treatments, these same participants were correct almost two-thirds of the time. While these scenarios were, by design, more simple than the real world, it is clear that the wording of these FOMC statements is not leading readers to an obvious conclusion — even when households do understand the central bank reaction function. Indeed, the Federal Reserve Teal Book, which details possible FOMC text for all the possible policy decisions, details almost identical statements irrespective of the decision.

3.3 Transmission function

Figure 13 shows that there is substantial disagreement among households in our sample about the effects of interest rate changes on the economy. 48% of respondents predict a decrease in inflation in response to an interest rate increase while 39% predict an increase. Households also disagreed on the effect of interest rates on unemployment. 53% predict an increase in unemployment in response to an interest rate increase while 36% predict a decline. These results are qualitatively in line with the findings for interest rate shocks in Andre et al. (2022), al-

though our baseline sample has more 'correct' inflation predictions.[4] Furthermore, the results line up with other research around the perceived effect of interest rates on inflation (Binetti et al., 2024). In stark contrast, households were in broad agreement (and the vast majority were correct) about the effect of interest rates on economic activity. 73% predict that higher interest rates would slow economic activity with only 11% predicting the opposite. This tends to suggest that households have a reasonable grasp that, in general, higher interest rates should slow the economy, but they fail to translate this to the more general equilibirum concepts of inflation and unemployment. Indeed, the explanations households provide for these predictions suggest quite advanced and typical reasoning for why economic activity would slow, such as due to a higher cost of borrowing for firms and households. However, this same reasoning does not typically extend to their predictions for inflation.

Following the various treatment interventions, households significantly revised their beliefs of the effect of interest rate changes on the economy. When pooling all treatments together, the proportion of participants correctly stating that interest rate increases led to slower economic activity rose from 73% to 79%, led to higher unemployment rose from 53% to 66% and, led to lower inflation rose from 48% to 65%. These are all highly statistically significant increases. Figure 14 illustrates the comparison of the household predictions after receiving the information treatments to experts that were provided a similar question from a previous survey (Andre et al., 2022). Households that received the pedagogical treatments considerably align their predictions with that of the theoretical benchmark and now resemble the predictions of experts sampled in 2022 with almost identical questions. In particular, the share of households that expect higher interest rates to lead to lower inflation and higher unemployment rises to around two-thirds from less than half.

3.3.1 Explanatory mechanisms

The results in the previous section illustrated that participants disagreed considerably on the effect of interest rate changes — in particular for inflation. These findings replicate Andre et al. (2022). Furthermore, Andre et al. (2022) demonstrated that much of this is due to consumers having a 'costs-channel' view of inflation in mind rather than a 'demand-side' view. For example, a 'cost-channel' may be that higher interest rates increase the cost of loans for

[4] Andre et al. (2022) find 57% of households (vs our 39%) expected higher inflation. This could be due to a number of factors. First, our sample was conducted in 2024 following large increases in interest rates precisely to slow inflation. This may have in effect 'taught' some households. Second, our wording was slightly different to Andre et al. (2022) — we emphasised that the change occured as part of a central bank response but for participants to ignore why. Andre et al. (2022) explained it more as a random shock to interest rates.

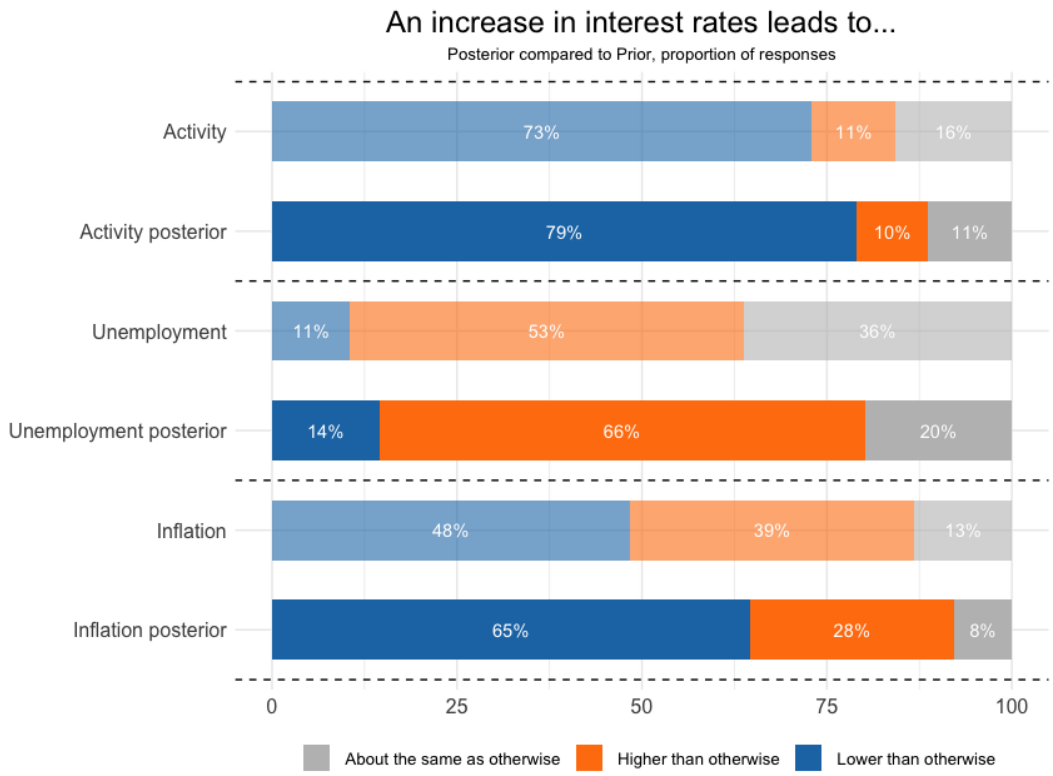


Figure 13: Predictions of directional effects of interest rate increase

businesses and in order for businesses to break-even or maintain profit margins, they must raise prices. We identify a similar effect in our baseline results. Figure 15 shows the share of household explanations that are categorized into 'cost-channel' and 'demand-channel'. The explanations provided by participants could pertain to their predictions for inflation, unemployment, or economic activity (or all of them).

Following the various information treatments (which include explicit mentions of 'demand-side' explanations and aims to counter 'costs-channel' thinking, as well as the control group), there is a reduction in the share of participant responses that use explanations that make references to the 'costs channel'. Furthermore, the proportion of explanations that make reference to 'demand channel' reasoning increases from around 53% to 57% - a statistically significant increase. This shift away from 'costs-channel' reasoning towards 'demand channel' reasoning likely helps explain the considerable increase in households predicting inflation decreases following a rise in interest rates.

It is important to note that these text explanations are free text responses and therefore unstructured. Participants are asked to explain their predictions, but they may have just

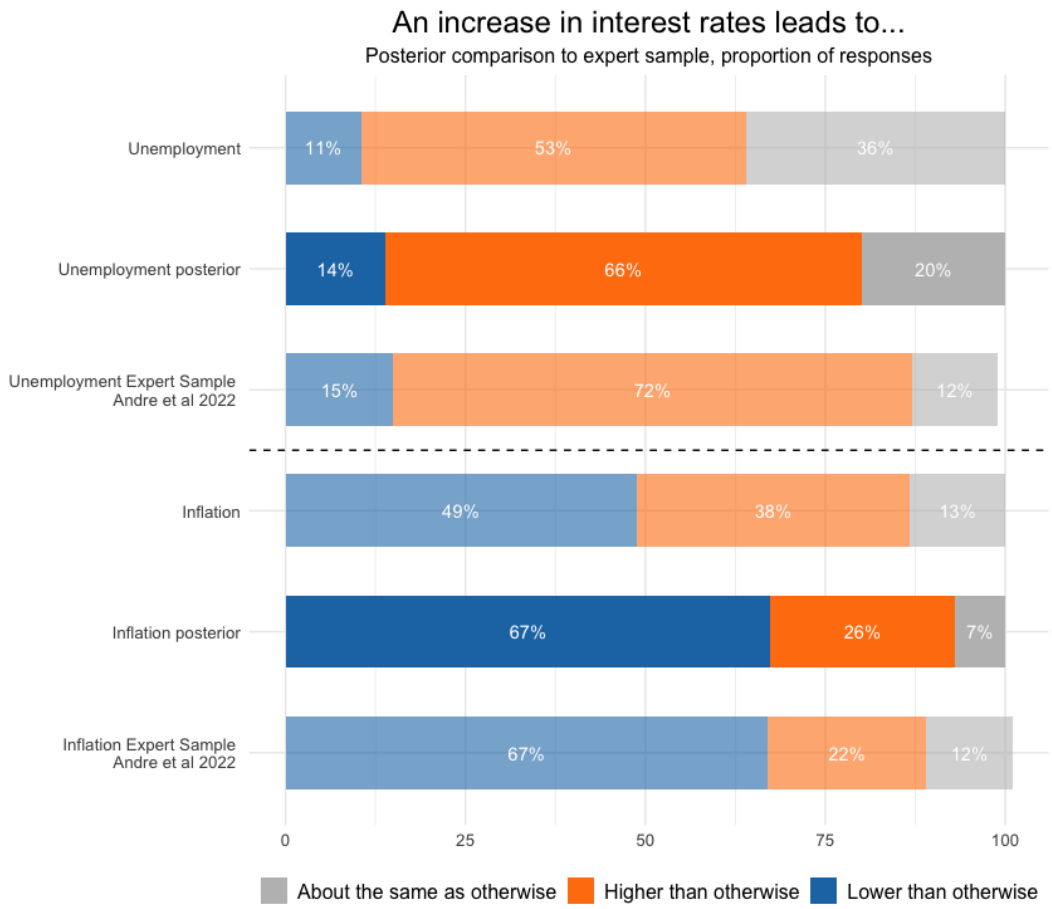


Figure 14: Predictions of directional effects of interest rate increase

explained their response relating to economic activity or unemployment, rather than all the predictions they made. As a result, the text explanations are not completely explanatory of the underlying predictions. Given the accuracy of predictions relating to economic activity, many participant text explanations that appear to look like demand-side reasoning is likely relating to economic activity predictions.

