

Inflation Expectations (Study 1) (#252322)

Author(s)

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

Pre-registered on:

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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. We test (1) whether having a conversation with another participant leads to greater belief revision than merely observing their reason and information sources, and (2) whether having a conversation with a GenAI assistant similarly leads to persuasion.

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 partner (or GenAI). We define a Weight of Advice (WoA) measure as $(\text{Revised} - \text{Initial}) / (\text{Partner} - \text{Initial})$, where Partner is the partner's (or GenAI's) point estimate shown to the participant. By design, matching prevents Partner = Initial.

We define Extreme Belief as a binary indicator that is 1 if a participant's post-exposure estimate is $< 0\%$ or $> 15\%$ and 0 otherwise.

We defined the Forecast Error as $(\text{Post-exposure forecast} - \text{Truth})^2$, where Truth is the 12-month percent change in the U.S. CPI released by the U.S. Bureau of Labor Statistics (https://www.bls.gov/schedule/news_release/cpi.htm). We use the first published value to anchor "truth."

We define the Deviation from Professionals as $(\text{Post-exposure forecast} - \text{Professional forecast})^2$, where Professional forecast is the mean of professional forecasters' expectations of one-year-ahead annual average CPI inflation (INFCPI1YR) surveyed by the FRB of Philadelphia.

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

Participants are randomly assigned to one of four conditions in a 2x2 design. We vary whether people can Chat with a Partner or if there is No Chat, and vary if the partner is another participant or AI.

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

We run separate OLS regressions for each of the four outcome measures. $DV \sim b_0 + b_1 \times \text{Chat} + b_2 \times \text{AI} + b_3 \times \text{Chat} \times \text{AI}$. We cluster at the dyad ID for human-human pairs and at the individual level for human-AI pairs.

For the WoA measure, we predict $b_1 > 0$ (chat helps human-human pairs), $b_1 + b_3 > 0$ (chat helps human-AI pairs), $b_2 > 0$ (stated reason from AI is more persuasive than stated reason from humans). We will test if interacting with AI is more persuasive than interacting with a human ($b_2 + b_3$) but do not make a prediction about that.

For the Extreme Beliefs, Forecast Error, and Deviation outcomes, we will conduct the same OLS regression but predict $b_1 < 0$, $b_1 + b_3 < 0$, and $b_2 < 0$. We will also test $b_2 + b_3$ but do not make a prediction about that.

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

We exclude participants who report technical issues that prevented matching or chatting, and participants who time out during matching and were not matched. If a partner dropout occurs such that a participant does not receive the partner chat, that participant is excluded from the analyses.

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 aim for 400 observations in each treatment, with two participants in the human-human and one participant in the human-AI treatments counting as an observation. That is, we target a total of 2,400 participants. We will recruit 2,500 participants to account for some dropout and technical issues.

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

We will collect standard demographics and additional items on information consumption and knowledge about inflation and current events. We will report these descriptively and do not preregister analyses using these as covariates.