

Information and Macroeconomic Expectations: Global Evidence*

Francesco D’Acunto[†] and Michael Weber[‡]

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Abstract

Homogeneous data on 47,000 consumers across 47 countries representing 90% of global GDP reveal facts that inspire realistic adaptations of macroeconomic belief-formation models. First, most consumers attend to information from their local economic environments —utility bills, shopping, and social media—which do not provide representative signals and lead to biased inflation, interest rate, and house-price perceptions and expectations. Second, consumers who face a higher cost of not being informed seek more economic information but mostly from local economic environments, which exacerbates instead of reducing biases. Third, conditional on information sources, demographics do not explain differences in expectations: differences in processing economic signals can barely explain demographic differences in macroeconomic expectations. Fourth, higher trust in governments and central banks, which produce aggregate economic information, reduces reliance on local economic environments and hence expectations biases.

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[†]McDonough School of Business, Georgetown University. e-Mail: francesco.dacunto@georgetown.edu

[‡]Booth School of Business, University of Chicago and NBER. e-Mail: michael.weber@chicagobooth.edu.

1 Introduction

The rational-expectations revolution slowed down a vibrant economic research program on the drivers and consequences of subjective macroeconomic expectations (for instance, see [Simon, 1955](#)). In theories based on the full-information rational expectations (FIRE) paradigm, only one set of beliefs is consistent with the structure of the economic model. Confronted with mounting evidence that this postulate was violated in the data, many economists argued that the direct elicitation of consumers’ expectations was unreliable because it delivered facts that were inconsistent with FIRE ([Prescott, 1977](#)). These tautological arguments against the study of subjective macroeconomic expectations could be summarized with the prescription that expectations data are wrong because theoretical models say so and because, for many consumers, they do not align with the realizations of macroeconomic variables as economists define and compute them.

These arguments have been losing their appeal since macroeconomic models featuring more realistic beliefs-formation processes came to prominence.¹ In particular, models in which agents are rationally inattentive and weigh the costs and benefits of gathering macroeconomic information (e.g., see [Sims \(2003\)](#); [Reis \(2006\)](#); [Coibion and Gorodnichenko \(2015\)](#); [Afrouzi and Yang \(2021\)](#)) can help explain the dispersion of macroeconomic beliefs across consumers but not their systematic bias, which is arguably the most striking and consistent empirical feature of subjective macroeconomic beliefs across space and over time ([D’Acunto and Weber, 2024](#)). The fact that most studies of macroeconomic expectations so far focus on single-country data makes it hard to isolate universal drivers of biases in subjective expectations, which requires the homogeneous elicitation of expectations and their potential drivers at the global level ([Falk et al., 2018](#); [Cappelen et al., 2025](#)).

In this paper, we propose—to the best of our knowledge for the first time—a global study of consumers’ subjective macroeconomic expectations covering about 47,000 individuals across 47

¹For instance, models with information frictions, recently reviewed by [Maćkowiak et al. \(2023\)](#) and models in which agents do not adhere to the rational-expectations paradigm [Gennaioli and Shleifer \(2018\)](#); [Bordalo et al. \(2022\)](#); [Bianchi et al. \(2024\)](#); [L’Huillier et al. \(2023\)](#).

countries that represent around 90% of global GDP and 75% of the world population with the aim of informing realistic adaptations of macroeconomic belief-formation models. The unique feature of our setting is that we elicit subjective macroeconomic expectations, preferences, and other individual characteristics homogeneously across countries and at the same point in time, which provides a uniform global cross-section of subjective beliefs alongside potential drivers at the individual, local, and country level, including cultural and institutional country-level characteristics that are hard to study in single-country settings.

Figure 2 is a color-coded global map based on our data that reveals two motivational facts for our analysis. First, in every single country for which we elicit economic perceptions and beliefs, on average households have perceptions of the prevailing value of macroeconomic variables in their countries that are biased upwards.² Second, the map documents substantial cross-country heterogeneity in the extent of this systematic bias, which suggests that its drivers vary across space and that our global setting is likely important to detect such drivers relative to a single-country setting.

Rather than the quantity of economic information consumers gather, it is the *quality* of such information, that is, the extent to which the information sources on which consumers rely provide representative signals for the macroeconomic variables, which contributes to explain the (in)accuracy of subjective macroeconomic expectations relative to ex-post realizations. In particular, we find substantial variation both within and across countries in whether consumers use economic signals from their local economic environments (shopping, utility bills, family & friends, social media) or from aggregate sources (government reports, official statistics, or traditional media) when forming their perceptions and expectations about aggregate inflation, interest rates, and house prices. After controlling for a rich set of demographic characteristics, such as gender, education, income, and cognitive abilities, as well as economic preferences and beliefs, all of which have been shown to correlate with learning from economic signals (Kuhnen and Miu, 2017; D’Acunto et al., 2022, 2021; Coibion et al., 2020), consumers who

²In the figure, we focus on inflation but we report also results for house prices and interest rates below. Darker shades represent higher values. White color coding reflects that we did not field the survey in a country.

mostly rely on their local economic environments to obtain information about the economy form systematically more inaccurate macroeconomic expectations relative to other consumers.

Models of rational inattention (e.g., see [Reis \(2006\)](#); [Maćkowiak and Wiederholt \(2009\)](#); [Afrouzi \(2023\)](#)) postulate that agents trade off the costs of gathering and processing information with the benefits of being informed. In this framework, agents should allocate more attention to macroeconomic variables, for example inflation, and hence, agents should form less biased inflation expectations, when inflation increases or becomes more volatile. This increase in attention arises because the cost of being uninformed becomes higher or because signals become cheaper to obtain because the media and other sources report more frequently about inflation. Inspired by the rational-inattention framework, we assess if consumers' sorting into alternative information sources depends on the cost of forming inaccurate macroeconomic expectations. We test if consumers in countries that have witnessed higher inflation are more likely to seek economic information and, if so, from which sources. Consistent with models of rational inattention, consumers in countries with a higher inflation history seek more economic information than consumers in other countries. At the same time, and contrary to the predictions of standard rational inattention models, consumers in countries with a higher inflation history form more inaccurate subjective expectations. This result arises because they rely more on information from their local economic environments rather than from aggregate sources.³

Globally, consumers do pay more attention to economic information when being uninformed could lead to costly mistakes in their choices. Yet, they predominantly sort into acquiring more information from local economic environments that do not provide representative signals of the distribution of current or future macroeconomic variables. A potential explanation consistent with rational inattention is that obtaining information from aggregate sources is too costly for consumers. This cost-based hypothesis seems implausible because the cost of accessing aggregate sources is quite low in times of widespread access to digital technology and the

³These results hold for different look-back horizons such as 10 or 20 years and also when looking at inflation volatility as a sorting variable.

internet. If anything, extracting signals from local economic environments imposes a higher cognitive load on consumers, who need to recall and process many signals about prices or interest rates rather than reading about a single number for each macroeconomic variable (D’Acunto and Weber (2023)).

The cost-based hypothesis is unlikely also because it predicts the opposite of what we find. Indeed, in economies that have witnessed higher recent and historical inflation or more volatile inflation, if anything, the coverage of aggregate economic variables such as inflation and interest rates is more frequent and more prominent, which reduces the cost of obtaining information from aggregate sources (Weber et al., 2023). And yet, consumers in those economies rely more on their local economic environments for information when forming their subjective expectations.

We find that this apparent puzzle is at least in part explained by consumers’ trust in the suppliers of aggregate economic information—governments and central banks. In economies in which inflation has been higher for longer, trust in economic institution is lower and consumers are more likely to recur to their local economic environments to extract signals to form their macroeconomic beliefs.

The facts we document based on unique homogeneous global data on expectations suggest two directions in which standard rational-inattention models could be adapted to provide a more complete and realistic description of consumers’ beliefs-formation process for macroeconomic variables. First, not only does it matter whether consumers acquire information or how much information they acquire, but also the source of the information matters given that not all information sources provide signals that are representative of the macroeconomic variable of interest.

Second, in addition to the costs of acquiring signals or the costs of forming inaccurate expectations, consumers’ trust in those who produce the information matters for consumers’ endogenous decision of which type of information source to consult and rely upon, a dimension that so far is absent from standard rational-inattention models. This form of trust could be modeled by introducing a perceived bias and noise in the signals obtained from each source

by consumers that is not based on learning about the actual bias and noise as consumers face more and more realizations of macroeconomic variables. Our results also hint at the possibility that trust in economic institutions might be endogenous to historical realizations of macroeconomic variables: consumers might trust economic institutions and aggregate economic information less if they face undesirable macroeconomic outcomes for prolonged periods of time. These results stress a neglected role for direct communication with consumers as a policy tool of economic institutions ([Christelis et al., 2020](#); [D’Acunto et al., 2021](#)): building higher trust through direct communication leads consumers to sort more into aggregate economic information when forming their macroeconomic beliefs and hence to make choices that enhance the effectiveness of fiscal and monetary policy ([D’Acunto et al., 2021](#)).

Our results contribute to at least three strands of literature. First, we contribute to the fast-growing body of work that studies the characteristics, drivers, and consequences of subjective economic expectations. Recent surveys of this literature include [Armantier et al. \(2013\)](#); [Weber et al. \(2022\)](#); [D’Acunto and Weber \(2024\)](#); [Dräger and Lamla \(2024\)](#). This line of research has grown recently because mainstream macroeconomics had largely dismissed subjective expectations after the rational-expectations revolution. Most work in this area focuses on isolating one potential correlate of the cross-sectional variation of subjective expectations at a time and across different populations of consumers or on assessing the causal effects of providing information to consumers on their subjective expectations using information-provision experiments, see, e.g., [Haaland et al. \(2023\)](#) for a review of this literature. Methodologically, our paper belongs to a growing number of studies that design and administer ad-hoc surveys to elicit the beliefs, preferences, and characteristics of representative consumer populations. We build on earlier work to design expectations-elicitation questions but for the first time, we administer a homogeneous survey on macroeconomic expectations to consumer populations around the globe. In terms of content, our setting allows us to investigate the relationship between information sources, trust in economic institutions, and consumers’ expectations-formation process both within and across countries.

Second, our results speak to theoretical and empirical work in behavioral macroeconomics,

that is, the incorporation of psychological and sociological microfoundations into standard macroeconomic models (e.g., see [Akerlof, 2002](#); [Stiglitz, 2011](#); [Bordalo et al., 2022](#)). This line of work has developed alongside another line of departure from the FIRE paradigm in macroeconomics, that is, the incorporation of frictions in the acquisition of economic information to which consumers respond rationally (*rational inattention*, see [Mankiw and Reis \(2010\)](#), [Sims \(2003\)](#), and, for a recent review, [Maćkowiak et al. \(2023\)](#)). Our results include facts that are consistent with both lines of departure from FIRE. On the one hand, consumers for whom forming inaccurate economic beliefs is costlier are more willing to access economic information, which is consistent with models of rational inattention. On the other hand, accessing more economic information does not lead such consumers to form more accurate subjective expectations because the information comes from their local economic environments rather than from aggregate economic sources. Consumers who are more willing to pay the costs of being informed are less likely to trust the suppliers of aggregate economic information, which is why they are more likely to extract information from their local economic environments.

Third, we belong to the strand of macroeconomics that uses microdata to discipline heterogeneous agent macro models to study the reaction of macroeconomic aggregates to aggregate shocks while at the same time being consistent with the income and wealth distribution [Kaplan et al. \(2018\)](#); [Auclert \(2019\)](#); [Bayer et al. \(2024\)](#)⁴ and the macro literature that uses methods from empirical and applied microeconomics to understand the drivers of macroeconomic outcomes. This micro-to-macro approach has diffused swiftly in macroeconomics once microdata based on firm and consumers’ financial account transactions, credit registries, and surveys have become available. Examples are [Nakamura and Steinsson \(2014\)](#), [Chodorow-Reich et al. \(2012\)](#), and [Serrato and Wingender \(2016\)](#) who use regional data to estimate the size of fiscal multipliers and [Nakamura and Steinsson \(2018\)](#) and [Chodorow-Reich \(2019\)](#) provide recent reviews. One possible issue with using cross-sectional variation to inform macro questions is the issue of countervailing general equilibrium effects that might dampen or amplify the effect, sometimes referred to as the “missing intercept” problem ([Wolf, 2023](#)). One way to tackle this

⁴See [Kaplan and Violante \(2018\)](#) and [Auclert et al. \(2025\)](#) for recent reviews.

issue is to combine micro data such as survey data for credible identification with macro models consistent with the cross sectional estimates to inform policy makers, see, e.g., [Bachmann et al. \(2021\)](#).

2 Global Subjective Expectations Survey

We collaborated with Morning Consult, a U.S. market insights company that specializes in online surveys globally ([Hajdini et al., 2024](#)) and conducts over 30,000 interviews across at least 44 countries daily. Morning Consult uses a stratified sampling approach, which is localized based on each country’s population and cooperates with several panel providers in each country they cover to guarantee stability in sample representatives. Morning consult calculates weights using iterative post-stratification (raking) to targets from up-to-date high-quality population targets based on census estimates for age, gender, education, region as well as race/ethnicity in the U.S.

In December 2022, we designed a customized survey similar to surveys used in [D’Acunto et al. \(2021\)](#) and [Coibion et al. \(2022\)](#) with the aim to elicit subjective perceptions and expectations about macroeconomic variables, information sources, and trust in institutions, among others. The targeted average completion times was around 15 minutes. Morning Consult internally tested the questions several times before we converged on a final survey in February 2023. We fielded pilots in six countries (Australia, Brazil, Canada, Germany, Japan, and South Africa) between mid February and early March of around 1,000 respondents per country. Subsequently, Morning Consult translated the survey into national languages for a first set of 20 countries and the survey went into the field on April 11. Starting early April, the questionnaires for the remaining countries was translated and went into the field on April 25.

Morning Consult finished data collection on May 24 2023, which included consumers from 47 countries across all five continents covering more than 75% of the world’s population and 90% of global GDP in U.S\$ terms. The targeted sample size was 1,000 respondents with the exemption of Morocco (750) and Zimbabwe (500) given the difficulties in accessing sufficiently

large online samples. Our overall sample consists of 46,285 observations due to slightly above target samples in some countries such as 1,007 completes for the U.S. or 1,002 for Spain. The survey stayed in the field as little as four days for Zimbabwe and as much as 21 days for Austria.