3.3.2 Longevity of treatment effects

The sizeable treatment effects identified in the previous sections persist up to three and six weeks later. Figure 16 illustrates the proportion of correct predictions when participants are faced with the interest rate change scenario. Pooling across the control and three treatments in the priors, participants predict the correct direction around 50% of the time for inflation, 56% of the time for unemployment and almost 80% of the time for economic activity. As detailed in previous sections, this rises to 65% for inflation, 68% for inflation and 82% for economic ac-

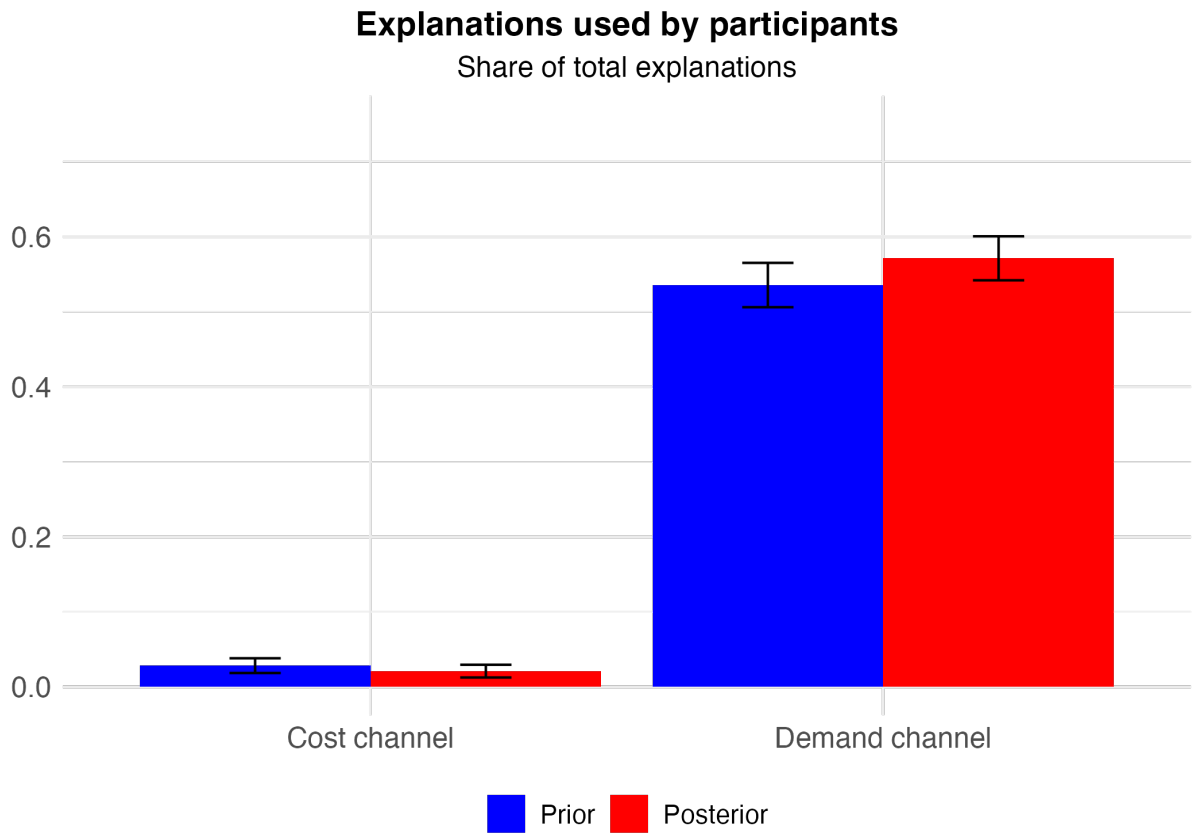


Figure 15: Predictions of directional effects of interest rate increase

tivity. These improvements are then maintained in the 3-week, 6-week and 20-week follow-ups.

Figure 17 illustrates that after 20 weeks, the initial large increase in understanding of the link from interest rates to inflation and unemployment remains. The proportion of respondents who accurately predict the directional effect of interest rates on inflation and unemployment continues to be elevated at two-thirds compared to the pre-treatment sample of around one-half.

3.3.3 Information effects by treatment

In this section, we split-out the effects of the three treatments and the control group. Figure 18 illustrates the proportion of correct predictions when participants are faced with the interest rate change scenario. The three active treatments see considerable increases in correct responses between the prior and posterior beliefs. There is also a slight increase in correct

