

Inflation Chat - Study 2 (#271657)

Author(s)

This pre-registration is currently anonymous to enable blind peer-review.
It has 2 authors.

Pre-registered on:

2026/02/03 20:44 (PT)

1) Have any data been collected for this study already?

No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?

Participants will forecast U.S. Consumer Price Index (CPI) inflation 12 months ahead (the percentage change of CPI during the next 12 months) and report their reasoning and information sources. They will then have a conversation with an AI Chatbot. Our experiment provides different conversational instructions. We test which features of the conversation (message length, question asking, certainty, information type, and attitude) are more persuasive.

3) Describe the key dependent variable(s) specifying how they will be measured.

Participants provide a point forecast of the U.S. 12-month inflation rate on a slider from -5% to +20%, both before and after exposure to a conversation with GenAI. We define a Weight of Advice (WoA) measure as $(\text{Revised} - \text{Initial}) / (\text{GenAI} - \text{Initial})$, where the GenAI estimate is fixed to be three percentage points from the participant's initial estimate in the direction of 2.9 (the consensus forecast at the time of the preregistration).

4) How many and which conditions will participants be assigned to?

Participants are randomly assigned to a GenAI Chatbot with instructions that are set as follows. We define five binary factors: message length {long, short}, question asking {yes, no}, certainty expressions {high, low}, information type {data, examples}, and attitude {affirmation, challenge}. Participants get a combination of these dimensions, e.g. long messages, with questions, expressing low certainty, relying on examples, and affirming the participant's views. In total, there are 32 combinations of factors and hence 32 treatments.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.

Our key analysis estimates the OLS regression: $\text{WOA} \sim b_0 + b_1 \times \text{Length} + b_2 \times \text{Certainty} + b_3 \times \text{Information} + b_4 \times \text{Questions} + b_5 \times \text{Attitude}$. Thus, each coefficient is a binary comparison between the two levels of a factor (e.g., Long vs. Short), controlling for the level of the other factors. Additionally, we will run a separate model that includes a control for the absolute distance between a participant's initial estimate and the 2.9 current consensus forecast.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

We include all participants who were successfully paired with a GenAI chatbot and complete the survey.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.

We will target a sample size of 1,000 participants. Our randomization aims for a similar fraction for each level of a factor (e.g., 500 participants getting long messages and 500 participants getting short messages).

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

We will conduct a manipulation check for our factor instructions. Specifically, we will analyze the AI messages for each conversation and compare: total words in the short vs. long treatment, number of questions asked in the question treatments, number of certainty expressions in the certainty treatment, number of references to data in the information type treatment, and number of challenging and number of affirming expressions in the attitude treatment. We will ask GenAI to parse the chatlogs and identify phrases associated with each factor (except for length, which we measure via a word count). This will allow us to test if the Chatbot followed the instructions during the chat.