We selected the set of countries that entered our sample to represent a large share of global GDP spanning all continents and having a varied inflation history for which Morning Consult could guarantee the sampling and recruitment of a population of consumers that were representative of the country’s general population. We designed the original version of the survey in English and Morning Consult delivered professional translations of the survey in the official languages of the 47 countries that entered the sample. All the costs related to the translations of the survey, the recruiting of respondents, the micro-data collection and preparation were covered by a grant from the Alfred P. Sloan Foundation.

To make the sample representative of each country’s population, sampling was stratified at the country level based on a set of demographic characteristics. The survey used a total of 12-16 combinations with two groups for sex assigned at birth, three to five age groups (e.g. 18-34, 35-44, 45+), and two educational attainment levels based on college completion. The age and education threshold may vary slightly by country. To ensure the representativeness of the data across countries, the data is weighted to demographic population targets with weighting groups based on age, gender, education level, citizenship status, and region of residence.⁵

We submitted our survey to the institutional review board of the University of Chicago and on October 11 2022, determined under protocol number IRB22-1574 that the survey was determined non-human subjects research.

⁵The weighting targets used in the survey are based on governmental statistical data. For some countries, the weights are based on official sub-population data or inter-governmental organizations’ population estimates depending on the availability and quality of national statistical data.

2.1 Survey Structure and Questions

Based on the available budget, the survey was designed to target an average per-respondent duration of 15 minutes, which allowed us to ask 34 questions.

The survey consisted of four parts. In the first part, respondents were asked about a set of demographic characteristics, including their age, gender, employment status, marital status, income brackets targeted to match the income quartiles at the country level, education level, area of study (for college graduates), and household size.

The second part of the survey elicited a set of financial characteristics of the respondents' households including, among others, the availability of rainy-day funds, the value of accumulated wealth relative to the household's income, homeownership and mortgage status, and the allocation of shopping and financial decision-making authority within the household.

In the third part, respondents faced a set of questions that elicited their numerical macroeconomic perceptions and expectations. To ensure everybody was familiar with the concept of inflation and the required answer format in percent changes, we started this block with

Question 1 *As you may know, inflation is the percentage rise in overall prices in the economy. For example, if a price increases from 10 to 11, the rate of inflation is $(11-10)/10 = 10\%$. If a price decreases from 10 to 9, the rate of inflation is $(9-10)/10 = -10\%$.*

and had examples of both inflation and deflation to not prime or bias responses ([Weber et al., 2022](#); [D'Acunto et al., 2022](#)).

For inflation perceptions and expectations elicitation, we followed standard question wordings in the literature and directly asked about inflation as in the New York Fed Survey of Consumer Expectations (see, e.g., [Crump et al., 2022](#)) rather than the price change of goods people typically purchase as in the Michigan Survey of Consumers to not bias consumers to largely think about groceries ([De Bruin et al., 2011](#); [D'Acunto et al., 2023](#)). We elicited perceptions by asking for the point estimate of the perceived rate of inflation in the 12 months prior to the survey. For expectations of inflation over the next twelve months, we elicited the

lowest possible, highest possible, and most likely rate of inflation that the respondent believed could be prevalent in their country over the 12 months after the survey. This elicitation format allows for the computation of the second moment of respondents’ inflation expectations under the assumption of a triangular probability beliefs distribution, which avoids asking cognitively taxing questions such as those eliciting probability weights attached to pre-set intervals of the beliefs distribution (Guiso et al., 2002; Coibion et al., 2024).⁶ We also asked for point estimates of the expected change in average nominal wage or salary of all workers and the average house price, and interest rates in the respondent’s country over the 12 months following the survey. The survey also elicited expectations about respondents’ saving plans, although, contrary to macroeconomic expectations, we cannot compare these forecasts of household-level outcomes to the actual ex-post realizations, which we do not observe.

In the last part of the survey, we first elicited respondents’ information acquisition by eliciting the importance of a set of non-mutually-exclusive sources of economic information for inflation based on a 4-point qualitative scale from “Not important at all” to “Very Important” including “TV,” “Newspapers,” or “Personal Shopping Experiences,” among others as well as whether respondents thought about the prices of specific goods when answering the questions on inflation such as “eggs,” “gasoline,” or “rent” based on D’Acunto et al. (2021). We then used standard questions in the literature to elicit respondents’ financial and numerical literacy (Lusardi and Mitchell, 2014), their risk and time preferences (Falk et al., 2018), and their trust in a set of country-level and international institutions including the central bank (Guiso et al., 2006). Finally, we asked respondents if the political party that best aligned with their political views had any roles in government at the time they were interviewed.⁷

The survey also included two attentiveness checks: one being a randomly generated basic

⁶We avoided asking a question based on probability distributions with pre-specified bins because, based on Morning Consult’s trials, such a question would have required us to eliminate 5 other questions from the survey to maintain the average response time within the limit allowed by our budget but also because these bins would have to be set at the country level, which had complicated the comparison across countries given the response scale shapes elicited moments of inflation expectations (Becker et al., 2023; Boctor et al., 2024).

⁷Based on the potential sensitivity of this question, we could not ask the trust and political leaning question to respondents in the following countries: Egypt, Saudi Arabia, United Arab Emirates, Morocco, People’s Republic of China, Russian Federation, and Zimbabwe.

task asking respondents to solve an addition or subtraction problem and one asked respondents about their usage of prominent social media and media sources, and included two non-existent sources.

2.2 Summary Statistics

[Table 1](#) reports summary statistics of expectations and perceptions in Panel A, basic demographic information in Panel B, usage of information sources in Panel C, and trust in the central bank and government in Panel C, and [Table 2](#) shows summary statistics of the demographic variables such as age, higher education, gender, financial literacy, employment status, and marital status country by country.

On average, across the 46,285 survey participants, individuals perceive a prevailing inflation rate of 14.70% and expect slightly higher inflation of 15.75%. A right tail is present in both inflation perceptions and expectations because the median for both is 10% and average perception and expectations errors, that is, perceptions and expectations minus realized inflation at the time of the survey and twelve months later, respectively, are 4.22% and 7.36%. On average, survey participants expect house prices to increase by 4% and an average interest rate of 2.5%.

In most countries, a large percentage of respondents are in the age range of between 35 to 64 years. Bangladesh, Egypt, and India are an exception because 70% of the respondents are younger. The percentage of females in the survey is 48% and is equally balanced across countries with the exception of UAE, India, and Nigeria where they represent less than a third of the sample. Cross-sectional heterogeneity is present also in terms of education and financial literacy: in Argentina and Hungary more than 70% of survey participants understand basic financial questions, whereas in other countries, such as Canada, India, Japan, Malaysia, Saudi Arabia, and Thailand, the majority of respondents have limited financial knowledge. Also, in most countries, more than half of those surveyed are full-time employed, except for Bangladesh, Hungary, and the United States.

3 Information from Aggregate vs. Local Economic Environments

We separate the information sources consumers use in the formation of beliefs about aggregate macroeconomic variables into two broad groups, that is, aggregate and local economic environments.

Aggregate economic environments provide signals about prices and other macroeconomic variables drawn from the full distribution of such variables, which implies that, on average, the signals agents draw from aggregate economic environments are likely unbiased predictors of aggregate variables. For instance, the overall economy is an aggregate economic environment, and signals such as a government or central bank's forecasts and measures of past inflation and interest rates are aggregate signals about the macroeconomy. Agents can access aggregate signals about the macroeconomy from information sources that report such signals, such as directly from government and central banks' reports and communication or from traditional media and outlets that specialize in economic news. These signals are pre-processed and publicly available but agents need to incur possibly cognitive and search costs to acquire them and incorporate them into their own forecasts.

In contrast to aggregate economic environments, local economic environments provide agents with signals that are not necessarily representative of the full distribution of macroeconomic variables. These signals, while easy and cheap to obtain from one's day-to-day activities, are likely costlier to remember and process than the single number for each macroeconomic variable reported by aggregate economic sources. When agents draw economic signals about prices, interest rates, or other variables from their local economic environments, the average of those signals can be a biased predictor of the underlying variable. Local economic environments include, for instance, shopping activities such as grocery shopping. In this case, agents draw signals about prices that are representative of only a portion of the aggregate consumption bundle—a portion that is especially volatile, so much so that it is excluded in the measures of

inflation that are commonly monitored by central banks to gauge future inflationary pressures, such as the Core CPI in the United States. Hence, unless agents take into account that their signals might only represent a subset of the overall consumption bundle and the prices they see during any given daily activity might not be representative of the prices in different localities, they might draw biased inference about the overall price.

Drawing signals from one's own local economic environments is reminiscent of the [Lucas \(1975\)](#) islands model, whereby economic agents observe signals from their own island and form their beliefs based on such signals. The key difference, though, relates to the representativeness of signals for the aggregate variable's distribution and hence, ultimately, whereas drawing local signals leads to biased or unbiased beliefs. In the Lucas islands model, the overall price in the economy is an average of the prices across the individual island, or differently, the distribution of price signals in each island is representative of the aggregate price distribution. For this reason, even if agents draw signals from their own island, on average those signals are unbiased predictors of the aggregate price. By contrast, the distribution of possible signals in local economic environments is not representative of the aggregate price distribution but only of a limited category of goods and services, such as groceries. For this reason, when agents draw signals from their local economic environments on average they do not form unbiased forecasts about future macroeconomic variables, that is, the average across all local economic environment does not present the overall macroeconomic aggregate.

The contrast between aggregate and local economic environments as sources of signals about prices and macroeconomic variables has important implications for the role of information acquisition in the formation of subjective economic beliefs. In a rational inattention framework, agents for whom not gathering information about the economy and making uninformed decisions would be costly are willing to pay the cost of paying attention and obtaining economic signals, which leads them to form more accurate beliefs about future macroeconomic variables. This rationale is only true, though, if agents obtain signals from their aggregate economic environments. If agents obtain signals primarily from their local economic environments, when the cost of not gathering economic signals is high enough, they will gather biased

signals that will lead them to form biased subjective beliefs about the macroeconomy. Over time, as agents are exposed to more realizations of aggregate economic variables and compare them to the signals they used to form beliefs, in a standard framework they should learn that those signals might be systematically biased when obtained from local economic environments. Because we observe systematic biases in beliefs that do not disappear over time across many institutional settings, some features of the macroeconomic beliefs formation process must limit consumers’ learning.

Building on this discussion, the rest of the paper first describes empirically what are the sources of economic information agents use globally with a focus on the heterogeneity between aggregate and local economic information sources. We then relate these economic sources to subjective macroeconomic beliefs at the individual level to assess if agents that attend to information from their local economic environments form more biased subjective beliefs and hence whether gathering information from one’s local economic environment could be a driver of the systematic biases in households’ macroeconomic expectations that have been documented over the last decade. Third, we test whether agents that attend to local economic information do so more when it would be costlier for them to not gather any information. Finally, we investigate what explains subjects’ sorting into aggregate or local economic information sources, which is key to derive any policy implications from our analysis regarding how agents could be persuaded to switch their attention from local to aggregate economic sources so as to reduce the systematic biases in subjective economic expectations that have been documented over the last decade.

4 Information Sources and Subjective Beliefs

What economic information sources do households attend to? We find substantial cross-sectional variation both across and within countries.

Based on the most common sources of economic information for households in earlier country-specific surveys on consumers’ preferences and beliefs ([D’Acunto et al., 2021](#)), we

elicited the extent to which respondents attend to eight sources of economic information, which, in the paper, we split into information sources from aggregate and local economic environments. Aggregate economic sources include government and other official reports (such as the reports by central banks and national statistical offices), TV, and newspapers. Local economic sources include utility bills, shopping activities, the shopping activities of acquaintances (family members, friends, or co-workers), work-related activities, and social media.⁸

It is important to stress that no categorization or grouping of information sources was ever used in our survey to limit concerns about demand effects. For this reason and to avoid any order or ranking effects, information sources were presented in random order to each respondent on a single screen in matrix format. Respondents were asked to report the extent to which they relied on each information source when forming perceptions and beliefs about the economy on a Likert scale from 1 to 4.

Figure 1 reports the share of respondents who self-declared that each of the information sources listed on the x-axis, about which we asked directly in our survey, were “Very Important” or “Somewhat Important” to them as a source of information. In the rest of the paper, we refer to information sources that are deemed “Very Important” or “Somewhat Important” as information sources from which individuals gather information.

Figure 1 reveals substantial heterogeneity in the sources of economic information households use. Two sources of information about local economic environments (red bars)—utility bills and shopping activities—appear to be the most common sources and are selected by more than 80% of our respondents. At the same time, sources about aggregate economic environments (blue bars) also appear to be highly attended to. For instance, more than 70% of respondents declare that government reports and other official reports are at least somewhat important sources to them.

Note that some respondents might report a given information source as important due to

⁸We categorize social media as a source about local economic environments because most of the respondents indicate discussions about grocery and utility prices they follow on such media. In principle, social media might also provide signals about the aggregate economy through official institutional accounts and traditional outlets’ accounts.

a desirability bias because they think they should gather information about macroeconomic variables from certain information sources such as official reports. Alternatively, respondents in more authoritarian countries might perceive a chance that the government observes their responses and they might fear some repercussions if they do not report to attend to information from aggregate sources. This possible bias is immaterial for our results below because we aim to study whether attending to aggregate economic environments results in more accurate and less biased macroeconomic expectations than gathering information from local economic environments. To the extent some survey respondents report that they gather information from official sources, TV, or newspapers even if they don't, then we would observe on average an attenuated effect, which would bias the estimated coefficient against our hypothesis.

Armed with this cross-sectional variation in the sources of economic information consumers use, we ask if and how attendance to different sources predicts respondents' subjective macroeconomic expectations and especially whether different sources are systematically correlated with biases in macroeconomic expectations.

Figure 3 plots the results for the three macroeconomic variables whose expectations we elicit, that is, inflation, house prices, and interest rates. For each variable, we regress at the individual respondent level numerical macroeconomic expectations on a set of economic-information-source dummies that equal one if the respondent attends to that source, and zero otherwise. Moreover, we absorb the demographic characteristics we elicit in our survey, which include age, gender, college education, whether the respondent has an economics/finance/business degree, income groups, employment status, marital status, and household size. Finally, the most restrictive specifications add country fixed effects to absorb time-invariant systematic differences across countries. Country fixed effects also absorb variation in country-level inflation rates to which all respondents are exposed.

