Public Debt and Private Sentiment: International Evidence from the Gallup World Poll

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Abstract

This paper investigates whether and how public debt influences individual economic expectations and subjective well-being, using microdata from the Gallup World Poll spanning 2006 to 2024 across a broad set of countries. While macroeconomic research has increasingly focused on the sustainability of public debt and its effects on interest rates, investment, and inflation, far less is known about how rising debt levels shape public sentiment. Drawing on over a decade of harmonized survey responses linked with country-year fiscal indicators, I assess whether individuals' perceptions of the economy and institutions vary systematically with national debt-to-GDP ratios. I find robust evidence that higher debt levels affect economic expectations even after controlling for a wide array of demographics, country fundamentals, income shocks, and both country and year fixed effects. Debt also has stronger effects on expectations during times of economic hardship. These results suggest that high debt levels affect individual well-being through an expectations channel, rather than just an income.

Keywords: Fiscal policy; Expectations; Subjective well-being; Gallup World Poll;

Taxation; Political economy; Macroeconomic sentiment; Cross-country analysis.

JEL Codes: E62, H63, I31, D84, H53, O57.

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1 Introduction

Rising public debt levels in the wake of the global financial crisis and the COVID-19 pandemic have rekindled debates about fiscal sustainability and its broader impacts. Economists and policymakers have long questioned whether public debt influences private economic behavior and attitudes, or whether it is largely neutral. The classic Ricardian equivalence hypothesis posits that forward-looking consumers internalize the government's budget constraint, so debt-financed spending is offset by expectations of future taxes. In Barro (1974)'s seminal formalization, government bonds are not perceived as net wealth—that is, higher public debt today implies higher future tax liabilities, leaving consumption, demand, and economic well-being unchanged.

If Ricardian equivalence holds, individuals should not feel economically better or worse off merely because debt rises, as they optimally save any tax cuts to pay for the future tax increase (and conversely for deficit reductions). This view suggests that public debt per se would have no impact on personal economic expectations or welfare. However, a large body of theoretical and empirical work casts doubt on the idea of full equivalence. Consumers may be liquidity-constrained, myopic, or uncertain about future policies, so deficits can stimulate demand in the short run (Keynesian effects) rather than being fully undone by private saving. Many studies find that fiscal expansions affect output and household behavior, implying departures from the strict Ricardian benchmark (Bernheim, 1987; Seater, 1993). And yet, an unresolved tension in the literature is whether individuals perceive and respond to rising public debt, and if so, how?

One hypothesis is that individuals react less to the abstract level of debt than to its tangible consequences. When debt builds up, it eventually forces policy adjustments—tax increases,

spending cuts, or risk of macroeconomic instability—which directly touch people's lives. Using data from the Gallup World Poll between 2006 and 2023, I investigate whether rising public debt affects individual-level economic expectations, subjective well-being, and confidence in economic governance. Public debt could matter for private sentiment only insofar as it portends or triggers concrete policy actions and economic conditions that people experience. In other words, a country's residents may not track the debt-to-GDP ratio itself, but they likely respond to austerity measures, fiscal crises, or volatility that often accompany high debt, consistent with fiscal foresight: forward-looking agents might anticipate future fiscal tightening when debt is high (Leeper et al., 2013), or they may react contemporaneously when governments implement deficit-reduction policies. I test this by examining not just debt levels, but also fiscal events like consolidation episodes and crisis periods where I can exploit more plausibly exogenous variation in unanticipated shocks.

Using within-country variation across hundreds of thousands of respondents from 2006 to 2023, I estimate the effects of higher debt-to-GDP ratios on economic confidence. My identification strategy controls for not only standard demographic factors (e.g., age and education) and both country and year fixed effects, but also time-varying country macroeconomic fundamentals, such as the unemployment rate and industry employment composition. I find robust evidence that higher debt levels reduce economic confidence. I also control semi-parametrically for potential mechanisms by interacting real interest rates, inflation, tax revenue as a share of GDP, and debt service as a share of exports with year fixed effects. The main effects generally hold, barring reductions in sample size due to cross-country measurement differences, suggesting that the effect of debt on economic confidence is through a behavioral channel—not just standard disposable income channels. These results are robust to controlling semi-parametrically for income and isolating variation unique to perceptions about the national state of the economy, rather than the

locality and/or the respondent's own financial well-being.