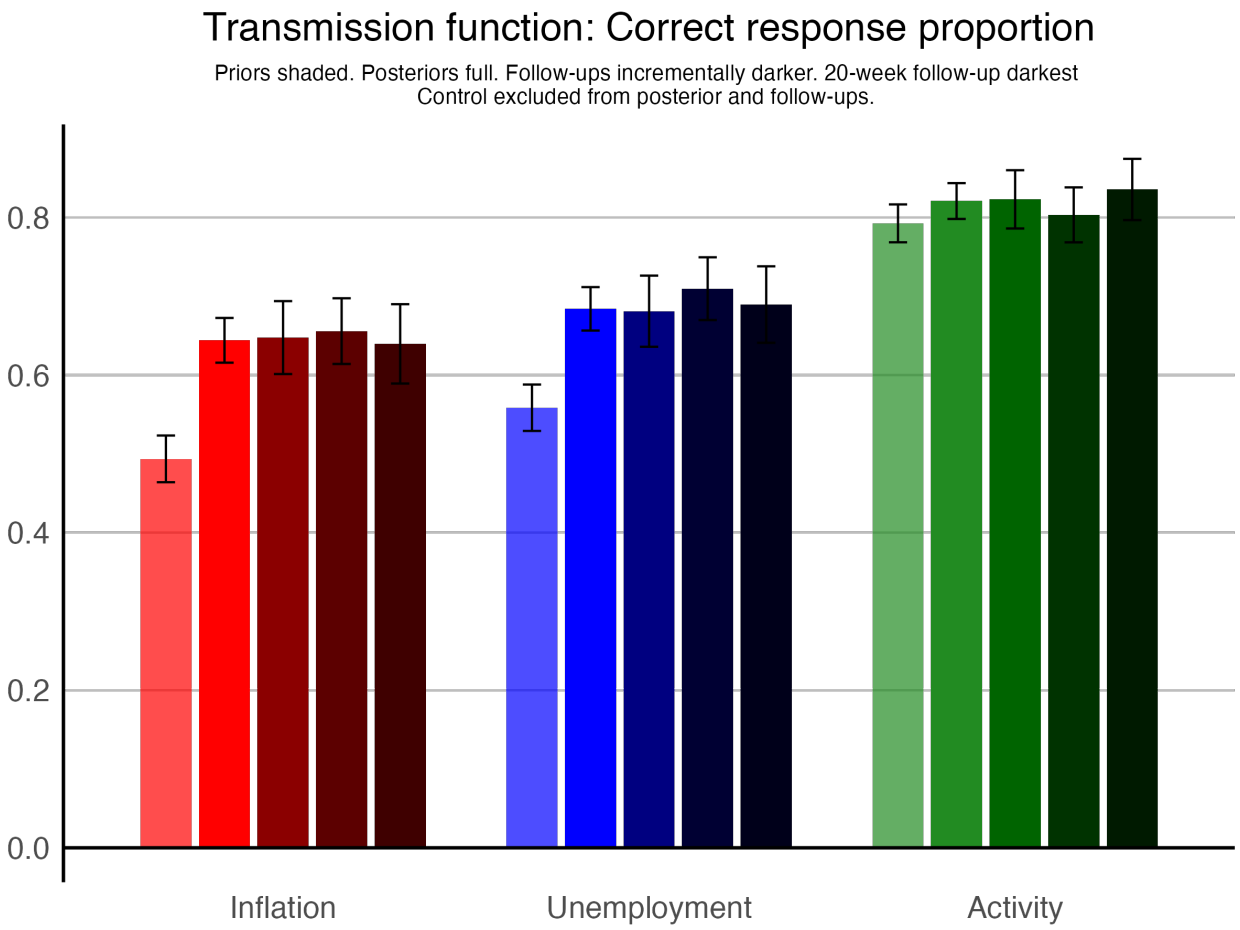


Figure 16: Longevity of treatment effects

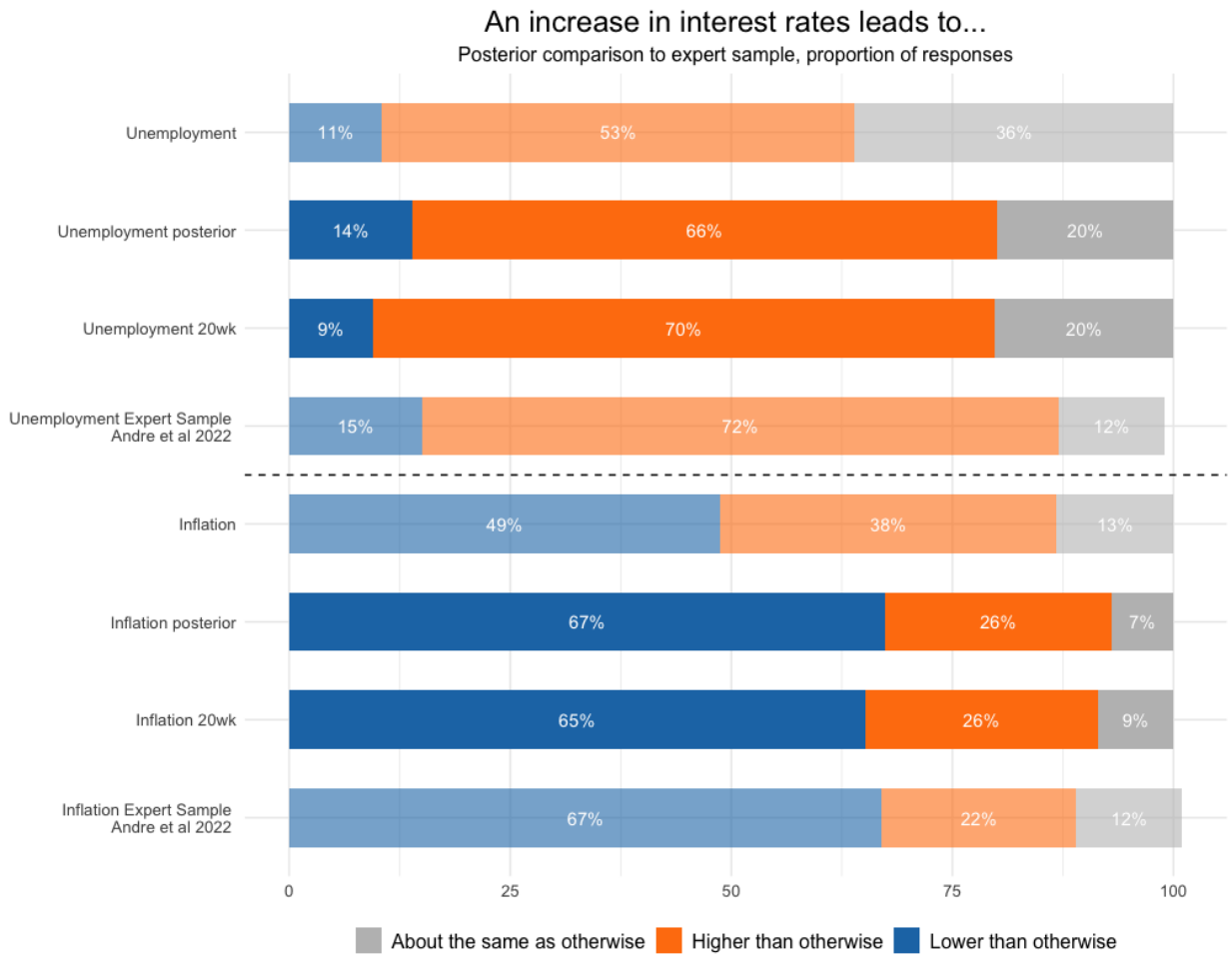


Figure 17: Longevity of treatment effects - up to 20 weeks

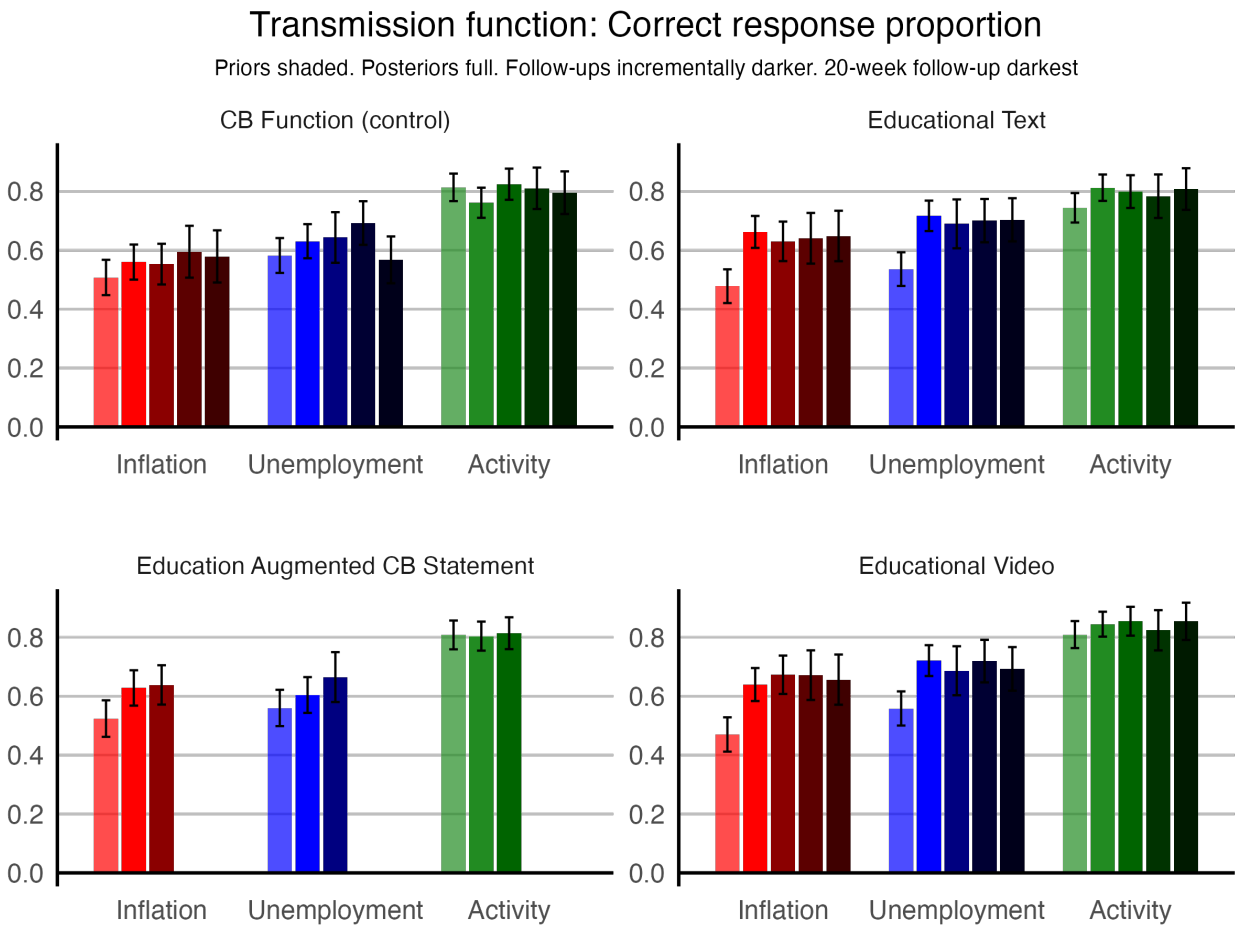


Figure 18: Transmission function understanding by treatment

responses among the active control group.[5] Our framework is to consider the increase in correct predictions to approximate understanding changes. We use the following econometric formulation to identify and estimate treatment effects:

$$\Delta Correct_i = \alpha + \beta_1 T + \beta_2 \mathbf{X}_i + \epsilon_i \tag{1}$$

where T is a dummy variable indicating the treatment received and X_i is a vector of controls. In addition to the controls, the change in accuracy ($\Delta Correct_i$) accounts for the initial understanding of participants. We use this econometric formulation to identify the treatment effects for all waves.

Table 6 shows the coefficients from the estimation in Equation 1 for the variables we elicit pre-

[5]This could be due to participants becoming more familiar with the belief elicitation process since the control group did not receive any information directly on the transmission function. Indeed, it helps to control for any natural improvement among the treatments for this same reason.

dictions for. Column 1 shows that within the first wave, the Educational Text and Educational Video treatments lead to considerably larger gains in understanding than the control group. The change in inflation and unemployment prediction accuracy from the prior to the posterior in the first wave was around 13 percentage points higher in both treatments relative to the control group. Considering that the prior accuracy was around 50 percent, a 13 percentage point improvement represents a very large proportional improvement in understanding. The augmented FOMC statement improved understanding of the link between inflation and interest rates by up to 6 percentage points more than the control group (around half as effective as the educational text and video treatments) and did not lead to any change in understanding of the link from interest rates to unemployment.

Figure 19 illustrates that the active Educational treatments, which considerably improve the accuracy of the transmission channel predictions, also bring about a reasoning change in participants. The Educational Text and Educational Video groups see a statistically significant increase in the share of participants using demand-channel reasoning in their explanations (around 5 percentage points, or a 10 percent improvement). By contrast, the control group and the Augmented FOMC statement group see no change.

After 3 weeks, the initial effects of the educational text and educational video treatment remain and are distinguishable from the control group. This is despite the reduced overall sample and improvements in the accuracy of the control. After 3 weeks, the participants who received these treatments are between 12 and 16 percentage points more accurate when predicting the link between inflation and interest rates. However, the improved understanding of the link between interest rates and the unemployment rate decays at the 3 week follow-up. While there is still improved understanding, it is not distinguishable relative to the control group. This is both due to a slight decline over the 3 weeks as well as an improved level in the control.

At the 6-week follow-up, the learning effects still remain. Participants who received the Educational Text treatment are still almost 6 percentage points more accurate when predicting the link between inflation and interest rates, but this is not statistically different from the control group. However, the participants who received the Educational Video predict the link almost 9 percentage points more accurately than the control. This is a statistically significant difference despite the decline in sample due to retention and the increase in the accuracy of the control. This is almost the same treatment effect (relative to the control) as in the initial wave of the experiment and shows that at least out to 6 weeks, there is very little decay in the learning.

The differences between the Educational Video and Educational Text treatments appear to

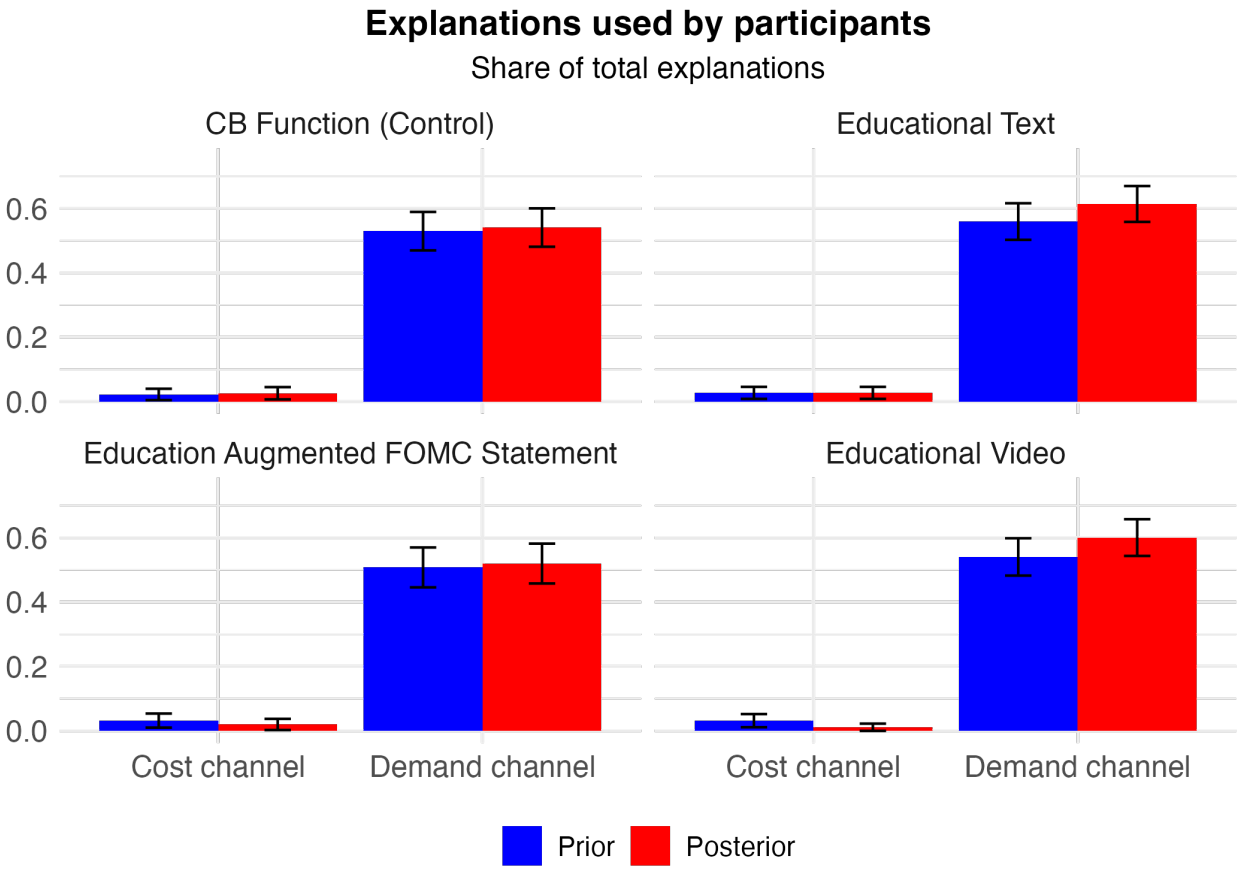


Figure 19: Explanatory mechanisms used by participants

largely be the longevity of the effect. Indeed, the content introduced in the two treatments is almost identical and the initial treatment effects are very similar. However, the Educational Video leads to sustained learning and understanding of the link between interest rates and inflation at 6 weeks. The Educational Text also leads to learning and improved accuracy up to the 3 week follow-up, but this is not distinguishable from the control at 6 weeks. This tends to suggest that the visual aids help individuals retain and recall the information.

When we re-elicit beliefs and predictions at 20 weeks, we see that there remains a considerable effect of the treatment and the pattern of the video having a more lasting effect remains. The Educational Video treatment group predict the direction of inflation more than 9 percentage points more accurately than the control group. Indeed, more than two-thirds of the treatment group, 20 weeks after the initial intervention, accurately predict the effect interest rates have on inflation and unemployment.