Starting with inflation expectations, first, we detect a dramatic difference in the numerical expectations of agents who attend to aggregate economic information sources relative to those who attend to local sources. The inflation expectations of those who gather economic information from government and other official reports are more than 3 percentage-point lower

than the average inflation expectations of those who do not. Inflation expectations are also lower for those who attend to other aggregate sources—TV and newspapers. Although the size of the relationship is about three times smaller in this case, it is still economically and statistically significant. In sharp contrast, the inflation expectations of those who gather economic information from their local economic environment are higher than those who do not. This relationship is especially strong for respondents who gather information from utility bills and shopping activities, whose inflation expectations are almost 2 percentage-point higher than the inflation expectations of others.

The pattern we uncover for inflation expectations holds similarly for the two other macroeconomic expectations we consider. For house price expectations, those who attend to aggregate economic sources have numerical expectations between 0.5 and 2 percentage-point lower than those who do not attend to such sources. Conversely, those who attend to local sources have expectations that are up to 1 percentage point higher than those who do not. For interest rate expectations, we detect the same patterns in terms of economic and statistical significance even though the size of the estimated coefficients are lower in absolute value. Still, because the average and range of interest rate expectations is substantially lower than those of inflation expectations, which is consistent with single-country survey results in the literature, the economic magnitudes are relevant also for interest rate expectations.

The questions we use to elicit attendance to different information sources purposefully avoid asking respondents to rank sources so that declaring attendance to one source does not exclude attendance to another source. In principle, a respondent might argue that she attends to all sources or none and any combination in between these two extremes. For this reason, in Table 3, we report the estimates for specifications that include all dummies for attendance to information sources at once as right-hand-side variables.⁹ Across the board, Table 3 confirms qualitatively and quantitatively the results reported in Figure 3.

The evidence so far considers the full cross section of respondents absorbing systematic

⁹The number of observations varies across columns based on the share of respondents that chose “Don’t know/no opinion” when asked about attendance to each source, which we exclude from the analysis.

time-invariant differences across countries. An alternative way to assuage the economic significance of our findings is to run regressions of macroeconomic forecasts on the dummies for sorting into each information source separately across countries and assessing whether the baseline relationships we detect in Figure 3 holds for many countries or whether they are driven by outlier countries. These tests also provide direct evidence on the cross-country range and variation in the relationship between economic information sources and macroeconomic expectations. Following Falk et al. (2018), we run these regressions and report the estimated country-level coefficients sorting countries based on the size of the estimates in Figures 4, 1, and 2 for inflation rates, house prices, and interest rates, respectively. For ease of interpretation, in all figures, we use the shape and color of country-level estimate markers to indicate the statistical significance of each estimate: black circles, dark gray diamonds, and light gray triangles denote estimates for which we can reject the null below the 1%, 5%, or 10% levels, whereas white circles represent statistically insignificant estimates.

In Figure 4, the country-level regressions show that the signs of the average estimates in the full sample are largely confirmed within most countries. For instance, in Panel A, the graph reporting the country-level estimates of the relationship between sorting into government and official reports and inflation expectations reveals that this relationship is negative for 41 out of 47 countries. Moreover, the estimates are significantly different from zero for the majority of countries. Similar patterns arise for the two other aggregate economic information sources—TV and newspapers. Panel A also reveals additional properties of these empirical relationships and especially what drives the larger sample-wide point estimate for government and official reports relative to the other aggregate sources. Indeed, we can see that the range of the size of the relationship is similar across sources but the relationship is flatter across countries for TV and newspapers than for government and official reports. Moving on to Panel B, which focuses on local economic information sources, we detect symmetric patterns: In this case, the estimates are positive for most countries in our sample. And, again, the range of estimate sizes is similar across countries but the cross-sectional steepness of these relationships varies: it is steeper for sources for which we detect larger positive coefficients in the full sample, such as

utility bills and shopping activities.

The cross-country patterns we detect for house prices (Figure 1) and interest rates (Figure 2) are similar to those for inflation expectations we described above. The main difference rests on the fact that a larger share of country-level regressions deliver small and statistically insignificant results for these two other macroeconomic variables, which helps us understand why we estimate smaller and less statistically significant relationships in the full sample.

5 Rational Inattention? Seeking Information from Local vs. Aggregate Sources

Standard rational inattention models imply that, if forming inaccurate macroeconomy expectations is costlier to agents than the cost of gathering signals about macroeconomic variables, agents are willing to pay the cost to acquire information.¹⁰ Underlying this intuition is the assumption that the signals about macroeconomic variables agents can gather at a cost provide unbiased information about the distribution of the underlying variable.

Our results show that often agents attend to local economic information sources that provide signals that are not representative of the true distribution of macroeconomic variables but are drawn from a subset of such distribution. For this reason, even if agents were willing to pay the costs of gathering signals about the economy and even if their beliefs-formation process were consistent with Bayesian learning, using only information from local economic environments would lead them to form systematically inaccurate macroeconomic expectations.

To assess this possibility in our setting, we would need a source of cross-sectional variation in the extent to which not gathering information about the macroeconomy is costly to households. Then, we could test if households are more likely to gather information about the macroeconomy when avoiding paying attention is costlier to them and, if so, what type of

¹⁰These costs of information might also capture cognitive costs of focuses on certain pieces of information and processing them rather than the literal costs of acquiring information which might be small for most signals given that they are publicly available.

information sources they are more likely to attend to, which determines the accuracy of their macroeconomic expectations.

Absent a quasi-exogenous source of variation in our setting, we capture variation in the cost of avoiding paying attention to the macroeconomy based on average historical inflation rates across countries. Using this source of variation is an advantage of our cross-country setting, because in single-country surveys the variation in historical inflation rates would be the same across all respondents.

In Table 4, we ask if a higher level of historical inflation rates at the country level predicts a higher likelihood of acquiring economic information on the part of households and, if so, which economic information sources households are more likely to sort into. This test is motivated by the idea that households in countries in which inflation is low and stable have a lower incentive to form accurate macroeconomic expectations to feed into their economic decision-making.

We estimate a positive association between historical inflation rates and the present-day gathering of economic information across all sources except for government and official reports. This exception hints at the possibility that exposure to suboptimal macroeconomic conditions might lower households' trust in institutions in charge of fiscal and monetary policy—a point to which we will come back in the next section.

Although most estimates are positive, their economic and statistical significance vary substantially. In particular, sorting into local economic sources is statistically significantly higher for agents in countries with higher historical inflation, whereas statistical significance is sparse for sorting into aggregate economic information sources. Moreover, in terms of economic magnitudes, the same increase in historical inflation rates leads to a higher likelihood of sorting into all but one of the local economic sources relative to the aggregate economic sources.

Overall, the results in Table 4 suggest that, consistent with a standard rational inattention model, agents for whom not gathering information about the economy is likely costlier do indeed seek more information. At the same time, these agents sort disproportionately more into local economic information sources which do not provide them with signals about macroeconomic variables that are representative of the full distribution of those variables.

If households' biased macroeconomic expectations are at least in part due to the inaccurate signals about the macroeconomy they gather from local economic information sources, above and beyond any biases in their expectations-formation process, we should see that sorting into local or aggregate sources can also predict systematic patterns in perception errors—the difference between what households think was the realization of a macroeconomic variable in the recent past and the actual realization.

In Figure 6, we assess this conjecture for perception errors for inflation. The left panel plots the estimated coefficients for the same specifications of Figure 3 but in which we replace the outcome variable with the difference between respondents' perceived inflation over the 12 months before the survey and the actual inflation rate over the same period (inflation perception error, left graph) or the absolute value of this difference (absolute inflation perception error, right graph). Figure 6 corroborates the conjecture that attending to local environments as a source of information about the macroeconomy leads respondents to form systematically positively biased inflation perceptions, whereas attending to aggregate economic sources leads to lower perception errors. We detect the same pattern for the absolute value of perception errors.

We detect the same patterns when considering consumers' expectations rather than perceptions, as reported in Figure ??.

6 The Mediating Role of Trust in Economic Institutions

So far, we have documented within- and across-country heterogeneity in households' sorting into aggregate or local economic environments as sources of economic information. This heterogeneity relates to cross-sectional variation in the extent of errors of macroeconomic expectations as well as of macroeconomic perceptions and hence is a viable candidate to help explain the systematic biases in macroeconomic expectations that have been detected in survey-based data over the last two decades.

But what explains consumers' sorting into alternative sources of information in the first

place? Answering this question is crucial to derive any potential policy implications from our analysis as well as to inform theoretical advances that model explicitly the heterogeneous accuracy of signals from alternative economic sources and endogenize households' sorting into alternative economic information sources in a rational-inattention framework.

Our results on the negative (although statistically insignificant) relationship between historical inflation levels and consumers' attention to government and other official reports hint to the possibility that consumers' trust in the economic institutions that produce aggregate economic information might be an important driver of their willingness to sort into aggregate economic information sources relative to local sources.

In our setting, we can assess this conjecture directly because we elicited respondents' trust in a series of national and international institutions, including governments and central banks.¹¹ Figure 9 plots the coefficients for a set of linear regressions of the dummy for whether the respondent sorts into the economic information sources listed on the x-axis on the principal component of the respondents' trust in the government and in their national central bank plus demographic controls and country fixed effects.

In Figure 10, we describe the variation in the estimates of similar regressions run at the country level after sorting the coefficients estimates from the smallest to the largest. In Panel A, we can see that respondents' trust in their government and central bank is strongly positively correlated with their willingness to attend to official reports as a source of economic information: the estimated associations are positive for all countries and statistically significant for all but one of the countries in our sample. Similarly, respondents who trust their government and central bank more are more likely than others to sort into newspapers and TV as sources of economic information, even if in this case the size of the estimated associations are smaller and in some cases not statistically different from zero. Moving on to local economic sources, Panel B of Figure 10 shows the opposite pattern for most countries in our

¹¹We were not able to ask questions about trust in national governments in Egypt, Saudi Arabia, United Arab Emirates, Morocco, People's Republic of China, Russian Federation, and Zimbabwe. For this reason, these countries are excluded from the analysis in this section.

sample: higher trust in governments and central banks correlates with lower attendance to local economic environments as sources of information about the economy in most countries in our sample. For these sources, statistical significance is a bit more sparse for more countries but the pattern is consistent across economic sources.

Trust in governments and central banks appears to be one major driver of the extensive margin of sorting into alternative sources of economic information, that is, whether consumers sort into aggregate or local economic environments to gather signals about the economy. At the same time, one can think about sorting into economic sources in terms of intensive margin, that is, how much weight consumers put on the signals they obtain from each source conditional on attending to that source and gathering the signal.

Our survey design does not allow us to measure this intensive margin directly, because we did not elicit a ranking or intensity of attendance for each source at the consumer level. Alternatively, we can test whether higher trust in governments and central banks moderates the relationship between attending to a source of economic information and macroeconomic expectations. Intuitively, if an intensive margin exists, even if a survey participants attends to local sources of economic information, a consumer who has a high trust in their government and central bank might put less weight on the signals obtained from those sources relative to aggregate information about the economy, and vice versa. We therefore test if the size of the baseline associations we documented in Table 3 differs across consumers that attend to aggregate or local sources of economic information.

Table 6 reports the results. Each column of this table proposes a specification similar to the corresponding column of Table 3 except for the addition of the level of trust in the government and central bank reported by the consumer and its interaction with the dummies that capture sorting into each of the source of economic information. For ease of reading, we only report the coefficients attached to the interaction terms.

Starting from local economic information sources, we can see that, for most sources, the association between sorting into the source and inflation expectations is lower for consumers who trust their government and central bank more. This difference is not only economically

but also statistically significant for social media, shopping activities, and utility bills. This result is consistent with the possibility that consumers who trust the producers of aggregate economic information more, even when considering signals from their local economic environment, put less weight on those signals when forming aggregate macroeconomic expectations. As a result, the macroeconomic expectations of those consumers are less positively biased than the macroeconomic expectations of distrustful consumers who attend to local economic sources.

7 Conclusions

Using novel data on almost 50,000 consumers across 47 countries representing 90% of global GDP, we document three facts that can help us understand why consumers' macroeconomic beliefs are systematically biased—a fact that has been documented across space and over time but that the standard rational-inattention framework cannot explain.

We find that, even when paying the cost to access economic information, not all consumers obtain accurate signals that are representative of the distribution of macroeconomic variables because many consumers seek information from their local economic environments—utility bills, shopping, family & friends, and social media—rather than gathering information from aggregate sources such as TV, newspapers, or government reports. This sorting into local economic environments and hence observations of signals that only cover parts of the distribution is stronger for consumers who, consistent with a basic premise of rational inattention models, face a higher cost from not acquiring economic information. For this reason, such consumers end up forming more inaccurate macroeconomic beliefs rather than more accurate one, as the standard rational-inattention framework predicts. We find that an important driver of this phenomenon is consumers' trust in economic institutions—governments and central banks—which produce aggregate economic information. Indeed, in countries in which consumers have observed higher historical inflation rates, consumers tend to sort more into local economic environments when seeking economic information because they distrust economic institutions.

The facts we document can inspire evidence-driven adaptations of the rational-inattention framework that could allow this framework to not only account for the cross-sectional dispersion in consumers' macroeconomic expectations but also for their systematic bias. For instance, models could allow for two or more signals that consumers can choose to observe whose accuracy varies. Crucially, even if the cost consumers need to pay to observe different signals is similar, consumers' trust in the source that produces such signals should feature as a driver of their willingness to observe them. One way to capture trust in the source of the signal could be via the perceived precision of the signal. Our results also hint at the possibility that trust in economic institutions might be endogenous to historical realizations of macroeconomic variables: consumers might trust economic institutions and the aggregate economic information they produce less if dissatisfied with the macroeconomy. These results also stress a neglected role in increasing the broader public's trust in economic institutions through direct communication and reaching out to consumers (D'Acunto et al., 2021): higher trust leads consumers to sort more into aggregate economic information sources when forming their macroeconomic beliefs and hence to make choices that enhance the effectiveness of fiscal and monetary policy (D'Acunto et al., 2021).