This paper builds on and connects two strands of literature. The first is the macro-fiscal literature on the economic effects of debt and deficits. Following Barro's seminal work, researchers have probed whether deficits crowd out private spending or are offset by private saving. Empirical evidence is mixed: while some find support for Ricardian behavior, many others document that deficit-financed stimulus raises output and consumption in the short run (Elmendorf and Mankiw, 1999; Gale and Orszag, 2003). Modern identification approaches often reject pure neutrality. For example, Nakamura and Steinsson (2014) use regional variation in U.S. military spending to estimate a fiscal multiplier around 1.5, indicating that government spending can have large effects on output. This suggests that at least some households do not fully offset government spending changes, consistent with limited Ricardian equivalence. On the other hand, Cogan et al. (2010) and others using New Keynesian models find that multipliers can be modest if monetary policy or expectations "lean against" fiscal expansions, consistent with a more Ricardian or forward-looking view. The design of fiscal adjustment also matters: a robust finding is that how governments restore balance—through tax hikes or spending cuts—yields different macro outcomes. Alesina et al. (2019) document that spending-based austerity plans tend to be much less contractionary than tax-based plans. Tax-driven adjustments often coincide with deeper recessions and drops in confidence, whereas spending cuts (especially when paired with accommodative monetary policy) sometimes even coincide with growth (the controversial "expansionary austerity" hypothesis). This literature underscores that the context and composition of fiscal policy changes shape their effects on the economy (Alesina and Ardagna, 2010; Giavazzi and Pagano, 1996).

The second strand of literature is in behavioral economics and political economy, examining how macro-fiscal conditions influence public perceptions and well-being. There is ample evidence

that macroeconomic performance is reflected in measures of subjective well-being and consumer sentiment. Unemployment and inflation, for instance, have strong negative effects on self-reported happiness (Di Tella et al., 2001). During major downturns, people report lower life satisfaction and worse outlooks for the future. A striking example comes from the Eurozone debt crisis: in Greece—an epicenter of the crisis—the share of respondents reporting they are thriving fell from about 44% in 2007 to just 13% in 2012.[1] This collapse in well-being coincided with severe austerity measures and economic hardship as Greece grappled with unsustainable debt. Such episodes suggest that fiscal crises can exact a direct human toll beyond GDP, eroding optimism and trust. Indeed, public confidence in institutions often falters when debt concerns dominate; surveys show that trust in government declined markedly in high-debt, austerity-hit countries during the Eurozone crisis (OECD, 2013). More generally, "fiscal sentiment" may be an important but under-studied channel: households form expectations about their financial future and the national economy partly based on fiscal policy signals. For example, announcements of tax increases to rein in deficits might cause consumers to downgrade their expected spending or feel less secure about their finances (Romer and Romer, 2010). Similarly, Georgarakos and Popov (2024) find that those who experienced a sovereign default during their youth are 7% less likely to hold debt than otherwise similar individuals who emigrated from the same country to the same U.S. state, but did not live through a default episode, consistent with a "scarring effect" of traumatic personal experiences.[2] Conversely, credible plans to stabilize debt could, in theory, boost confidence by reducing fears of future economic turbulence—the so-called "confidence fairy"' effect cited in policy debates. Our

[1]This number comes from my calculations using the Gallup World Poll. Thriving is an indicator for whether a respondent reports at least a 7/10 in current life satisfaction and at least an 8/10 on expected life satisfaction in the next 5 years.

[2]There is a large literature on the role of personal experience, including Malmendier and Nagel (2011) who provided early evidence on how growing up in the Great Depression affects later-in-life risk taking.

paper contributes new empirical evidence to these debates by analyzing micro-data on people's expectations and attitudes alongside objective debt indicators.