Over the course of the intervention and the following 20 weeks, the accuracy of the control group increased from 51 per cent to 59 per cent. This was a statistically insignificant change. In contrast, the accuracy of the Educational Video treatment group increased from 47% to 65%, a highly statistically significant improvement. Likewise, the Educational Text group accuracy improved from 48% to 65%. Importantly, the improvement seen in the Educational Video and Text treatment groups occurred immediately following the intervention and was evident in the posterior estimates in Wave 1. In fact, the level of understanding and accuracy remained almost identical across the follow-up waves for these groups. By contrast, the control group only improved very slightly immediately after the intervention: by around 3 percentage points.[6] The improvement for the control group occurred over the course of 20 weeks, as participants were free to do their own research to understand the survey. The Educational Video and Text treatments had already been provided this information in their intervention and therefore would likely have less need for searching the information out — a possible explanation for the very steady level of accuracy across the follow-ups.

As a robustness measure, we consider individuals who received in the prior a scenario where interest rates increased, we can compare this to the same participants who received this question 20 weeks later. This reduces the sample size but also reduces the noise in the measure, since the different direction scenarios had different average accuracy. The sample is reduced

[6]This was likely due to understanding the questions a little more — a test effect which is important to control for. In addition, prompting participants to think about these concepts may have also induced some improved understanding compared to the prior, even without the treatment — another test effect that is important to control for.

considerably, but the results show clearly that the active pedagogical treatments lead to sustained differences in the accuracy of household understanding of the impact of higher interest rates on inflation. Participants who received the Educational Text and Education Video treatment were 20 and 13 percentage points more accurate, respectively, than those who received the control treatment.

Table 6: Treatment effect on understanding transmission mechanism

	1st wave	2nd wave: 3wks	3rd Wave: 6wks	4th Wave: 20wks
	(1)	(2)	(3)	(4)
Inflation accuracy				
Educational Text	0.137***	0.117**	0.052	0.070
	(0.043)	(0.053)	(0.053)	(0.057)
Augmented FOMC stmt	0.064	0.039		
	(0.045)	(0.055)		
Educational Video	0.135***	0.165***	0.108**	0.091*
	(0.043)	(0.053)	(0.054)	(0.055)
Unemployment accuracy				
Educational Text	0.139***	0.086	0.055	0.155***
	(0.047)	(0.056)	(0.055)	(0.065)
Augmented FOMC stmt	0.011	0.001		
	(0.049)	(0.058)		
Educational Video	0.122***	0.035	0.035	0.146***
	(0.048)	(0.056)	(0.055)	(0.064)
Activity accuracy				
Educational Text	0.117***	0.059	0.036	0.058
	(0.040)	(0.044)	(0.049)	(0.053)
Augmented FOMC stmt	0.047	-0.010		
	(0.041)	(0.047)		
Educational Video	0.073*	0.025	-0.012	0.009
	(0.040)	(0.045)	(0.050)	(0.053)
Observations	1,078	813	610	690
Demographic Controls	Yes	Yes	Yes	Yes
Note:		*p<0.1; **p<0.05; ***p<0.01		

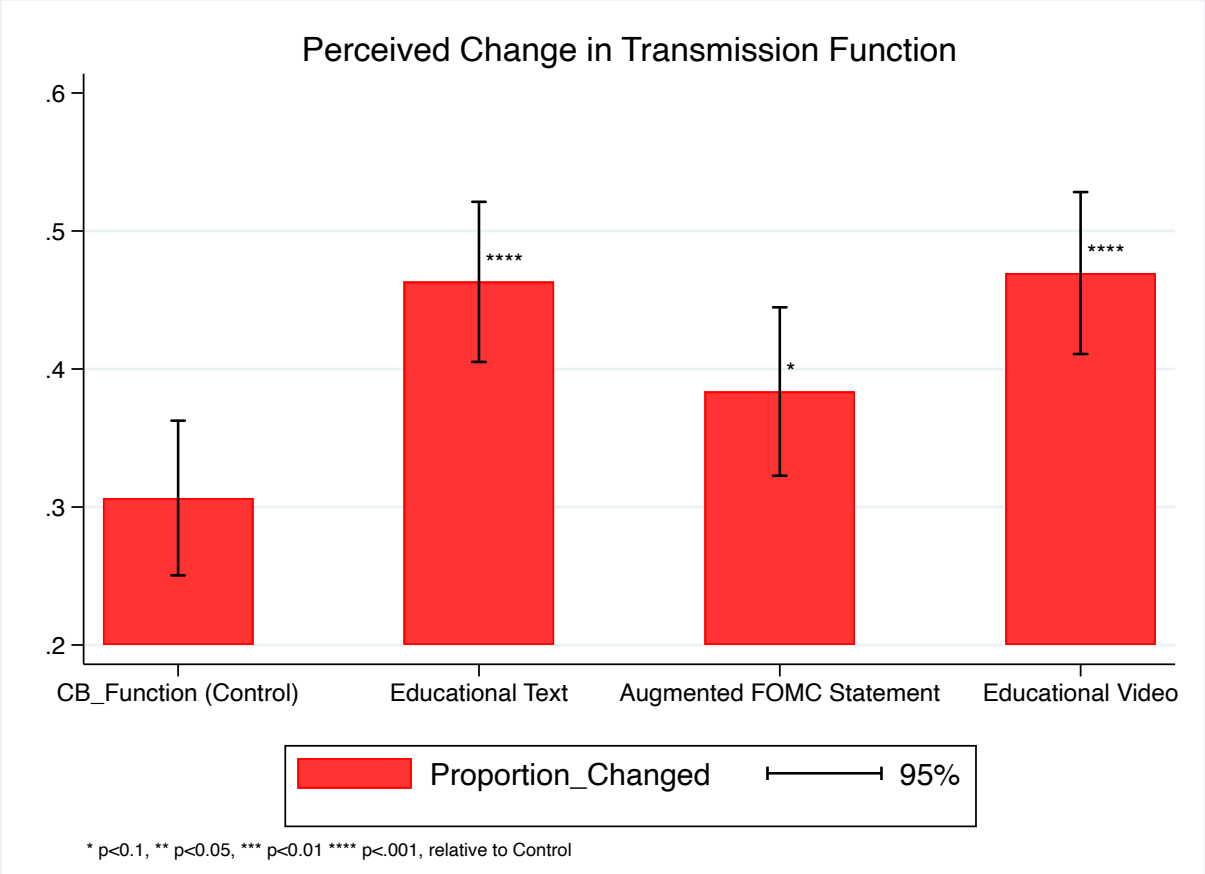


Figure 20: Self-perceived change in understanding of Transmission function

3.3.4 Household Perceptions of Understanding

In addition to eliciting household predictions, participants were asked at the end of the first wave if their understanding of the way interest rate changes influence the economy had changed. Again, there was no incentive for participants to report a particular answer, and we made clear to participants that their payment was independent of the response to this question. Figure 20 details the proportion of respondents that believed their understanding of the transmission mechanism changed as a result of the first wave. All treatment groups, including the active control, reported improved understanding. Almost 50% of participants who received the educational text and video treatments reported that their understanding changed — this is statistically much larger than the control group. Participants who received the augmented FOMC statement also reported higher understanding although this is not strongly significantly different to the control group.

3.4 Participant recall and reasoning methods

After we elicit beliefs from participants, we ask them what methods they used to answer our questions. We find that almost 50% of participants state that they are using their 'gut feeling' in at least some of the predictions they provided to us. This is broadly in line with findings in Andre et al. (2022). At the same time around 60% of participants reported to using some knowledge of economics. Furthermore, around 50% of households relied on their previous experience or memories of macroeconomic events when forming their predictions.

Following the information treatments in the first wave, there is a broad increase in the share of participants reporting using their knowledge of economics while there is a broad decline in the share using their gut feeling. In particular, the Educational Video group reported an almost 7 percentage point higher share of using their economic knowledge than the control group (a statistically significant difference) while they also reported a 5 percentage point lower share of using their gut feeling (although this is not statistically significant at conventional levels). While the other treatment groups also reported increases it is likely the effects are slightly muted by the fact we asked participants to average across a number of scenarios as well as the factual historical scenario which may have induced more gut feeling and reliance on previous memories given the incentives and reward for accuracy with this question.

3.5 Central Bank Credibility

Across the prior and posterior beliefs, we see considerable improvements in the perceived credibility of the Federal Reserve. Figure 21 shows that each of the information treatments saw improvements across all categories — including the control group. While considerable changes in the control group might normally suggest caution when interpreting results, the improvements in the control are not surprising in this circumstance. This was an active control group and much of the text detailed the broad role of the Federal Reserve in controlling inflation, keeping the financial system stable and regulating banks as well as protecting consumers. While it did not detail economic mechanisms, it is not surprising that it had an influence on credibility. These results also align with recent findings by Dräger and Nghiem (2025) where participants that received a financial literacy treatment had higher trust in the central bank.

We find a strong positive relationship between perceived central bank credibility and understanding of key economic mechanisms. This finding is in line with previous research, although those studies often proxy understanding with previous education or financial literacy. Partic-