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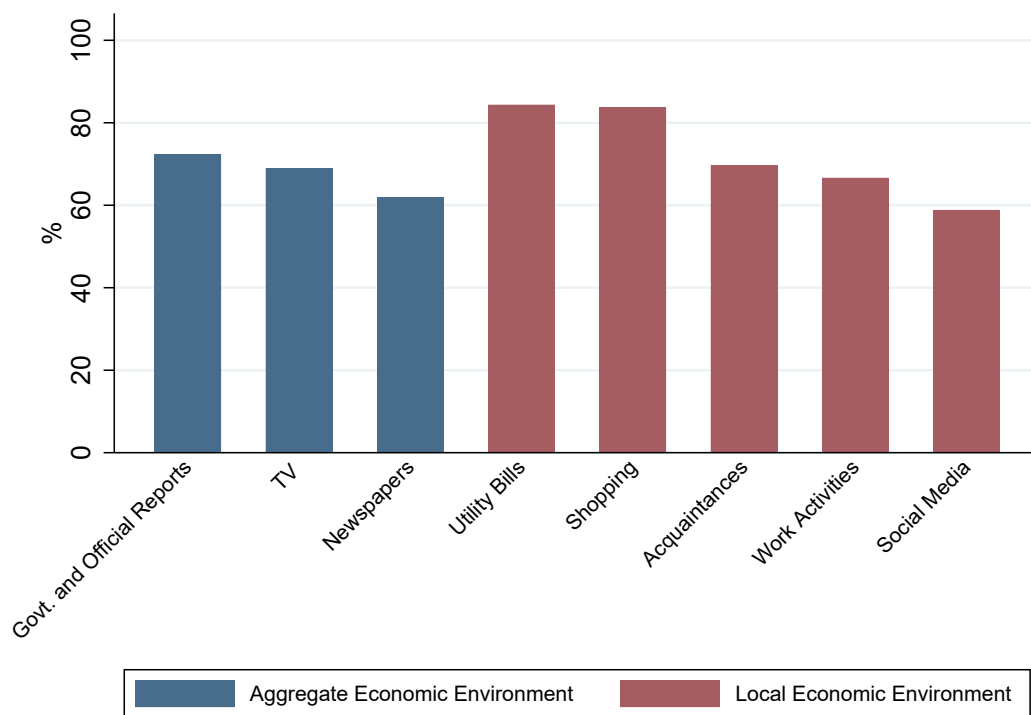
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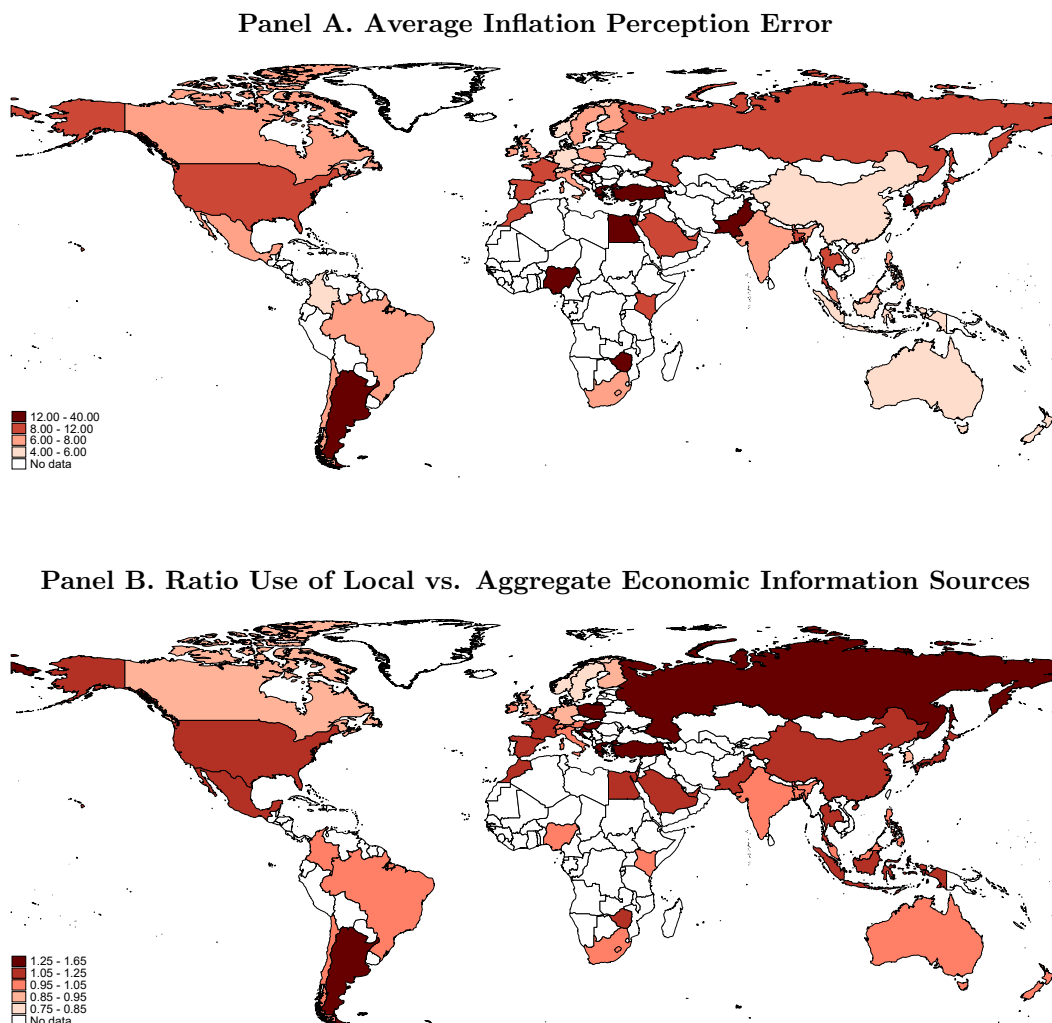
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Figure 1: **Economic Information Sources: Aggregate vs. Local Economic Environments**



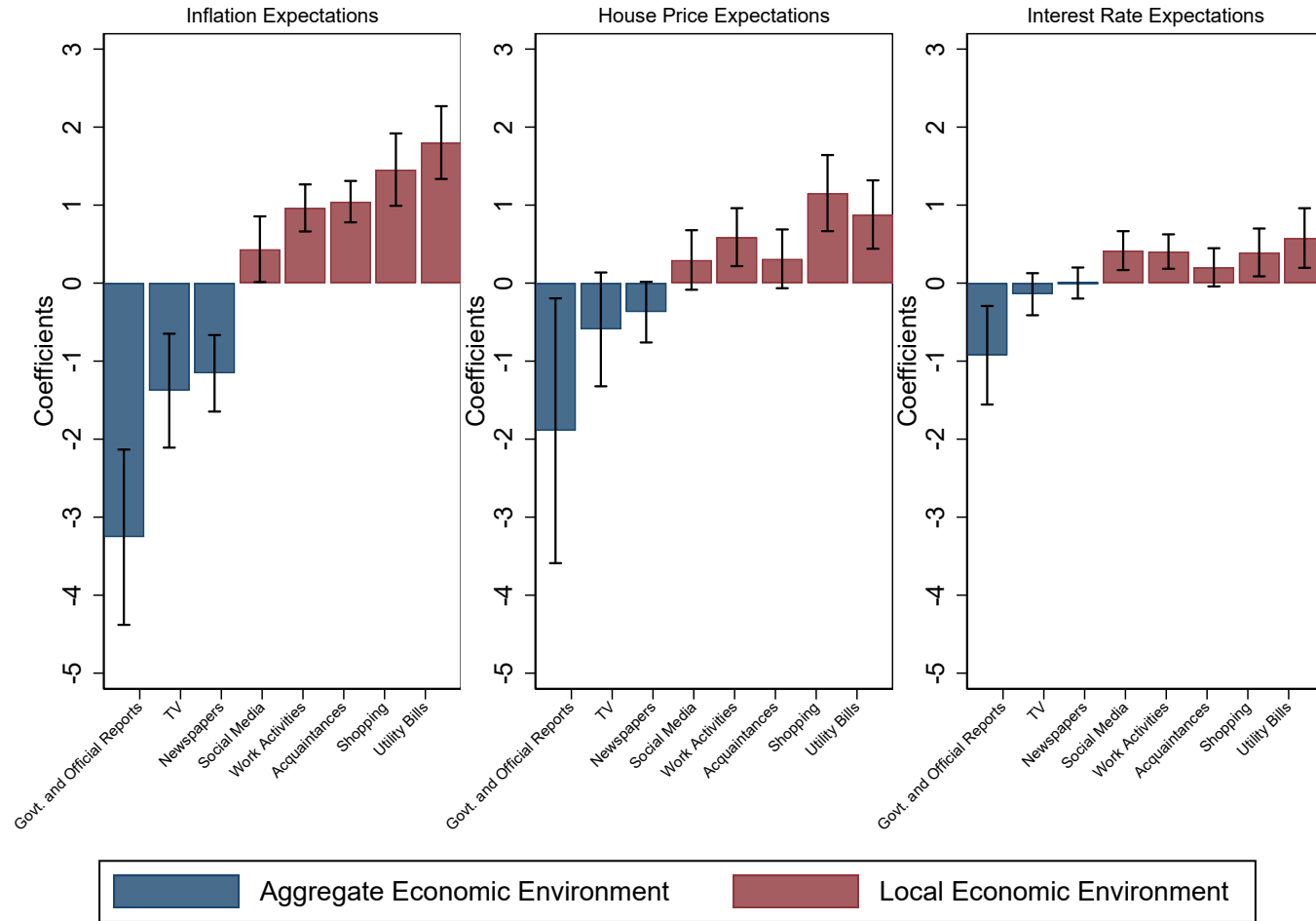
Notes. This figure plots the reported importance of different information sources for the formation of inflation expectations based on the survey responses of 46,285 respondents representative of the households across 47 countries in April/May 2023. *Global Subjective Inflation Expectations Survey*.

Figure 2: Macroeconomic Perception Errors and Economic Information Sources Worldwide



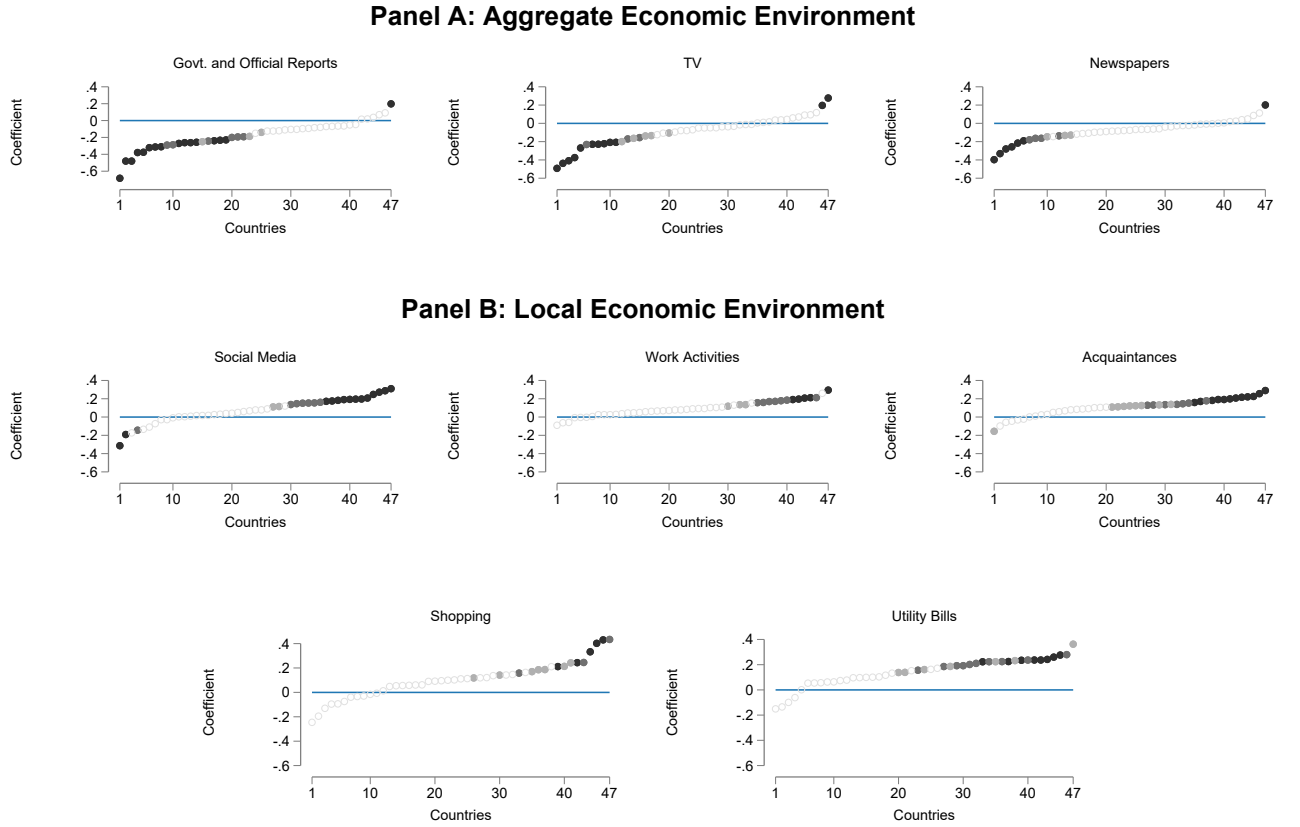
Notes: This map plots the country-level averages of the absolute inflation perception error (top map) and the ratio between the country-level respondents who attend to local economic information sources over those attending to aggregate economic information sources (bottom map) based on 46,285 respondents across 47 countries in the *Global Inflation Expectations Survey* conducted in April/May 2023. The respondents were asked to provide the perceived inflation in their country in the previous 12-month period within -1000 and 1000. Absolute inflation perception error is the absolute value of perceived inflation minus actual inflation in April 2023, which is winsorized at 5-95 levels.