The paper bridges the gap between macro-fiscal aggregates and individual experience. Whereas most prior research on public debt focuses on growth, interest rates, or inflation (Reinhart and Rogoff, 2010; Baum et al., 2013), I examine the effects on national economic confidence. These subjective measures matter for their own sake and can also feed back into economic performance, e.g. via consumer spending or social cohesion (Makridis, 2022). I ask: Do people feel less secure or less content in high-debt environments? Or do they only react when policy actions (taxes, spending cuts) directly affect them? By leveraging a global survey spanning 2006–2024, my analysis tests whether rising public debt is associated with changes in individual sentiment across countries and over time. I exploit major fiscal crisis episodes—the 2008–09 global financial crisis, the 2010–12 sovereign debt crisis in Europe, and the pandemic-related surge in debt after 2020—as natural stress tests for my hypothesis. These episodes provide variation in fiscal conditions that is salient to residents of a country: e.g., sudden austerity programs, publicized bailouts, or fears of default and instability. If the hypothesis is correct, I should observe larger shifts in public sentiment during these high-debt action periods than in calmer periods of debt accumulation.

This paper contributes to several ongoing debates. First, it offers a new perspective on the consequences of high public debt, adding a micro-behavioral dimension to the mostly macroeconomic discourse on debt sustainability. In doing so, it speaks to the question of whether debt problems manifest only in impersonal metrics like bond yields and growth rates, or also in the minds of the public. Second, our findings will inform the Ricardian versus Keynesian debate: if people do not react to debt at all, that would align with a strong Ricardian view; evidence that tax hikes and spending cuts depress sentiment, while debt levels per se do not, would suggest a nuanced

view where anticipated policy (rather than debt itself) drives behavior. Finally, our cross-country approach sheds light on the role of institutions and credibility. For example, do countries with a history of fiscal prudence experience less of a sentiment drop when debt rises, because people trust that the government will handle it? By analyzing heterogeneous responses, I can explore whether certain fiscal frameworks or social safety nets buffer the public's economic expectations against debt-related worries. In short, the work integrates macro-fiscal analysis with survey-based behavioral evidence to better understand how "macro meets micro"—that is, how the state of the public finances trickles down to the perceptions and well-being of the public.

2 Data and Measurement

To investigate these questions, I assemble a panel dataset merging individual-level survey data from the Gallup World Poll with country-level fiscal indicators from 2006 through 2024. This section describes our data sources, key variables, and measurement choices, including the identification of fiscal adjustment episodes and the strategy for linking micro and macro data.

2.1 Subjective Well-being and Expectations

The Gallup World Poll (GWP) is a globally standardized annual survey conducted in more than 140 countries and territories, representing over 95% of the world's adult population. Each year, Gallup surveys a nationally representative sample (typically about 1,000 respondents per country-year) on a wide range of topics, including economic conditions, well-being, and institutional trust. Our analysis uses pooled cross-sectional microdata from the 2006–2024 waves of the GWP. In total, the dataset covers approximately 150 countries and over 1.5 million individual observations.

The country coverage is very broad, ranging from advanced economies to developing countries in all world regions, which provides substantial variation in public debt trajectories and fiscal events. For each respondent, I observe their year and country of interview, allowing us to merge in contemporaneous macro-fiscal indicators for that country-year. I focus on survey variables capturing three conceptual domains central to our hypothesis: (1) economic expectations, (2) subjective well-being, and (3) perceptions of government and national conditions.

Economic expectations are measured in several ways. The first measure is based on the Economic Confidence Index, which is the result of responses to two questions: (a) Right now, do you think that economic conditions in this country, as a whole, are getting better or getting worse? (b) How would you rate your economic conditions in this country today - as excellent, good, only fair, or poor? The second is an indicator for whether the respondent rates the current state of the economy as excellent or good. This variable, however, is only available from 2006 to 2017 (and for some countries to 2019). Another variant of the index is available for local economic confidence from 2017 to 2023. I also examine trust in national institutions. A key variable is confidence in national government, based on the yes/no question: "Do you have confidence in your national government?" This measure reflects public trust in fiscal policymakers and can be directly relevant to fiscal policy—for instance, heavy debt or harsh austerity might erode trust in government competency. Additionally, I observe each individual's assessment of their standard of living and whether they feel it is improving. These items paint a picture of how residents of a country view the economic climate and government performance in their country-year.