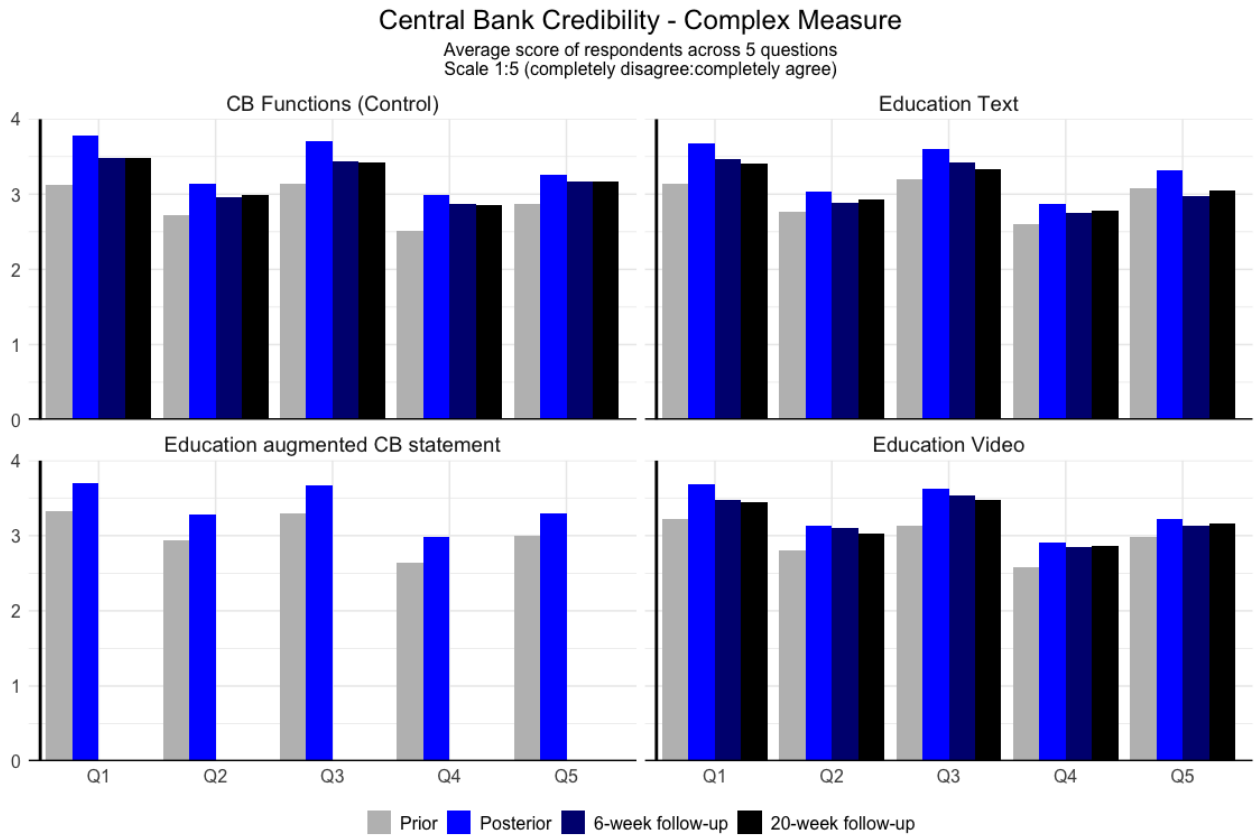


Figure 21: Measures of Central Bank Credibility by Treatment

ipants who correctly identified the transmission mechanism in the posterior rated the Federal Reserve's credibility as 0.46 points higher on average in the posterior than those who were incorrect. Given that the variable ranges from 1 to 5 this is a very large effect size. Indeed a similar finding holds in the priors as well, although the 'correct' bonus for credibility is around 0.3 points. We find no direct link between improved understanding of the transmission mechanism and credibility.

The retreatment of the third group with the Educational Video at the 6-week follow-up allows us to causally consider the difference between receiving the video and simply engaging with the survey. In particular, we compare the results of the multi-faceted credibility questions across the retreated group and the control. We find that the retreated group has a statistically significantly higher average response to Q1 (The Federal Reserve consistently fights inflation) than the control group. The other elements of the mutli-faceted credibility measure are also increased by the Educational Video treatment, but the increase is not statistically different from 0.

The literature's finding of very sticky central bank credibility may also have arisen due to the method of eliciting credibility and trust. We find that when participants are asked to summarize their view on credibility into one single measure, they huddle around the middle of the Likert scale. We also find that information interventions have no impact on this measure. Figure 22 shows the distribution of responses for the single-question and multi-question measures of credibility across the prior and posteriors. The mean and median of the single-question measures do not change and the distribution is also unchanged. In contrast, when we consider the multi-question measure, we find the information treatments lead to a shift upwards in the entire distribution of responses. Therefore, it is possible that the pedagogical interventions are considerably more influential in altering the beliefs of households than simple central bank statements or forecasts. However, it is also possible that those previous studies did have an influence on credibility, but the single-question masked any effects.

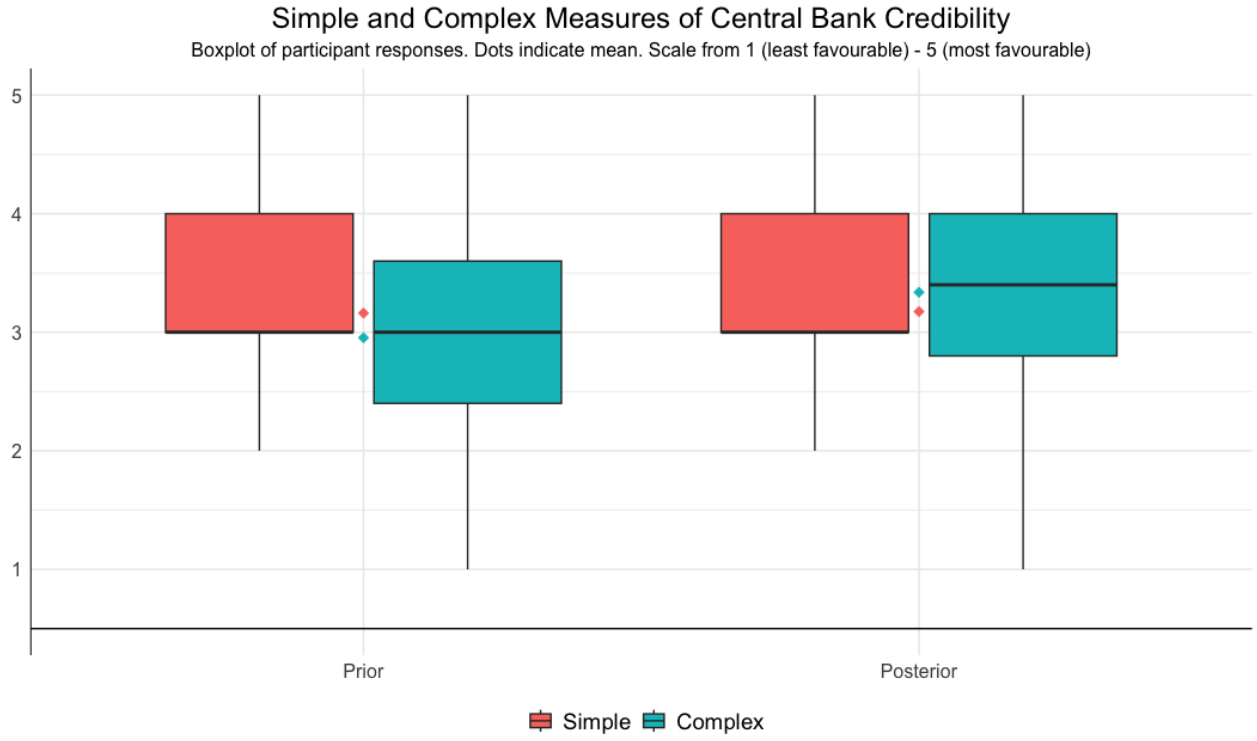


Figure 22: Two types of measures of central bank credibility

4 Conclusion

In this paper we assess the extent to which heterogeneous beliefs are held by households. We decompose household mental models into an assessment function, reaction function and

understanding of the transmission mechanism. Despite finding some aspects of the economy where households tend to agree both as a group and with economists, we find substantial heterogeneity across households regarding other aspects. In these areas, households tend to hold views at odds with those of the economics profession.

Most importantly, we show that pedagogical interventions explaining economic mechanisms can coordinate their mental models such that consumers then make predictions akin to experts. This updated understanding persists for many weeks after the initial intervention. Our novel findings have important implications for policy communication and the management of expectations. They suggest that rather than giving households specific information to influence expectations, a teaching approach can yield better understanding and boost trust in institutions.

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A Instruction texts

Welcome to the Experiment

Thank you for participating in this research study. This experiment is divided into three main tasks. It will take you approximately 20 minutes to complete the full experiment. Your insights and engagement are crucial to helping us understand how people think about the economy and its mechanisms.

You will receive a fixed fee of XX for participating in this study. You may also earn a bonus payment that we will pay in addition to your fixed participation fee. The bonus payment you receive will depend directly on the responses you provide.

These instructions will explain each of the three tasks in this experiment and how your decisions impact your bonus payment. We will provide these instructions on each page for your reference. However, you should read these instructions carefully now so you understand your task and opportunity for bonus payments.

We will quiz you on these instructions to ensure you understand how to complete the tasks in this experiment and understand how your bonus payment depends on your responses and answers throughout.

Overview of the Tasks

1. **Hypothetical Economic Scenarios (6 scenarios)**
    - We will present you with 6 hypothetical economic scenarios
    - **Your Role:** For each scenario, you'll make a prediction about how at least one important component of the economy (like inflation, interest rate, or output) will evolve.
    - **Attention Check:** After making your prediction in each scenario, we will ask you to correctly identify the details of that scenario by choosing from a list of alternatives. This helps ensure that you're engaging with the material and fully understanding each scenario. If you answer two of these attention checks incorrectly, we will remove you from the experiment.

- **Reflection:** For some of the later scenarios, we will ask you to reflect on whether your view of how the economy works has changed compared to an earlier scenario. We're not looking for a particular answer here - we do not mind if it changed or stayed consistent. What's important is that you engage enough with the scenarios to recognize your thinking. If you correctly identify whether your belief about how that aspect of the economy functions has shifted or remained the same, you will receive a fixed bonus payment of XX dollars.
- **Explanation:** Following some hypothetical scenarios, we will ask you to explain why you made your prediction. That is, we will ask you for the logic of your prediction.
- **How your responses impact your bonus payment:**
  - **Explanation bonus:** We will manually read all answers. If you answer thoughtfully, we will pay you a fixed fee of XX for each of these explanations. Otherwise, we will pay you nothing. Thus, you will receive bonus payments if your explanation reflects honesty and effort.
  - **Reflection Bonus:** You'll also receive bonus payments if your recall of whether your rationale changed or stayed the same matches what you did during the predictions.

2. **Historical Economic Scenarios (2 scenarios)**

- You'll answer questions about 2 historical economic events. These are real-world scenarios where the outcomes are known.
- **Your role:** Predict what you think happened in each scenario based on the information provided.
- **How your responses impact your bonus payment:** We will randomly select one of these scenarios and pay you XX if your prediction matches the actual historical outcome.

3. **Cognitive task:**

- This task involves pattern recognition exercises
- **Your Role:** Complete as many questions as possible within the allotted time.
- **How your responses impact your bonus payment:**You will earn bonus payments based on the number of correct answers you provide.

Why Your Participation Matters

This experiment is designed to understand how people like you think about the economy. There are no right or wrong answers in the hypothetical scenarios—we are genuinely interested in your personal beliefs and reasoning. Your thoughtful engagement is crucial to the success of this research. We are providing bonus payments based on your responses as a way to reward careful and honest participation.

Key Points to Remember

- **Engagement is Key:** Your predictions and explanations should reflect your true beliefs and thought process. Take your time to think through each scenario.
- **Bonus Payments:** You will be rewarded for the quality of your engagement and the accuracy of your reflection on your through processes - not just for getting the 'right' answer.
- **Your Contribution to Science:** Your participation helps us understand how economic beliefs are formed, contributing to important research in the field.

We appreciate your time and effort. Please take a moment to ensure you understand these instructions before proceeding. We will have a quick comprehension quiz on the next page to ensure you understood the tasks.

B Reflection task texts

Reflection Task - reaction function

As part of this experiment you were incentivized to carefully read each scenario and thoughtfully form your predictions. Now, you'll engage in a reflection task that's closely tied to these incentives. This task isnt about whether your rationale stayed the same or changed - it's about ensuring that you were fully engaged with the scenarios and predictions and rewarding you for doing so.