Figure 3: Economic Information Sources and Macroeconomic Expectations



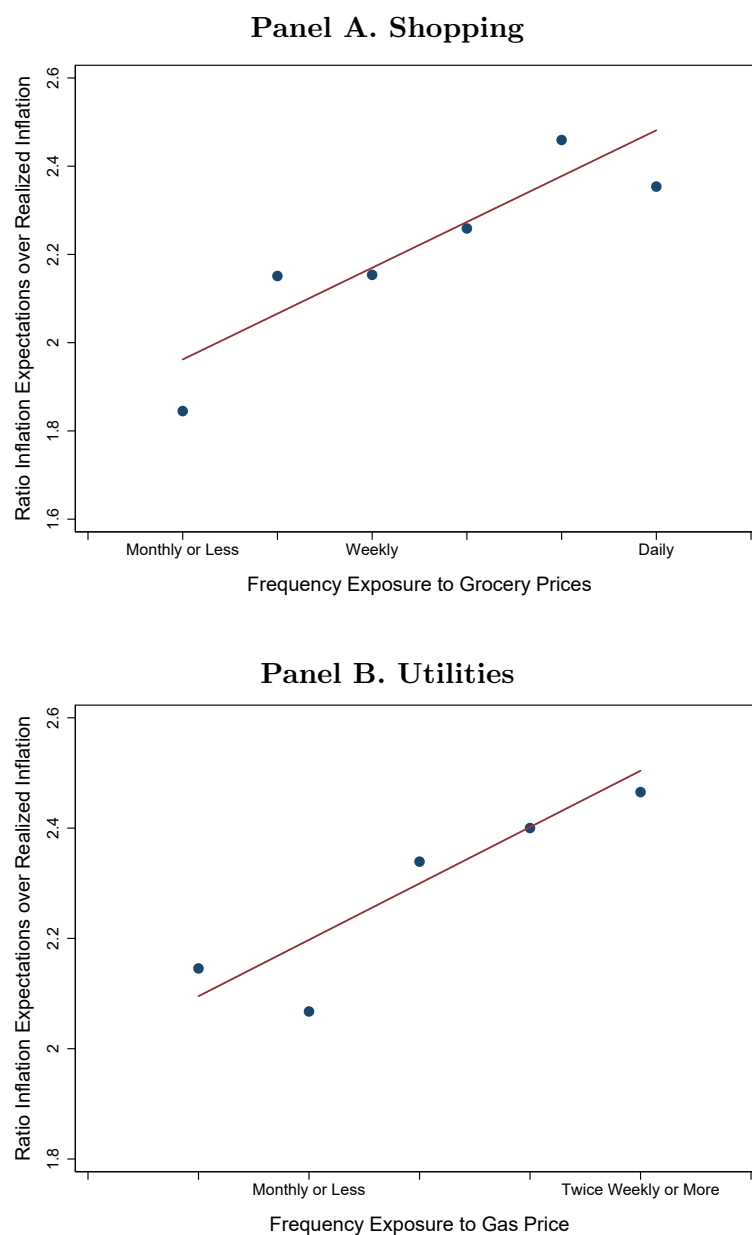
Notes: In this figure, we regress macroeconomic expectations (Inflation Expectations, House Price Expectations, and Interest Rate Expectations) on each information source (1 if the responses fall under “Very Important” and “Somewhat Important” category; 0 if otherwise. “Don’t know/no opinion” responses were deemed as missing values) with country FE and demographic controls. The coefficient from each information source is plotted in this figure. Most likely inflation expectations is winsorized at (5-95) levels; house price and interest rate expectations are winsorized at (1-99) levels. The data is elicited from 46,285 respondents in the *Global Inflation Expectations Survey* conducted in April/May 2023.

Figure 4: Economic Information Sources and Macroeconomic Expectations by Country



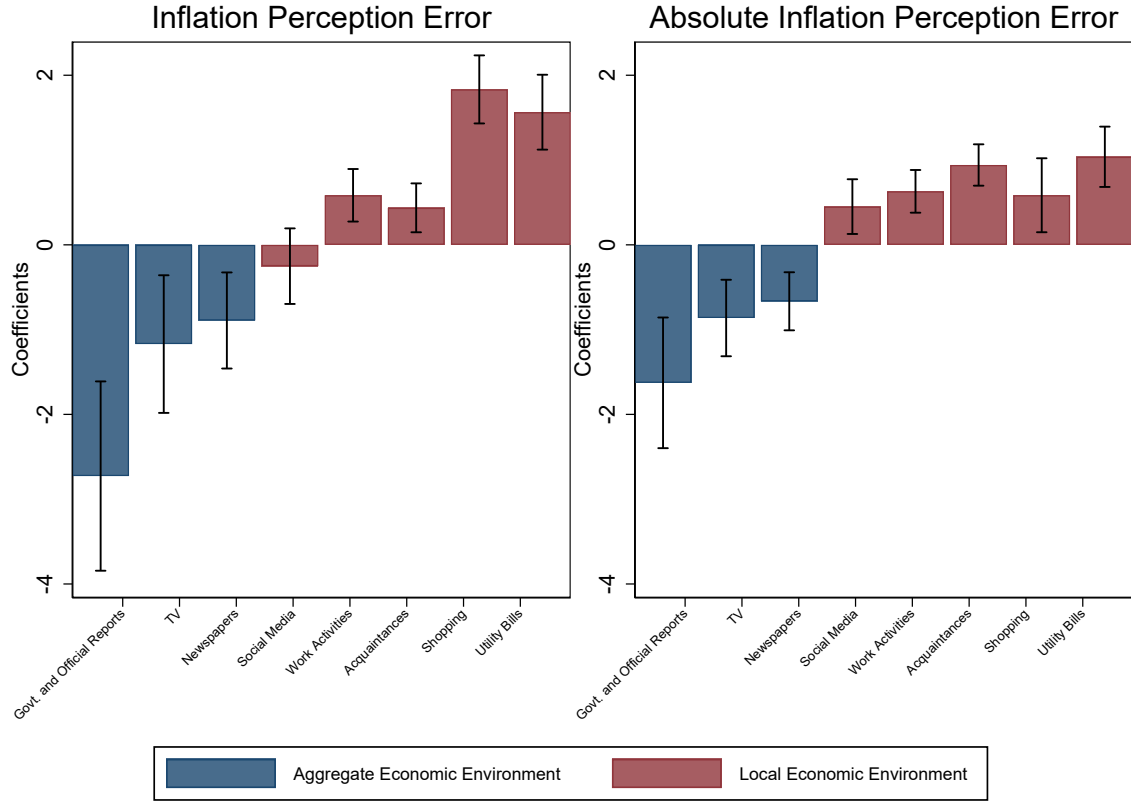
Notes: For each country, the respondent-level 12-month-ahead inflation point forecast is regressed on each of the dummies for whether the respondent sort into an information source. The coefficient estimates for each country-level regression are plotted in order of size from the smallest to the largest. To allow comparison across countries, expectations have been standardized (z-scores) within each country before running each regression. Hollow circles denote countries for which the estimate is not statistically different from 0 at the 10% level. Darker Grey solid circles, Light Grey solid circles, and Lighter Grey solid circles denote country-level estimates that are significant at 1%, 5%, and 10% levels. The information source variable is a dummy (1 if the source is “Very Important” or “Somewhat Important” to the respondent, and 0 otherwise. “Don’t know/no opinion” responses were treated as missing values). Expectations are winsorized at 5-95 levels. The responses were elicited from 46,285 respondents in the *Global Inflation Expectations Survey* conducted in April/May 2023 across 47 countries.

Figure 5: Intensity of Exposure to Local Economic Information Sources and Expectations Biases



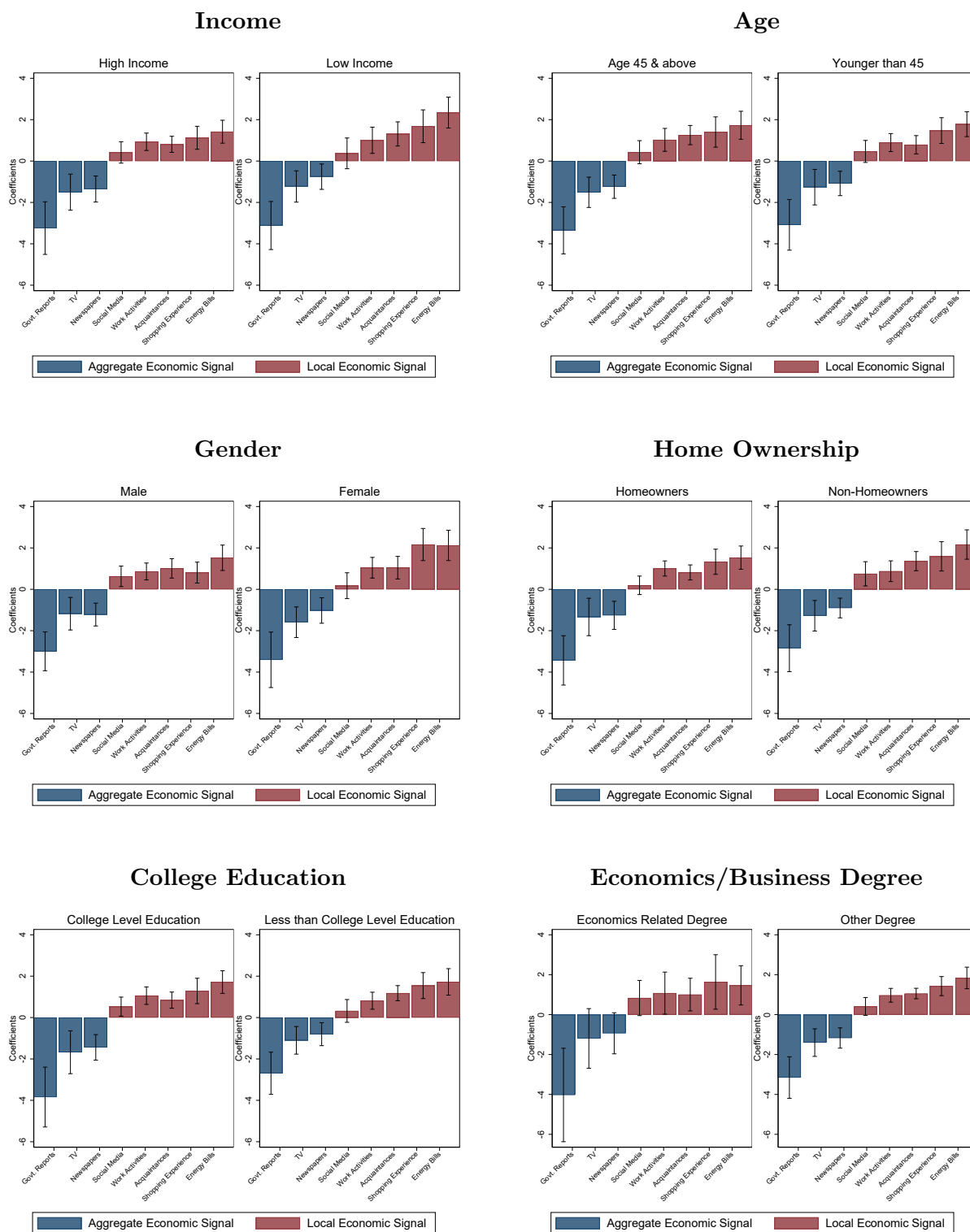
Notes: The y-axis plots the average ratio between numerical inflation expectations and ex-post realized inflation for each group of survey respondents based on the frequency of exposure to the two local information sources for which we have data—grocery prices via shopping (left graph) and utilities prices via gas station visits. Realized inflation data is from OECD or national statistics office or the central banks of respective countries. Continuous variables are winsorized at 5-95 levels. The data is from the *Global Inflation Expectations Survey* that surveyed 46,285 respondents conducted in April/May 2023.

Figure 6: **Bias in Local Economic Information Sources: Perception Errors**



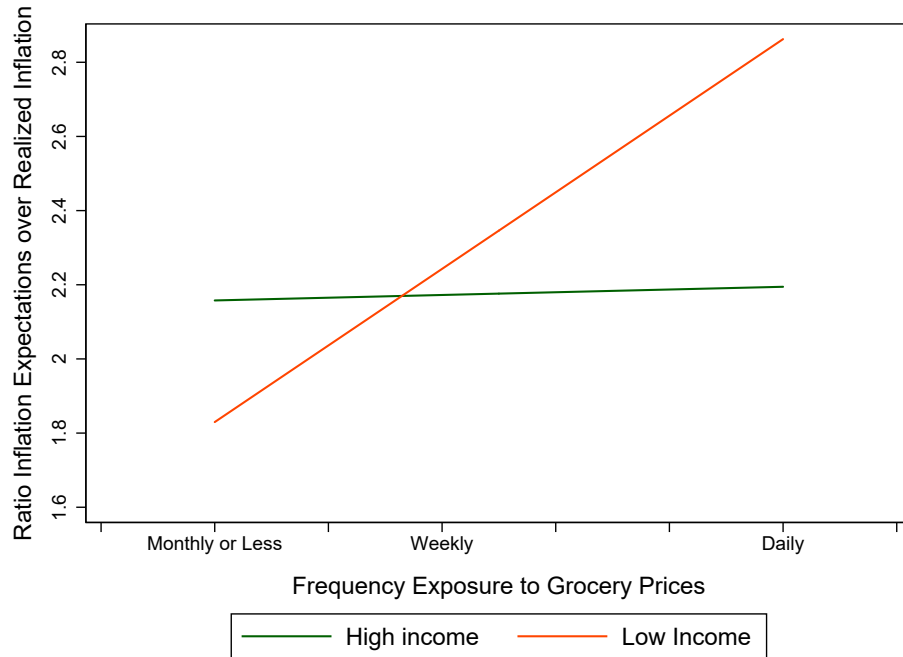
Notes: We regress both inflation and absolute inflation perception error separately on each information source with demographic controls and country FE, and plot the coefficients of each information source from the respective regressions. Inflation perception error is computed as perceived inflation by the respondents - actual inflation in a country as on April 2023. The actual realized inflation data is taken from OECD or national statistics office or the central banks of respective countries. Inflation and Absolute Inflation Perception Error variables are winsorized at 5-95 levels after they were calculated from the raw perceived and actual inflation. The data is from the *Global Inflation Expectations Survey* that surveyed 46,285 respondents conducted in April/May 2023.

Figure 7: Economic Information Sources and Macroeconomic Expectations: (Lack of) Variation by Demographics



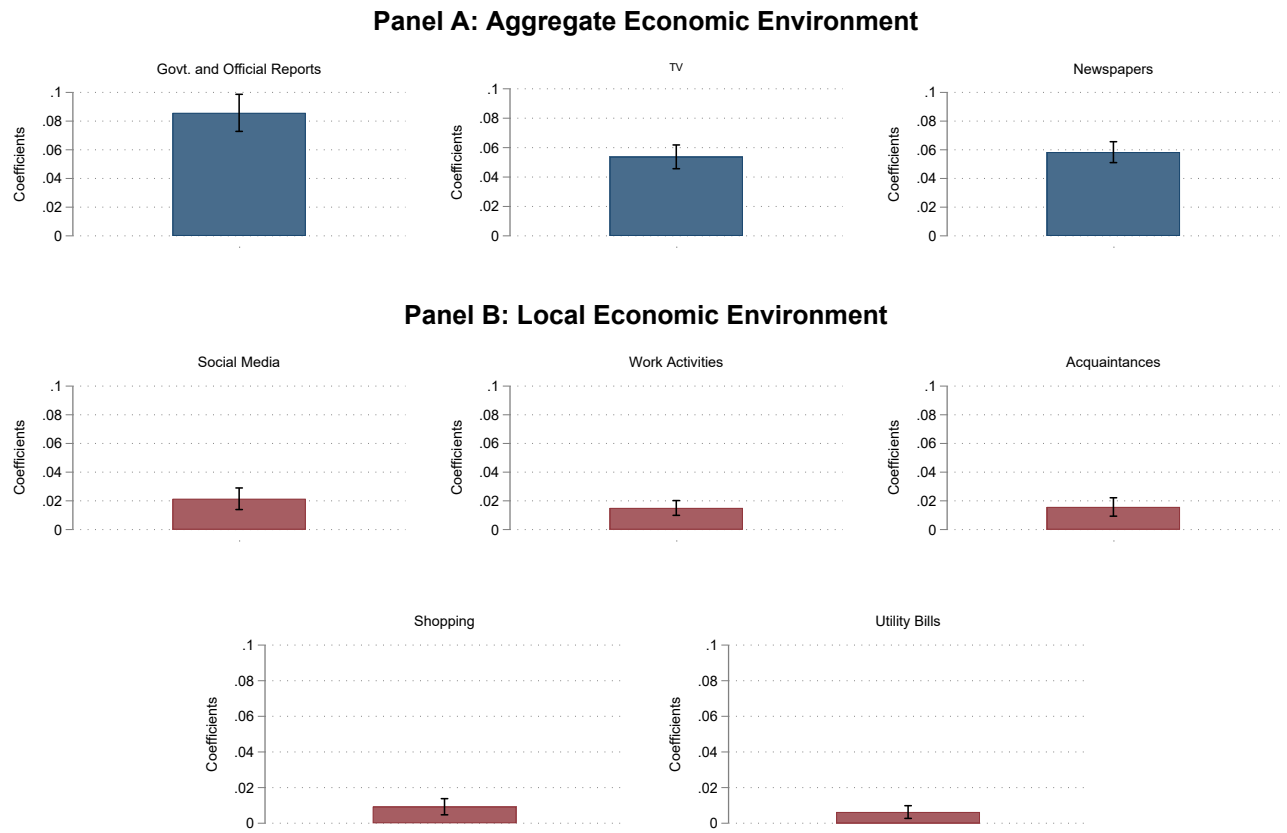
Notes: For this figure, we regress the most likely inflation expectations on each information source (1 if the responses fall under “Very Important” and “Somewhat Important” category; 0 if otherwise. “Don’t know/no opinion” responses were deemed as missing values) with country FE and demographic controls (except if used for the split). The coefficient from each information source is plotted in this figure. The data is elicited from 46,285 respondents in the Global Inflation Expectations Survey conducted in April/May 2023.

Figure 8: **Intensity of Exposure to Grocery Prices and Expectations Biases by Income**



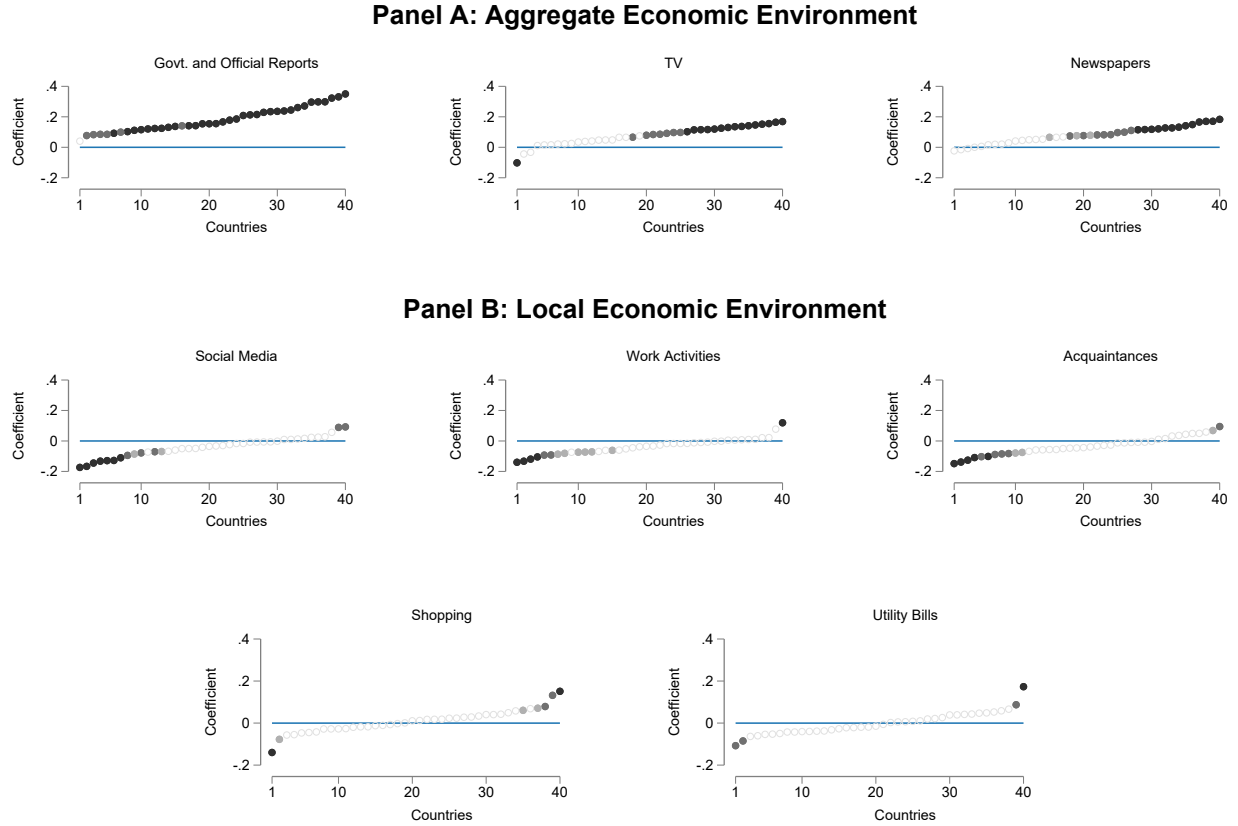
Notes: The y-axis plots the average ratio between numerical inflation expectations and ex-post realized inflation for each group of survey respondents based on the frequency of exposure to the two local information sources for which we have data—grocery prices via shopping. Realized inflation data is from OECD or national statistics office or the central banks of respective countries. Continuous variables are winsorized at 5-95 levels. The data is from the *Global Inflation Expectations Survey* that surveyed 46,285 respondents conducted in April/May 2023.

Figure 9: Trust in Government & Central Bank and Sorting into Economic Information Sources



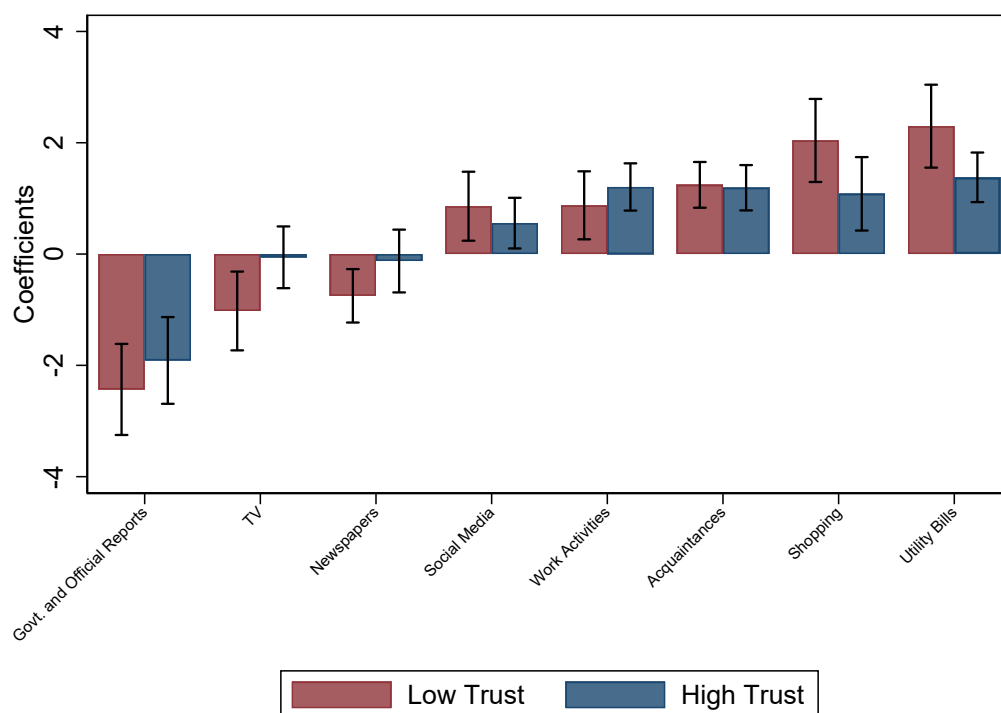
Notes: We regress each information source respondents may attend to on the principal component of trust in central bank/government with demographic controls and country FE. The coefficients of the principal component of trust in central bank/government from each regression is plotted. Principal Component was predicted based on the trust variable (1 if the respondents reported they repose “A lot” or “Some” trust; 0 if otherwise; “Don’t know/no opinion” responses were deemed as missing). Each information source outcome variable is a dummy (1 if the responses fall under “Very Important” and “Somewhat Important” category; 0 if otherwise. “Don’t know/no opinion” responses were deemed as missing values). Demographic Controls include categorical age, income dummy, categorical household size, college education dummy, economic degree dummy, employment status dummy, and marital status dummy. The responses were elicited from 46,285 respondents in the *Global Inflation Expectations Survey* conducted in April/May 2023 for countries. We do not have data on trust in government from 7 countries – Egypt, Saudi Arabia, UAE, Morocco, China, Russia, and Zimbabwe.

Figure 10: Trust in Government & Central Bank and Sorting into Economic Information Sources by Country



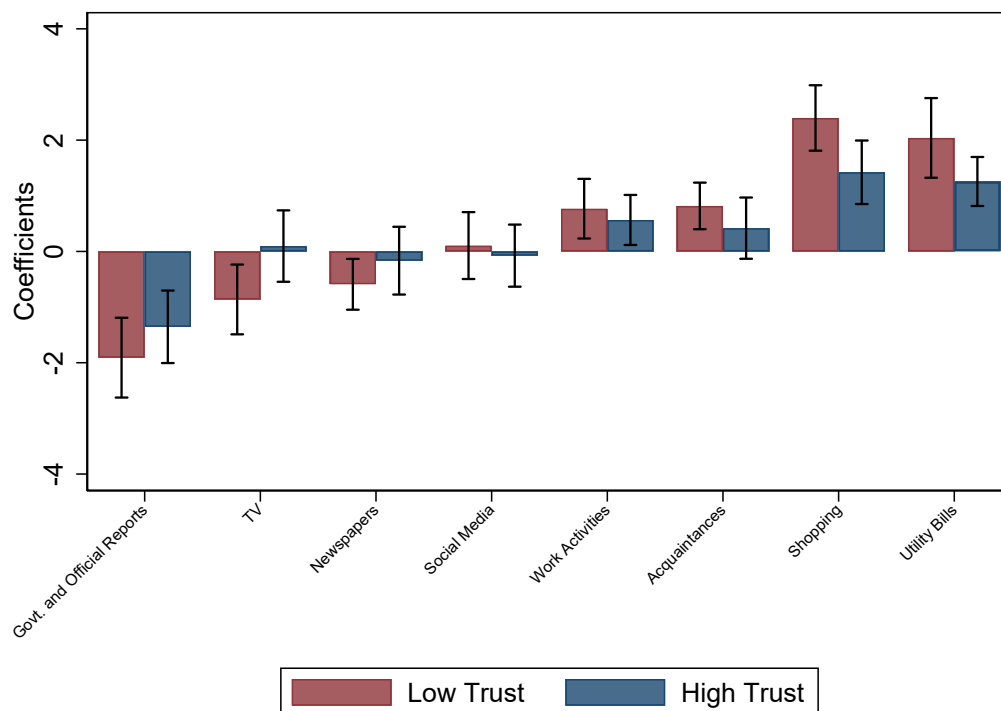
Notes: For each country, each information source is regressed on the principal component of trust in central bank/government and principal component of trust in other institutions. The coefficients of the principal component of trust in central bank/government are plotted here by country. In order to compare across all countries, responses for each information source have been standardized (z-scores) within each country before the regression. Hollow circles denote countries for which the estimate is not statistically different from 0 at the 10% level. Darker Grey solid circles, Light Grey solid circles, and Lighter Grey solid circles denote country-level estimates that are significant at 1%, 5%, and 10% levels. The responses were elicited from 46,285 respondents in the *Global Inflation Expectations Survey* conducted in April/May 2023 for countries. PC was predicted based on the trust variable (1 if the respondents reported they repose “A lot” or “Some” trust; 0 if otherwise; “Don’t know/no opinion” responses were deemed as missing). The information source variable is a dummy (1 if the responses fall under “Very Important” and “Somewhat Important” category; 0 if otherwise. “Don’t know/no opinion” responses were deemed as missing values). We do not have data on trust in government from 7 countries – Egypt, Saudi Arabia, UAE, Morocco, China, Russia, and Zimbabwe.

Figure 11: Information Sources and Macroeconomic Expectations by Trust in Central Bank/Government



Notes: We regress the most likely inflation expectations on each information source (1 if the responses fall under “Very Important” and “Somewhat Important” category; 0 if otherwise. “Don’t know/no opinion” responses were deemed as missing values) with country FE and demographic controls by taking sub-samples based on principal component of trust in central bank/government. The coefficient from each information source is reported in the table. PC was predicted based on the trust binary variable (1 if the respondents reported that they repose “A lot” or “Some” trust; 0 if “Not too much” or “Not at all”. “Don’t know/no opinion” responses were deemed as missing). Median and below the predicted PC are deemed to be the high trust sub-sample and above the median PC are deemed to be low trust sub-sample. The data is from the survey elicited from 46,285 respondents in the *Global Inflation Expectations Survey* conducted in April/May 2023. The mostly likely inflation expectations variable is winsorized at (5-95) levels. We do not have data on trust in government from 7 countries.