Earlier in the experiment before the cognitive task, you predicted how the Federal Reserve would change (or not) interest rates if inflation increased and unemployment declined. In the most recent scenario on the previous page you predicted how the Federal Reserve would

change (or not) interest rates when inflation decreased and unemployment increased. As you can see, these situations are opposites of each other.

When making these predictions, you may have had a specific model or relationship in mind (e.g. a link between inflation and interest rates). Think about your predictions for both scenarios. Do you believe the underlying model or relationship you used to form the prediction was the same in both cases, or did it differ?

Note: We will compare your actual predictions from the two scenarios to assess whether the relationships you predicted were consistent or different. You will be rewarded with a bonus payment if you accurately identify whether your rationale was consistent or if it changed.

Actual Question: (transmission function)

Earlier in this experiment, before the cognitive task, you predicted how inflation and unemployment would change (or not) in response to higher [lower] interest rates. Your prediction was the outcome of your view of the *transmission function*, which determines how changes in interest rates impact the economy.

Do you think your answer to this most recent prediction scenario represents a different understanding of how changes in interest rates impact upon inflation and unemployment (i.e. a different understanding of the *transmission function*)?

Actual Question: (assessment function)

Earlier in this experiment, before the cognitive task, you predicted how inflation and unemployment would change in response to different economic events. Your predictions represented your view of how the economy responds to different types of economic shocks. We call this your *assessment function.*

Relative to your previous assessment, do you think your answers about how inflation and unemployment would change in response to different economic events in these most recent scenarios represent a new outlook on how the economy responds to economic shocks (i.e. a new or different assessment function?)

B.1 Instructions 2

Welcome to the Experiment

Thank you for participating in this study! Your responses will provide valuable insights into how people think about economic concepts. The experiment is divided into three main tasks and will take approximately 20 minutes to complete.

Throughout the experiment, you will make predictions, provide explanations, and complete cognitive tasks. In addition to a fixed participation fee of XX, you can also earn bonus payments based on your responses.

Please read these instructions carefully! Doing so will help you maximize your bonus payment. We will provide reminders and instructions during each step, but it's important that you fully understand the tasks before starting.

Overview of the Tasks

1. **Hypothetical Economic Scenarios (6 scenarios)**

   - We will present you with six hypothetical economic scenarios.
   - **Your Role:** In each scenario, you'll predict how a key economic factor (like inflation, interest rates, or output) will change.
   - **Attention Check:** After each prediction, we will ask a question to make sure you understood the scenario. If you miss two attention checks, you will be removed from the experiment.
   - **Reflection:** In some scenarios, we will ask you to reflect on whether your view of how a certain aspect of the economy works has changed. There are no right or wrong answers—what matters is accurately recognizing if your thinking shifted or stayed the same.

     Example:

     Imagine you believe that the production of apples and bananas is linked—when one changes, the other changes in the same way. This belief is your "underlying model."

     Example Scenario 1: A Drought Affecting Bananas

In the first scenario, we tell you that a drought has reduced banana production. You're asked to predict how this will affect apple production. Based on your belief, you might predict that apple production will also decrease since you think both are affected similarly.

Example Scenario 2: An Increase in Apple Production

Later, we tell you that a new technology has increased apple production. Now, you're asked to predict how banana production will change. Again, you might predict that banana production will rise, if you're still using the same belief that apples and bananas move together.

Reflection on Your Reasoning:

Did your reasoning stay the same across both scenarios? Did you use the same model (that apples and bananas move together) to make both predictions, or did your thinking change? If your predictions indicate a shift in reasoning (like now thinking that apples and bananas are negatively linked), you should reflect that your thinking changed.

- **Explanation:** After some predictions, we'll ask you to explain your reasoning. If your explanation reflects effort and honesty, you'll receive a bonus payment.

How to Earn a Bonus:

- *Explanations:* Thoughtful explanations will earn a bonus of XX per explanation. There are no right or wrong answers. We only care that you put effort into explaining how and why you provided your prediction.
- *Reflections:* Accurate reflections on whether your views changed will also earn a bonus of XX. For example, if your predictions in both scenarios were based on the belief that apples and bananas move together, and you accurately reflect that your reasoning stayed the same, you will receive the bonus.

2. **Historical Economic Scenarios (2 scenarios)**

- We will present two historical economic events with known outcomes.
- **Your Role:** Based on the information provided, predict what you think happened in each scenario.

How to Earn a Bonus:

- We will randomly select one of the two scenarios. If your prediction matches the actual historical outcome, you will receive a bonus of XX.

3. **Cognitive Task**

   - This task involves solving pattern recognition exercises within a time limit.
   - **Your Role:** Complete as many correct answers as possible in the allotted time.

   How to Earn a Bonus:

   - You will earn a bonus based on the number of correct answers you provide.

Why Your Participation Matters

Your predictions, explanations, and reflections help us understand how people think about the economy. We reward thoughtful and engaged participation, not just "right" answers. The better you engage with the tasks, the higher your chances of earning bonuses.

Summary of Bonuses

- Earn bonuses for thoughtful explanations in the hypothetical scenarios.
- Earn bonuses for accurate reflections on whether your thinking changed.
- Earn bonuses for correct predictions in the historical scenarios.
- Earn bonuses for correct answers in the cognitive task.

We appreciate your time and effort and look forward to seeing how you approach these tasks!

Next Steps
Please ensure that you understand the tasks. You will take a brief quiz on the next page to check your understanding.

Reflection Task - Consistency of Predictions

Now, we'll ask you to reflect on the predictions you made earlier.

In one scenario, you predicted how the Federal Reserve might change interest rates if inflation increased and unemployment declined. In another scenario, you predicted how the Federal Reserve might change interest rates when inflation decreased and unemployment rose.

These scenarios present opposite conditions. Do you think you used the same reasoning (or "model") to make both predictions, or did your thinking change between the two situations?

How to Earn a Bonus: You will receive a bonus if your answer accurately reflects whether your reasoning stayed the same or changed.

Reflection Task - Understanding of Economic Models

Earlier in the experiment, you predicted how inflation and unemployment would change in response to adjustments in interest rates. Your predictions were based on your understanding of how these economic factors are related.

Do you think your most recent prediction reflects a new or different view of how interest rates affect inflation and unemployment?

Final Reflection Task - Economic Shocks

Earlier in the experiment, you predicted how inflation and unemployment would change in response to different types of economic events. We call this your "assessment function"—the way you view how the economy reacts to shocks.

Relative to your previous assessment, do you think your answers now represent a new or dif-

ferent understanding of how the economy responds to economic shocks?

Final Reminder: Remember, we reward careful and honest engagement, not just "correct" answers. Continue reflecting thoughtfully to maximize your bonus potential.

B.2 Instructions 3

Welcome to the Experiment!

Thank you for participating! Your responses will help us understand how people think about economic concepts. This experiment will take about 20 minutes and includes three main tasks.
What You'll Do:

1. **Make Predictions:** Predict changes in economic factors based on different scenarios.
2. **Provide Explanations and Reflections:** Explain your predictions and provide accurate reflections to earn bonuses.
3. **Complete Cognitive Tasks:** Solve pattern recognition exercises to earn additional bonuses.

Your Role:

- **Attention to Detail:** Carefully read each scenario and question.
- **Honest Responses:** Provide thoughtful and detailed answers.

Task Overview:

1. Hypothetical Economic Scenarios:
    - **What:** You will be presented with a series of hypothetical scenarios involving economic factors like inflation, interest rates, or unemployment.
    - **How:**

- **Prediction:** For each scenario, predict how a key economic factor will change. There are no right or wrong answers. We are interested in your view.
- **Attention Check:** After each prediction, you'll answer a quick question to ensure you were paying attention and understood the scenario. Missing two attention checks will disqualify and remove you from the experiment.
- **Explanation:** After making your prediction, you will be asked to explain your reasoning. Please use at least 2 sentences.
  - **Explanation Details:** Describe why you made your prediction. Include any economic principles or personal beliefs you used. There are no right or wrong answers, but your explanation should clearly show your thought process.
- **Reflection:** After completing the prediction scenarios, you will reflect on whether your views on economic relationships were consistent across the scenarios.
  - **Reflection Details:** For each reflection, tell us if your reasoning remained the same or changed. There are no right or wrong answers—what matters is accurately recognizing if your reasoning was the same or different. For example, if in one scenario your prediction used the rationale that two economic factors were linked in a certain way, did a prediction you make in another scenario also use that rationale or a different one?

- **Bonus:** Explanations that reflect effort and engagement and accurate reflections will earn a bonus.

2. Historical Economic Scenarios:

- **What:** You will predict the outcomes of historical economic events based on the provided information.
- **How:** Guess what happened in each scenario based on your understanding of the events.
- **Bonus:** Match the actual historical outcome to earn a bonus.

3. Cognitive Task:

- **What:** Solve pattern recognition exercises within a time limit.
- **How:** Complete as many correct answers as possible to earn a bonus.
- **Bonus:** Earn a bonus based on the number of correct answers you provide.

How to Earn Bonuses:

- **Explanations:** Earn XX for providing clear and thoughtful explanations for your predictions.
- **Reflections:** Earn XX for accurate reflections on whether your reasoning changed or was consistent.
- **Historical Predictions:** Earn XX for correctly predicting the outcome of one historical event.
- **Cognitive Task:** Earn a bonus based on the number of correct answers you provide.

Why Your Participation Matters:
Your engagement helps us understand economic reasoning. There are no right or wrong answers in the hypothetical scenarios—we are genuinely interested in your personal beliefs and reasoning. Thoughtful and accurate participation will increase your chances of earning bonuses.

Next Steps: Please read these instructions carefully. You'll take a brief quiz on the next page to check your understanding and then you'll progress to the experiment.
Thank you for your time and participation. Let's get started!