Figure 12: Information Sources and Perception Errors by Trust in Central Bank/Government



Notes: We regress the inflation perception error on each information source (1 if the responses fall under “Very Important” and “Somewhat Important” category; 0 if otherwise. “Don’t know/no opinion” responses were deemed as missing values) with country FE and demographic controls by taking sub-samples based on principal component of trust in central bank/government. The coefficient from each information source is reported in the table. PC was predicted based on the trust binary variable (1 if the respondents reported that they repose “A lot” or “Some” trust; 0 if “Not too much” or “Not at all”. “Don’t know/no opinion” responses were deemed as missing). Median and below the predicted PC are deemed to be the high trust sub-sample and above the median PC are deemed to be low trust sub-sample. Inflation perception error is computed as perceived inflation - actual inflation as on April 2023 and it is winsorized at (5-95) levels. The data is from the survey elicited from 46,285 respondents in the *Global Inflation Expectations Survey* conducted in April/May 2023. We do not have data on trust in government from 7 countries.

Table 1: **Summary Statistics: Macroeconomic Expectations and Perceptions**

Variables	Mean	Std. Dev.	p5	p25	p50	p75	p95	N
Panel A Expectations/Perceptions:								
Mostly Likely Inflation Expectations	15.51	17.46	0.00	5.00	10.00	17.00	70.00	46,285
Minimum Inflation Expectations	10.40	12.28	0.00	3.00	7.00	10.00	50.00	46,284
Maximum Inflation Expectations	21.47	24.78	0.00	8.00	12.00	25.00	100.00	46,284
Average Inflation Expectations	15.75	17.35	0.00	5.50	10.00	17.50	70.00	46,284
Range of Inflation Expectations	9.89	13.02	0.00	2.00	5.00	10.00	50.00	46,284
Inflation Perception (Past 12-month period)	14.70	17.20	0.00	5.00	10.00	16.20	70.00	46,285
Inflation Perception Error	4.22	13.09	-20.60	-2.57	1.88	7.78	40.09	46,285
Absolute Inflation Perception Error	10.00	12.19	0.30	2.10	5.09	12.22	45.90	46,285
Inflation Expectations Error	7.39	14.33	-22.50	1.10	5.27	11.40	46.20	46,285
House Price Expectations	4.02	8.99	-10.00	0.00	0.00	6.00	30.00	46,285
Interest Rate Expectations	2.48	5.31	-3.00	0.00	0.00	3.00	20.00	46,285
Average Historical 10-year Inflation Rate	4.06	4.34	0.69	1.51	2.31	4.49	18.37	46,285
Average Historical 20-year Inflation Rate	4.23	3.58	1.41	1.85	2.38	5.02	14.09	46,285
Panel B Demographic Characteristics:								
Age (18 - 34)	0.39	0.49	0.00	0.00	0.00	1.00	1.00	46,285
Age (35 - 44)	0.20	0.40	0.00	0.00	0.00	0.00	1.00	46,285
Age (45 - 64)	0.31	0.46	0.00	0.00	0.00	1.00	1.00	46,285
Age (65+)	0.10	0.30	0.00	0.00	0.00	0.00	0.00	46,285
Female	0.48	0.50	0.00	0.00	0.00	1.00	1.00	46,285
Employment	0.65	0.48	0.00	0.00	1.00	1.00	1.00	46,285
College Education	0.49	0.50	0.00	0.00	0.00	1.00	1.00	46,285
Economics/Business/Finance Degrees	0.12	0.32	0.00	0.00	0.00	0.00	1.00	46,285
Married	0.57	0.50	0.00	0.00	1.00	1.00	1.00	46,285
Household Size	3.90	1.43	2.00	3.00	4.00	5.00	6.00	46,285
High Income	0.60	0.49	0.00	0.00	1.00	1.00	1.00	46,285
Panel C Information Sources:								
Govt. and Official Reports	0.78	0.41	0.00	1.00	1.00	1.00	1.00	42,900
TV	0.73	0.44	0.00	0.00	1.00	1.00	1.00	43,513
Newspapers	0.68	0.47	0.00	0.00	1.00	1.00	1.00	42,064
Social Media	0.63	0.48	0.00	0.00	1.00	1.00	1.00	43,203
Work Activities	0.77	0.42	0.00	1.00	1.00	1.00	1.00	40,257
Acquaintances	0.74	0.44	0.00	0.00	1.00	1.00	1.00	43,400
Shopping	0.88	0.32	0.00	1.00	1.00	1.00	1.00	43,826
Utility Bills	0.89	0.31	0.00	1.00	1.00	1.00	1.00	43,642
Panel D Trust in Government/Central Bank:								
	43							
Principal Component of Trust in Govt./Central Bank	0.00	1.22	-1.43	-1.43	-0.01	1.42	1.42	36,779

Notes: This table summarizes the respondents' expectations and perceptions, demographic characteristics, importance of information sources, and trust reposed by the respondents in Government/Central bank elicited from 46,285 respondents across 47 countries in the *Global Subjective Inflation Expectations Survey* conducted in April/May 2023.

Table 2: Summary Statistics: Demographic Variables by Country

	AR	AT	AU	BD	BR	CA	CL	CN	CO	DE	EG	FI	FR	GR	HR	HU
Age: 18-34	0.37	0.26	0.27	0.79	0.44	0.26	0.35	0.51	0.53	0.25	0.76	0.27	0.25	0.24	0.26	0.25
Age: 35-44	0.22	0.16	0.22	0.15	0.22	0.19	0.18	0.19	0.24	0.21	0.15	0.19	0.21	0.19	0.18	0.18
Age: 45-64	0.34	0.35	0.33	0.06	0.29	0.33	0.41	0.26	0.22	0.43	0.09	0.39	0.42	0.36	0.35	0.33
Age: 65+	0.08	0.23	0.17	0.01	0.04	0.21	0.06	0.04	0.01	0.11	0.00	0.15	0.11	0.20	0.21	0.24
College Education	0.40	0.21	0.46	0.52	0.51	0.86	0.68	0.50	0.51	0.32	0.76	0.40	0.25	0.52	0.46	0.22
Female	0.52	0.51	0.50	0.24	0.51	0.52	0.51	0.46	0.51	0.53	0.39	0.51	0.55	0.48	0.50	0.53
Financial Literacy	0.75	0.59	0.48	0.45	0.55	0.60	0.63	0.19	0.58	0.55	0.35	0.52	0.54	0.55	0.69	0.75
Full-time Employment	0.76	0.51	0.57	0.44	0.81	0.64	0.69	0.86	0.72	0.60	0.75	0.60	0.62	0.60	0.48	0.48
Married	0.56	0.50	0.55	0.43	0.62	0.53	0.50	0.72	0.55	0.50	0.62	0.54	0.60	0.63	0.62	0.59
	ID	IE	IL	IN	IT	JP	KE	MA	MX	MY	NG	NL	NO	NZ	PH	PK
Age: 18-34	0.63	0.28	0.35	0.78	0.25	0.21	0.57	0.43	0.49	0.45	0.60	0.29	0.30	0.34	0.61	0.64
Age: 35-44	0.21	0.21	0.19	0.09	0.19	0.17	0.24	0.31	0.21	0.20	0.21	0.17	0.17	0.14	0.21	0.19
Age: 45-64	0.15	0.33	0.39	0.12	0.45	0.50	0.13	0.23	0.26	0.33	0.18	0.34	0.33	0.33	0.17	0.16
Age: 65+	0.00	0.19	0.07	0.01	0.11	0.11	0.06	0.02	0.04	0.02	0.01	0.20	0.20	0.19	0.01	0.01
College Education	0.49	0.42	0.53	0.64	0.22	0.47	0.44	0.53	0.77	0.55	0.73	0.36	0.45	0.31	0.60	0.42
Female	0.47	0.51	0.51	0.33	0.51	0.48	0.51	0.51	0.53	0.48	0.32	0.49	0.49	0.52	0.55	0.35
Financial Literacy	0.23	0.47	0.51	0.25	0.43	0.38	0.41	0.37	0.51	0.48	0.41	0.59	0.51	0.58	0.38	0.38
Full-time Employment	0.70	0.60	0.74	0.73	0.61	0.65	0.71	0.61	0.76	0.73	0.80	0.60	0.55	0.60	0.68	0.52
Married	0.53	0.62	0.58	0.48	0.63	0.59	0.53	0.50	0.61	0.53	0.47	0.60	0.55	0.60	0.49	0.56
	AE	CH	ES	GB	KR	PL	RU	SA	SE	SG	TH	TR	US	ZA	ZW	Total
Age: 18-34	0.27	0.27	0.26	0.27	0.33	0.27	0.37	0.47	0.30	0.29	0.35	0.37	0.27	0.50	0.60	0.34
Age: 35-44	0.38	0.17	0.22	0.22	0.24	0.20	0.18	0.23	0.19	0.17	0.23	0.21	0.19	0.32	0.22	0.22
Age: 45-64	0.34	0.34	0.45	0.42	0.34	0.32	0.34	0.29	0.34	0.41	0.39	0.42	0.31	0.15	0.17	0.34
Age: 65+	0.01	0.21	0.06	0.10	0.09	0.22	0.10	0.00	0.17	0.13	0.02	0.01	0.23	0.02	0.00	0.10
College Education	0.81	0.27	0.38	0.43	0.67	0.36	0.49	0.61	0.21	0.53	0.69	0.66	0.37	0.34	0.61	0.49
Female	0.24	0.49	0.50	0.54	0.47	0.52	0.51	0.39	0.49	0.51	0.51	0.50	0.52	0.51	0.50	0.48
Financial Literacy	0.35	0.44	0.54	0.52	0.65	0.62	0.62	0.32	0.50	0.52	0.32	0.67	0.44	0.47	0.51	0.50
Full-time Employment	0.89	0.62	0.69	0.61	0.68	0.52	0.57	0.67	0.60	0.78	0.79	0.70	0.46	0.69	0.65	0.66
Married	0.81	0.51	0.59	0.57	0.55	0.65	0.62	0.69	0.52	0.60	0.50	0.70	0.49	0.46	0.41	0.58

Notes: This table summarizes the demographics elicited from 46,285 respondents across 47 countries from the *Global Subjective Inflation Expectations Survey* conducted in April/May 2023.

Table 3: Information Sources and Macroeconomic Expectations

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:						
<i>Numerical Point Forecast</i>						
	Inflation		House Prices		Interest Rates	
<u>Aggregate Economic Environment</u>						
Govt. and Official Reports	-6.24*** (1.86)	-3.35*** (0.58)	-3.71** (1.66)	-2.34** (0.99)	-1.90** (0.88)	-1.17*** (0.38)
TV	-0.86** (0.35)	-0.91*** (0.30)	-0.48 (0.33)	-0.28 (0.33)	-0.11 (0.17)	-0.11 (0.16)
Newspapers	-0.13 (0.45)	-0.40** (0.18)	0.16 (0.23)	0.02 (0.21)	0.30 (0.20)	0.14 (0.10)
<u>Local Economic Environment</u>						
Social Media	2.08*** (0.70)	0.53*** (0.19)	1.49*** (0.46)	0.31 (0.20)	0.84*** (0.26)	0.42*** (0.15)
Work Activities	2.71*** (0.97)	0.71*** (0.20)	2.10*** (0.68)	0.55** (0.25)	1.05*** (0.35)	0.30** (0.13)
Acquaintances	0.91*** (0.28)	0.65*** (0.15)	0.11 (0.27)	-0.01 (0.24)	0.04 (0.18)	-0.02 (0.15)
Shopping	2.63*** (0.83)	1.32*** (0.28)	2.16*** (0.62)	1.21*** (0.29)	0.60* (0.33)	0.38** (0.16)
Utility Bills	3.05*** (0.69)	1.82*** (0.25)	1.43** (0.59)	0.90*** (0.29)	0.81*** (0.30)	0.58*** (0.21)
R^2	0.04	0.35	0.02	0.14	0.01	0.35
Observations	36,294	36,294	36,294	36,294	36,294	36,294
Demographic Controls	No	Yes	No	Yes	No	Yes
Country FE	No	Yes	No	Yes	No	Yes

Notes: We regress the 12-month-ahead point forecast for the most likely value of the macroeconomic variables indicated on top of columns on whether respondents attend to each information source (1 if the responses fall under “Very Important” and “Somewhat Important” category; 0 if otherwise. “Don’t know/no opinion” responses were deemed as missing values). In even columns, the specification adds demographic controls and country fixed effects as covariates. Demographic controls include age, gender, college education, whether or not a respondent has an economics/finance/business degree, income, employment status, marital status, and household size. The data is elicited from 46,285 respondents across 47 countries in the *Global Inflation Expectations Survey* conducted in April/May 2023. The most likely inflation expectations variable is winsorized at (5-95) levels. The house price and interest rate expectations were winsorized at (1-99) levels. Standard errors clustered at the country level are reported in parentheses. *p<0.10, **p<0.05, ***p<0.01

Table 4: **Historical Inflation Realizations in the Country and Consumers' Sorting into Information Sources**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variable: <i>Information Source Indicator</i>								
	Aggregate Economic Environment			Local Economic Environment				
	Govt. and Official Reports	TV	Newspapers	Social Media	Work Activities	Acquaintances	Shopping	Utility Bills
Average 10-year Inflation Rate	-0.02 (0.01)	0.02 (0.01)	0.02* (0.01)	0.04*** (0.01)	0.04*** (0.01)	0.02*** (0.01)	0.02*** (0.00)	0.01*** (0.00)
Constant	0.72*** (0.03)	0.62*** (0.02)	0.56*** (0.03)	0.61*** (0.03)	0.65*** (0.03)	0.73*** (0.02)	0.86*** (0.01)	0.86*** (0.01)
R^2	0.02	0.01	0.02	0.10	0.07	0.04	0.01	0.01
Observations	42,900	43,513	42,064	43,203	40,257	43,400	43,826	43,642
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: We regress each information source (1 if the responses fall under "Very Important" and "Somewhat Important" category; 0 if otherwise. "Don't know/no opinion" responses were deemed as missing values) on the 10-year historical average inflation rates with demographic controls. The coefficients of historical inflation rates are reported in the table. Data on 10-year average historical inflation rates by country is winsorized. Argentina, Turkey, and Zimbabwe fall beyond the 95th percentile; Switzerland falls below the 5th percentile. They were winsorized at 5-95 levels and then standardized. The data is elicited from 46,285 respondents in the *Global Inflation Expectations Survey* conducted in April/May 2023. Standard errors clustered at the country-level are reported in parentheses. *p<0.10, **p<0.05, ***p<0.01

Table 5: **Trust in Government/Central Bank and Consumers' Sorting into Information Source Preferences**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variable: <i>Information Source Indicator</i>								
	Aggregate Economic Environment			Local Economic Environment				
	Govt. and Official Reports	TV	Newspapers	Social Media	Work Activities	Acquaintances	Shopping	Utility Bills
PC Trust in Govt./Central Bank	0.09*** (0.01)	0.05*** (0.00)	0.06*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.01*** (0.00)	0.01*** (0.00)
Constant	0.61*** (0.01)	0.64*** (0.01)	0.63*** (0.02)	0.62*** (0.02)	0.80*** (0.02)	0.75*** (0.02)	0.94*** (0.01)	0.91*** (0.01)
R^2	0.12	0.07	0.08	0.17	0.12	0.06	0.06	0.02
Observations	35,211	35,513	34,663	35,160	32,946	35,383	35,689	35,563
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: In this table, we regress each information source respondents may attend to on the principal component of trust in central bank/government with demographic controls and country FE. The estimates of the principal component of trust in central bank/government from each regression is reported. Principal Component was predicted based on the trust variable (1 if the respondents reported they repose “A lot” or “Some” trust; 0 if otherwise; “Don’t know/no opinion” responses were deemed as missing). Each information source outcome variable is a dummy (1 if the responses fall under “Very Important” and “Somewhat Important” category; 0 if otherwise. “Don’t know/no opinion” responses were deemed as missing values). Demographic Controls include categorical age, income dummy, categorical household size, college education dummy, economic degree dummy, employment status dummy, and marital status dummy. The responses were elicited from 46,285 respondents in the *Global Inflation Expectations Survey* conducted in April/May 2023 for countries. We do not have data on trust in government from 7 countries – Egypt, Saudi Arabia, UAE, Morocco, China, Russia, and Zimbabwe. *p<0.10, **p<0.05, ***p<0.01

Table 6: Moderating Role of Trust in Central Banks/Governments on the Effect of Information Sources on Macroeconomic Expectations

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:						
<i>Numerical Point Forecast</i>						
	Inflation		House Prices		Interest Rates	
<u>Aggregate Economic Environment $\times$ Trust</u>						
Govt. and Official Reports $\times$ Trust	4.36** (2.13)	1.24* (0.63)	3.38 (2.07)	1.06 (1.14)	1.99 (1.21)	0.86 (0.60)
TV $\times$ Trust	0.03 (0.80)	0.41 (0.48)	-0.40 (0.86)	-0.52 (0.64)	-0.44 (0.52)	-0.42 (0.40)
Newspapers $\times$ Trust	-0.58 (0.81)	0.21 (0.50)	-0.24 (0.53)	0.13 (0.39)	-0.01 (0.49)	0.27 (0.28)
<u>Local Economic Environment $\times$ Trust</u>						
Social Media $\times$ Trust	-1.22 (0.84)	-0.92* (0.52)	-0.43 (0.94)	-0.42 (0.66)	0.11 (0.26)	0.17 (0.19)
Work Activities $\times$ Trust	-1.09 (1.22)	0.08 (0.55)	-1.66 (1.00)	-1.02 (0.68)	-1.05* (0.60)	-0.57 (0.37)
Acquaintances $\times$ Trust	-0.70 (0.42)	-0.20 (0.38)	-0.14 (0.40)	0.02 (0.40)	0.16 (0.26)	0.26 (0.29)
Shopping $\times$ Trust	-1.99* (0.99)	-1.24* (0.62)	-1.72** (0.84)	-1.14* (0.64)	-0.90 (0.67)	-0.58 (0.49)
Utility Bills $\times$ Trust	-1.78** (0.78)	-1.52*** (0.50)	-1.09 (0.85)	-0.71 (0.63)	-0.72 (0.45)	-0.58 (0.37)
R^2	0.06	0.36	0.02	0.16	0.01	0.11
Observations	30,167	30,167	30,167	30,167	30,167	30,167
Values in Level	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	No	Yes	No	Yes	No	Yes
Country FE	No	Yes	No	Yes	No	Yes

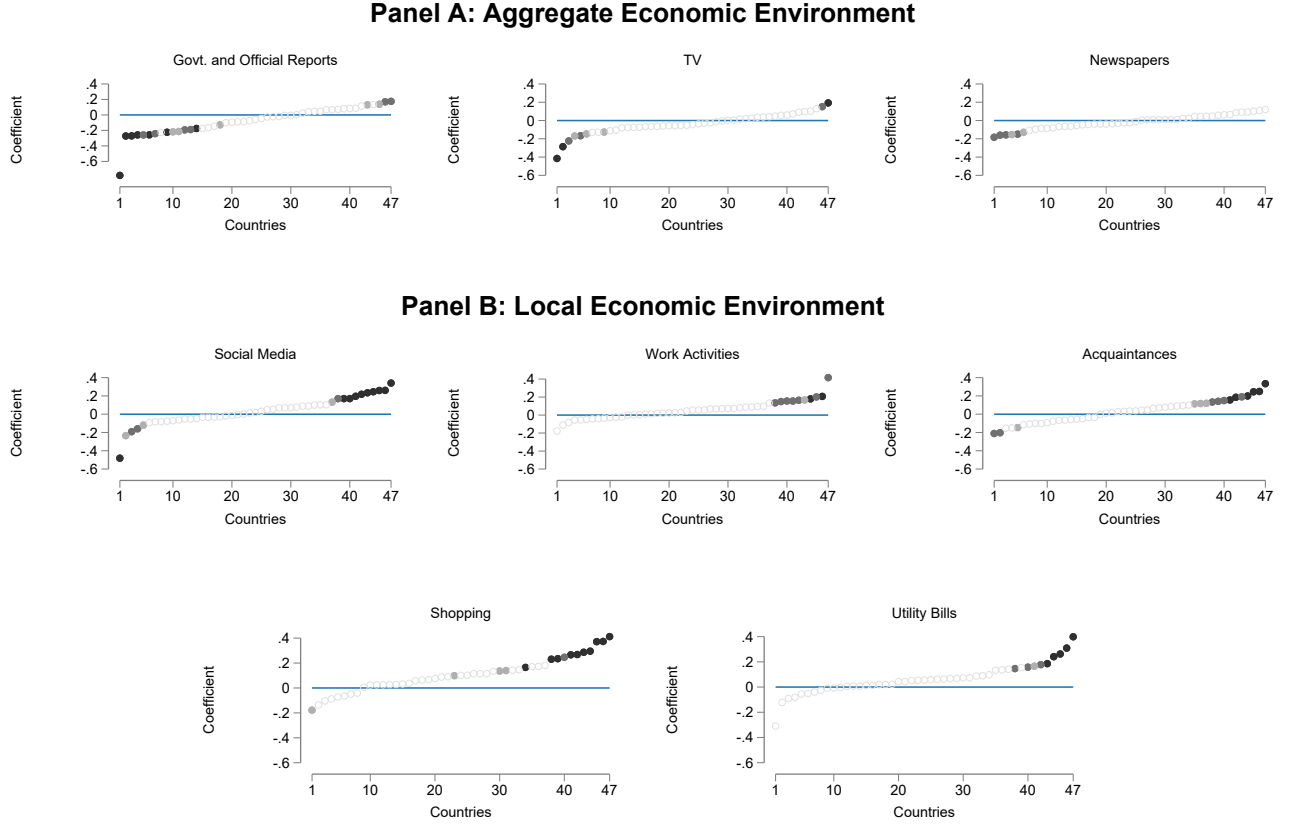
Notes: We regress the 12-month-ahead point forecast for the most likely value of the macroeconomic variables indicated on top of columns on information sources (1 if the responses fall under “Very Important” and “Somewhat Important” category; 0 if otherwise. “Don’t know/no opinion” responses were deemed as missing values), trust dummy (1 if high trust; 0 if low trust), interaction term between information sources and trust dummy. In even columns, the specification adds demographic controls and country fixed effects as covariates. Demographic controls include age, gender, college education, whether or not a respondent has an economics/finance/business degree, income, employment status, marital status, and household size. Principal Component of trust in Government/Central Bank was predicted based on the trust binary variable (1 if the respondents reported that they repose “A lot” or “Some” trust; 0 if “Not too much” or “Not at all”. “Don’t know/no opinion” responses were deemed as missing). Median and above of principal component were categorized as 1 and below median is 0 for trust dummy used in this regression. The mostly likely inflation expectations variable is winsorized at (5-95) levels. The house price and interest rate expectations were winsorized at (1-99) levels. The data is elicited from 46,285 respondents in the *Global Inflation Expectations Survey* conducted in April/May 2023 We do not have data on trust in government from 7 countries – Egypt, Saudi Arabia, UAE, Morocco, China, Russia, and Zimbabwe. Standard errors clustered at the country-level are reported in parentheses. *p<0.10, **p<0.05, ***p<0.01

Online Appendix: Inflation Expectations, Trust, and Information Sources: Global Evidence

Francesco D'Acunto and Michael Weber

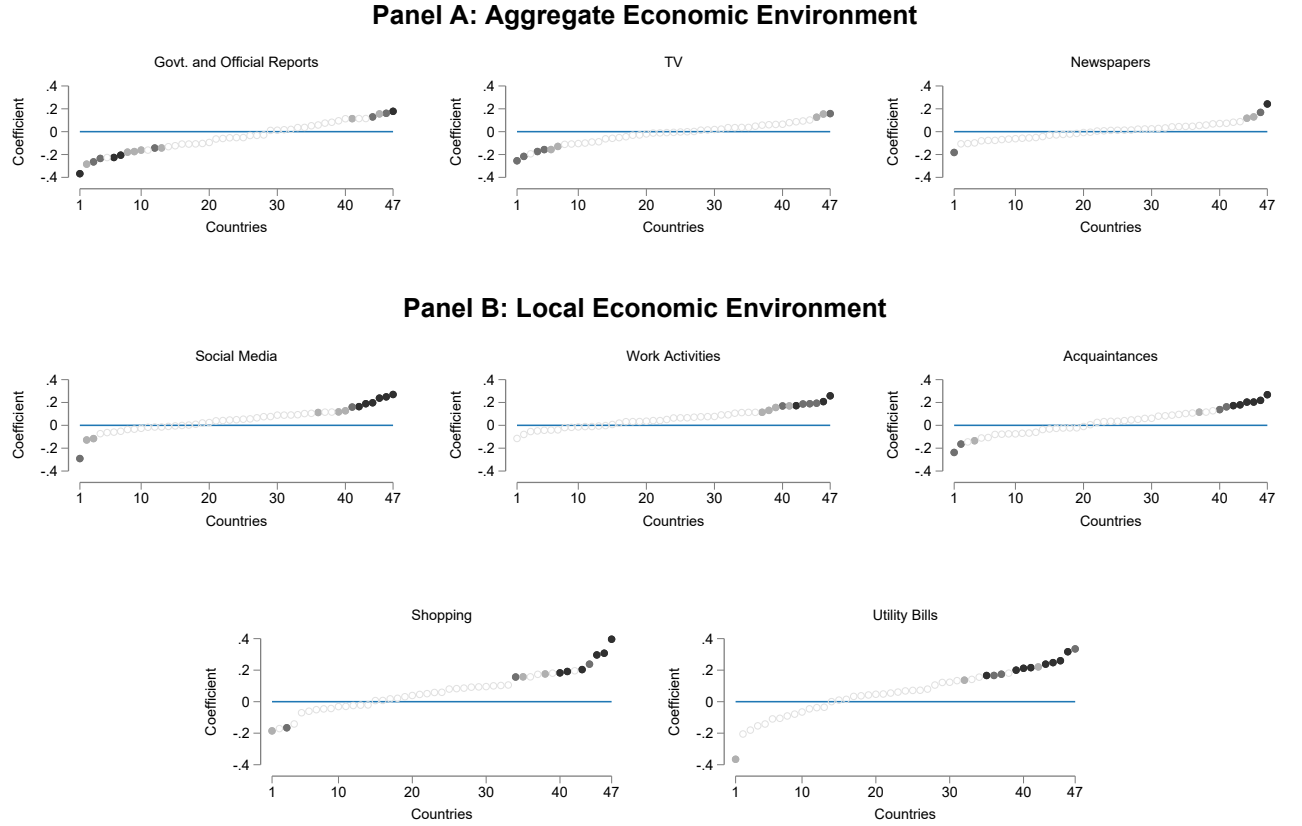
Not for Publication

Figure 1: Information Sources and House Price Expectations across Countries



Notes: For each country, the respondent-level 12-month-ahead national house price point forecast is regressed on each of the dummies for whether the respondent sort into an information source. The coefficient estimates for each country-level regression are plotted in order of size from the smallest to the largest. To allow comparison across countries, expectations have been standardized (z-scores) within each country before running each regression. Hollow circles denote countries for which the estimate is not statistically different from 0 at the 10% level. Darker Grey solid circles, Light Grey solid circles, and Lighter Grey solid circles denote country-level estimates that are significant at 1%, 5%, and 10% levels. The information source variable is a dummy (1 if the source is “Very Important” or “Somewhat Important” to the respondent, and 0 otherwise. “Don’t know/no opinion” responses were treated as missing values). Expectations are winsorized at 1-99 levels. The responses were elicited from 46,285 respondents in the *Global Inflation Expectations Survey* conducted in April/May 2023 across 47 countries.

Figure 2: Information Sources and Interest Rate Expectations across Countries



Notes: For each country, the interest rate expectations is regressed on each of the information sources. The coefficients of each of the information sources are plotted here by country in the respective panel. In order to compare across all countries, responses for interest rate expectations has been standardized (z-scores) within each country before the regression. Hollow circles denote countries for which the estimate is not statistically different from 0 at the 10% level. Darker Grey solid circles, Light Grey solid circles, and Lighter Grey solid circles denote country-level estimates that are significant at 1%, 5%, and 10% levels. The information source variable is a dummy (1 if the responses fall under “Very Important” and “Somewhat Important” category; 0 if otherwise. “Don’t know/no opinion” responses were deemed as missing values). Interest rate Expectation is winsorized at 1-99 levels. The responses were elicited from 46,285 respondents in the *Global Inflation Expectations Survey* conducted in April/May 2023 for countries.