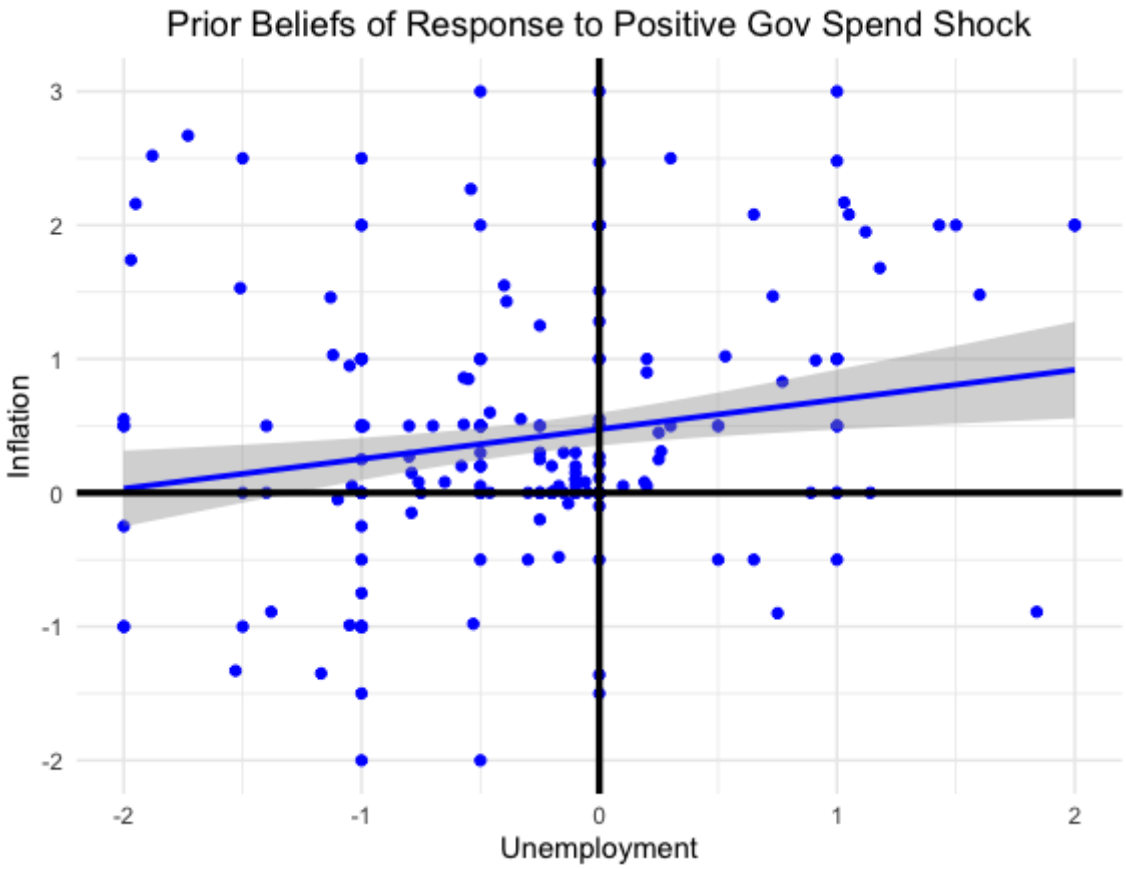


Figure 23: Household predictions of positive government spending shock

C Appendix

D Analysis Figures

E Sample Size Calculations

Here we determine the necessary sample size for detecting effects of various magnitudes with a significance level of 0.05 and a power of 0.80. Effect magnitudes are specified in terms of Cohen's d, ranging from 0.2 to 1.0 in increments of 0.1. The effect magnitude(Cohen's d) is calculated as the standardized mean difference between the treatment and control groups. Specifically, Cohen's d is defined as:

$$d = \frac{M_1 - M_2}{SD_{pooled}}$$

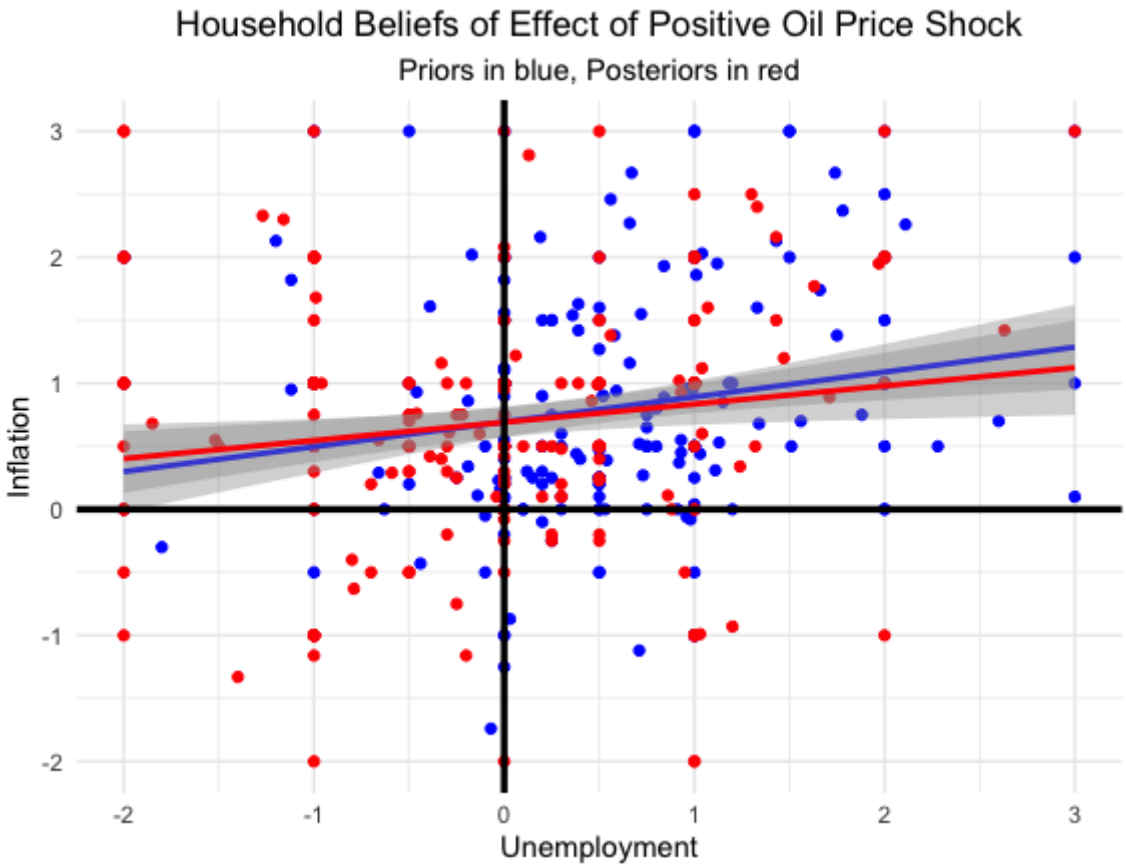


Figure 24: Household predictions of positive oil price shock



Figure 25: Household predictions of positive food price shock

where M_1 and M_2 are the means of the treatment and control groups, respectively, and SD_{pooled} is the pooled standard deviation of the two groups. We assume $M_1 = 0$, treating it as the control group.

Cohen provided conventional thresholds for interpreting the magnitude of effect sizes:

- **Small effect size:** $d = 0.2$
- **Medium effect size:** $d = 0.5$
- **Large effect size:** $d = 0.8$

These thresholds offer a general guideline for interpreting the practical significance of research findings. For context, the effect size Michael and I observed, on average, with our text treatments corresponds roughly to a Cohen's d of .6.

To replicate in Stata:

- **Table:** power twomeans 0 (0.2(0.1)1), alpha(.01 .05 .1) power(.8) sd(1) graph
- **Graph:** power twomeans 0 (0.2(0.1)1), alpha(.01 .05 .1) power(.8) sd(1) table

The resulting graph (26) plots the required total sample size (y-axis) against the effect size (Cohen's d) (x-axis). Alternatively, you can get exact numbers from 7.

F Treatment Texts

1. Control text
2. Text treatment
3. Video treatment
4. Educational CB statement

α	β	**N**	N_C	N_T	Δ	μ_C	μ_T	σ
0.01	0.80	1,172	586	586	0.2	0	0.2	1
0.01	0.80	524	262	262	0.3	0	0.3	1
0.01	0.80	296	148	148	0.4	0	0.4	1
0.01	0.80	192	96	96	0.5	0	0.5	1
0.01	0.80	134	67	67	0.6	0	0.6	1
0.01	0.80	100	50	50	0.7	0	0.7	1
0.01	0.80	78	39	39	0.8	0	0.8	1
0.01	0.80	62	31	31	0.9	0	0.9	1
0.01	0.80	52	26	26	1.0	0	1.0	1
0.05	0.80	788	394	394	0.2	0	0.2	1
0.05	0.80	352	176	176	0.3	0	0.3	1
0.05	0.80	200	100	100	0.4	0	0.4	1
0.05	0.80	128	64	64	0.5	0	0.5	1
0.05	0.80	90	45	45	0.6	0	0.6	1
0.05	0.80	68	34	34	0.7	0	0.7	1
0.05	0.80	52	26	26	0.8	0	0.8	1
0.05	0.80	42	21	21	0.9	0	0.9	1
0.05	0.80	34	17	17	1.0	0	1.0	1
0.10	0.80	620	310	310	0.2	0	0.2	1
0.10	0.80	278	139	139	0.3	0	0.3	1
0.10	0.80	156	78	78	0.4	0	0.4	1
0.10	0.80	102	51	51	0.5	0	0.5	1
0.10	0.80	72	36	36	0.6	0	0.6	1
0.10	0.80	52	26	26	0.7	0	0.7	1
0.10	0.80	42	21	21	0.8	0	0.8	1
0.10	0.80	32	16	16	0.9	0	0.9	1
0.10	0.80	28	14	14	1.0	0	1.0	1

Table 7: Sample Size Calculation Results Sorted by Alpha and Cohen's D (i.e. μ_T)

F.1 Control text

Please read the following information carefully. The text below should take around 2 minutes to read. On the next page, we will ask you a question about the text below which you will be rewarded for, so please read everything carefully.

The Federal Reserve aims to ensure price stability by keeping inflation, a measure of how quickly prices are changing over time, near 2%. They also aim to keep unemployment as low as possible.

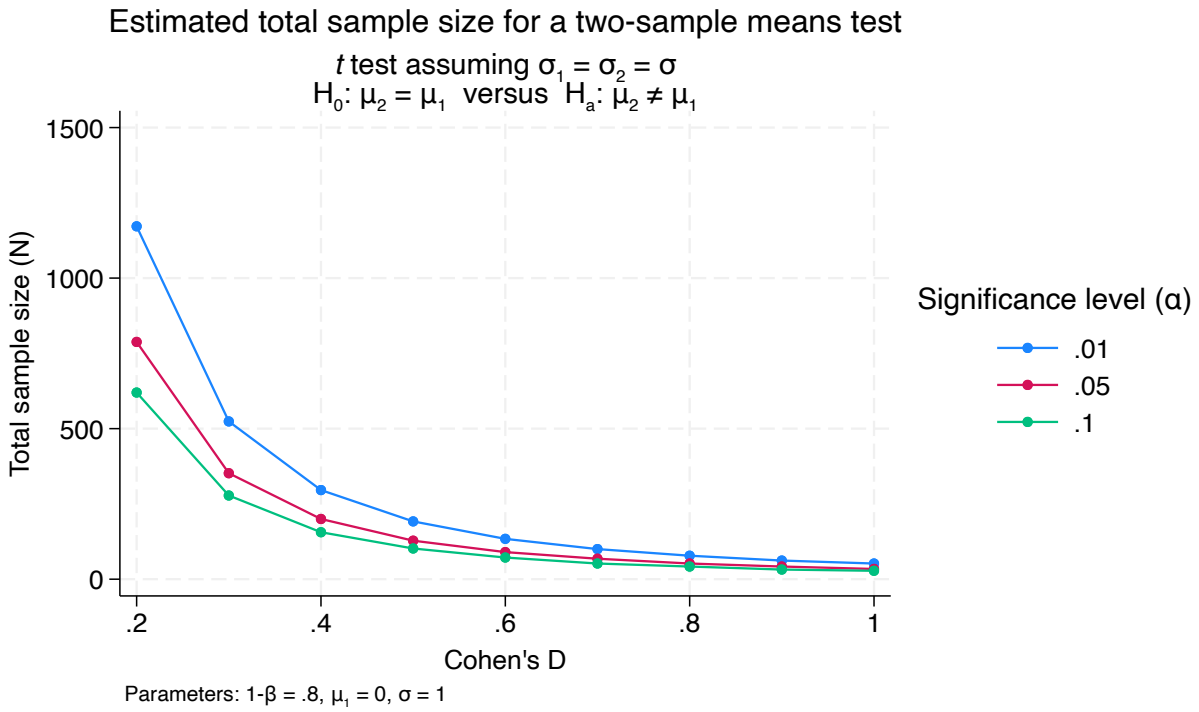


Figure 26: Sample Size Curves for Different values of Alpha

The Federal Reserve System is the central bank of the United States. It performs five general functions to promote the effective operation of the U.S. economy and, more generally, the public interest. The Federal Reserve conducts monetary policy, promotes the stability of the financial system, promotes the safety and soundness of individual financial institutions, fosters payment and settlement system safety and efficiency and promotes consumer protection and community development.

The Federal Reserve System includes three key entities: 1) the Board of Governors located in Washington, 2) 12 Federal Reserve Banks located in separate districts around the U.S., including New York, Richmond, Atlanta, Chicago and Dallas, and 3) the Federal Open Market Committee. The three entities work together to promote the health of the U.S. economy and the stability of the U.S. financial system.

In addition to monetary policy, the Federal Reserve is also responsible for promoting financial system stability. The Federal Reserve was created in 1913 to promote greater financial stability and help avoid banking panics, such as those that had plunged the country into deep economic contractions in the late nineteenth and early twentieth centuries. The Federal Reserve monitors financial system risks and engages at home and abroad to help ensure the

system supports a healthy economy for U.S. households, communities and businesses.

The Federal Reserve also regulates and supervises financial institutions to ensure that they operate safely. Regulation entails establishing the rules within which financial institutions must operate. Once the rules and regulations are established, supervision seeks to ensure that an institution complies with those rules and regulations, and that it operates in a safe and sound manner. In addition, the Federal Reserve monitors the financial system as a whole by identifying and analyzing potential risks to financial institutions, the broader financial system, and the economy. A safe, sound, and efficient banking and financial system contributes to a strong economy.

The fourth function of the Federal Reserve is to foster payment and settlement system safety and efficiency. The U.S. dollar payment and settlement system is composed of payment instruments, systems, and institutions that have changed over time. The Federal Reserve provides currency and operates some elements of this system. This system facilitates financial transactions, purchases of goods and services, and the movement of money at all levels of the U.S. economy.

Finally, the Federal Reserve is responsible for promoting consumer protection and community development to help ensure a fair and transparent financial services marketplace that benefits all Americans. The Federal Reserve advances supervision, community reinvestment, and research to improve understanding of the impacts of financial services policies and practices on consumers and communities.

F.2 Text treatment

Please read the following information carefully. The text below should take around 3 minutes to read. On the next page, we will ask you a question about the text below which you will be rewarded for, so please read everything carefully.

The Federal Reserve aims to ensure price stability by keeping inflation, a measure of how quickly prices are changing over time, near 2%. They also aim to keep unemployment as low as possible.

What causes inflation

As well as movements of prices outside of the U.S., economists think that inflation is affected

by the balance between the demand for goods and services, and the economy's capacity to supply them. Demand and supply can sometimes be out of balance. If demand exceeds supply and there is a relative shortage of goods and services, prices rise quickly (high inflation). If demand is too low and there is relative excess of goods and services, prices rise very slowly (too low inflation) or may even fall.

An imbalance could result from one large change to demand or supply, or many small ones. For example, if the government immediately gave each household $5,000 by reducing taxes, demand would rise sharply as individuals have more money to spend. This would cause higher inflation if supply cannot keep up. This would likely reduce unemployment, as businesses hire workers to satisfy the extra demand. Typically, events affecting demand move inflation and unemployment in opposite directions.

Conversely, a natural disaster like a forest fire that destroys farms and factories could reduce supply without reducing demand. Supply lower than demand would lead to higher inflation. The destruction of businesses could also raise unemployment. Events affecting supply tend to move inflation and unemployment in the same direction.

Why the Federal Reserve changes interest rates

The Federal Reserve adjusts interest rates to manage imbalances in the economy by influencing demand. If inflation exceeds the 2% target (indicating higher demand than supply), the Federal Reserve raises interest rates to slow demand and re-balance the economy. There are several ways this is expected to work. First, higher interest rates encourage households to save more, therefore spending less. Second, businesses invest less in expanding their business (such as buying a new factory or tractor) due to the higher cost of repaying loans. Businesses may face higher costs with higher interest rates and they might consider raising prices to maintain profits. However, because higher interest rates also reduce consumer spending, they risk losing customers who are already cutting back if they raise prices too much. While people often think that higher interest rates automatically lead to higher prices, the effect is quite limited, and the other effects typically dominate. Due to higher interest rates, demand (household consumption and business investment) is reduced closer to balance with supply which lowers inflation over time towards the 2% target.

Instead, if inflation is too far below the 2% target and unemployment is high, the Federal Reserve lowers interest rates to stimulate demand and increase inflation. This works since lower interest rates encourage households to spend more of their income and save less. Busi-

nesses may invest more in expanding their business due to the lower cost of repaying the loan. Therefore, demand (household consumption and business investment) is increased towards balance with supply, which increases inflation and reduces unemployment over time.

Some of these effects happen quickly, but others may take many months, and it can take a few years for interest rate changes to pass through the economy completely. Because of these lags, the Federal Reserve must also consider the expected state of the economy in the future, including demand, supply, and where inflation might be relative to the target. Overall, these actions to change interest rates aim to balance demand and supply in the economy, stabilize inflation around the target rate and keep unemployment low.

F.3 Video treatment

Please watch the following video carefully. The video lasts for 6 minutes. On the next page, we will ask you a question about the information in it which you will be rewarded for, so please listen carefully.

Video Transcript: The Federal Reserve aims to ensure price stability by keeping inflation, a measure of how quickly prices are changing over time, near 2%. They also aim to keep unemployment as low as possible.

What causes inflation
As well as movements of prices outside of the U.S., economists think that inflation is affected by the balance between the demand for goods and services, and the economy's capacity to supply them. In the picture here, demand is represented by the blue balloon on the right and supply is the orange balloon on the left. More air in a balloon indicates more demand or more supply, but they are linked by the seesaw such that what matters is the relative state betweeen the two.

Demand and supply can sometimes be out of balance. If demand exceeds supply and there is a relative shortage of goods and services, prices rise quickly above the Fed's target (there is higher inflation). If demand is too low and there is relative excess of goods and services, prices rise very slowly (too low inflation) or may even fall.

An imbalance could result from one large change to demand or supply, or many small ones. For example, if the government gave each household $5,000 by reducing taxes, demand would rise sharply as individuals have more money to spend. This would cause higher inflation if supply cannot keep up. This would likely reduce unemployment, as firms hire workers to satisfy the extra demand. Typically, events affecting demand move inflation and unemployment in opposite directions.

Conversely, a natural disaster like a forest fire that destroys farms and factories could reduce supply without reducing demand. Supply lower than demand would lead to higher inflation. The destruction of businesses could also raise unemployment. Events affecting supply tend to move inflation and unemployment in the same direction.

Why the Federal Reserve changes interest rates

The Federal Reserve adjusts interest rates to manage imbalances in the economy by influencing demand. If inflation exceeds the 2% target (indicating higher demand than supply), the Federal Reserve raises interest rates to slow demand and re-balance the economy. There are several ways this is expected to work. First, higher interest rates encourage households to save more, therefore spending less. Second, businesses invest less in expanding their operations (such as buying a new factory or tractor) due to the higher cost of repaying loans.

Businesses may face higher costs with higher interest rates and they might consider raising prices to maintain profits. However, because higher interest rates also reduce consumer spending, they risk losing customers who are already cutting back if they raise prices too much. While people often think that higher interest rates automatically lead to higher prices, the effect is quite limited and the other effects typically dominate. Due to higher interest rates, demand (household consumption and business investment) is reduced closer to balance with supply which lowers inflation over time towards the 2% target.

Instead, if inflation is too far below the 2% target and unemployment is high, the Federal Reserve lowers interest rates to stimulate demand and increase inflation. This works since lower interest rates encourage households to spend more of their income and save less. Businesses may invest more in expanding their operations due to the lower cost of repaying the loan. Therefore, demand (household consumption and business investment) is increased towards balance with supply, which increases inflation and reduces unemployment over time.

Some of these effects happen quickly, but others may take many months and it can take a few years for interest rate changes to pass through the economy completely. Because of these lags, the Federal Reserve must consider the expected state of the economy in the future, including demand, supply, and where inflation might be relative to the target. Overall, these actions to change interest rates aim to balance demand and supply in the economy, stabilize inflation around the target rate and keep unemployment low.

F.4 Educational CB statement

New version: Based on July 2023 - rates increased.

Please read the following information carefully. The text below should take around 3 min-

utes to read. On the next page, we will ask you a question about the text below which you will be rewarded for, so please read everything carefully.

The following text is a modified version of the Federal Reserve statement from July 2023.

Consistent with it's statutory mandate, The Federal Reserve aims to achieve maximum employment and price stability and has set a target rate for inflation of 2/

Over the last few months, the unemployment rate in the United States has remained low and economic activity has been expanding at a moderate pace. However, inflation remains elevated above the 2 percent target.

Since inflation remains above the 2 percent target, the economy is expanding at a moderate pace and the unemployment rate is very low, this signals to the Federal Reserve that there is an imbalance of demand relative to supply in the economy. There is more overall demand for goods and services than the economy can currently produce and supply, which can lead to relative shortages and faster price rises - higher inflation.

The Federal Reserve uses changes in interest rates to manage imbalances in the economy by influencing demand. Therefore, given the current and expected state of the economy, the Federal Reserve has decided to increase interest rates. Higher interest rates are expected to slow down demand in the economy and reduce the relative shortages. A closer balance of demand and supply should lead to prices growing more slowly and thus inflation brought back down towards the target rate of 2 percent.

There are several ways that higher interest rates are expected to slow down demand in the economy. Higher interest rates encourage households to save more and spend less of their income. Additionally, businesses may be less willing to invest in expanding their business (such as buying a new factory or tractor) due to the higher cost of repaying the loan. As a result, both household consumption and business investment would decline, causing a decrease in overall demand in the economy and bringing it closer to balance with the capacity of the economy to supply goods and services.

A related channel that operates in the other direction is that businesses, faced with higher business costs from higher interest rates, might wish to raise prices to maintain profits. However, due to the reduced consumer spending, firms raising prices risk losing customers. As a

result, this channel is quite limited and the other effects typically dominate leading prices to increase less or even fall.

The Federal Reserve has increased interest rates in order to balance overall demand and supply in the economy, stabilize inflation around the target rate, and keep unemployment low.