All micro variables are coded such that higher values indicate more positive outcomes (e.g. optimistic expectations, higher well-being, confidence in government). In the baseline analysis, I mostly use binary or Likert-scale outcomes and employ linear probability models or ordered

responses as appropriate. By leveraging within-country changes over time, I mitigate cultural response biases that might affect levels of subjective measures. I include individual-level controls (age, gender, education, and income proxies provided in the survey) in the baseline specifications to account for compositional changes in the sample.

2.2 Macroeconomics and Fiscal Data

I draw on country-year fiscal indicators. The primary measures of public debt and deficits come from the International Monetary Fund (IMF) World Economic Outlook database, which compile government finance statistics for almost all countries. From these sources, I obtain the general government gross debt-to-GDP ratio (the main debt metric), which captures the accumulated public debt burden. Figure 1 shows the distribution of these ratios across 75 countries and over different time periods. In general, the dispersion of debt-to-GDP ratios expand during times of crisis (e.g., the financial crisis of 2007-2010 and the Covid-19 pandemic of 2020-2023). Similarly, Figure 2 shows an analogous distribution of the current account as a share of GDP. I also obtain a wide range of annual World Bank Indicators, including: per capita GDP, population, real interest rates, inflation, exports as a share of GDP, tax revenues as a share of GDP, the employment share in agriculture, manufacturing, and services, and the unemployment rate.

In addition to continuous debt and deficit variables, I construct indicator variables for fiscal adjustment events—years in which a country undertook a large fiscal consolidation (austerity) or, conversely, experienced a fiscal crisis or bailout. Defining consolidation episodes is tricky because it involves judgment of what constitutes "large." I adopt a criterion similar to that of Alesina and Ardagna (2010) and other researchers who identify episodes of sharp deficit reduction.

Specifically, I define a fiscal consolidation year as one in which the cyclically-adjusted primary balance improves by at least 1.5% of GDP relative to the previous year. This threshold of 1.5 percentage points is commonly used in the literature to flag major fiscal adjustments. I compute the cyclically-adjusted primary balance using IMF data on the output gap to remove the effect of the business cycle on revenues and spending (when available; if not, I use the primary balance change as is, acknowledging it may include some cyclical component). Years meeting this criterion are coded as "consolidation = 1." I also tried a higher threshold (2% of GDP) and results were similar, albeit fewer episodes are identified. Examples of consolidation years in the data include Greece 2010–2012, when severe austerity was implemented, Ireland 2009, the UK 2010, and several episodes in developing countries under IMF programs.

Conversely, I mark fiscal crisis years using narrative and event-based information. These include sovereign debt default or restructuring years (e.g. Argentina 2018, Greece 2012), IMF emergency program onsets, or other instances of acute fiscal stress (such as the Eurozone bailouts in Ireland 2010, Portugal 2011, Cyprus 2013). I compile these from IMF reports and Reinhart and Rogoff's historical debt crisis dates. While less formal, these dummies allow us to test whether public sentiment deteriorates in the face of an outright fiscal crisis beyond what the debt level or consolidation measure would predict.

2.3 Descriptive Statistics

I merge the macro data to the Gallup micro-data by matching on country and survey year. Since Gallup surveys are typically conducted once per year in each country (usually in the same season each year, though timing can vary), I treat the survey year as corresponding to the fiscal year for

macro variables. In a few cases, the survey took place in early January of a year; I still use that calendar year's macro data, assuming respondents have information as of that time. The analysis sample includes all country-years for which I have both Gallup data and the needed fiscal data. This covers 70 countries and 19 years (2006–2023). While not every country is surveyed every year—for example, the median country has about 7 survey waves over this period—countries in the 10th percentile have 6 years. I account for this unbalanced panel structure with Gallup survey weights and including country fixed effects in panel regressions.

Table 1 in the paper provides summary statistics in the pooled sample, as well as for countries in years with over 100% debt-to-GDP ratios and their counterparts. Although the demographic differences are minor between the two sets of countries, the difference in economic sentiment is stark: 33% of respondents say their economy is good or excellent for those with under 100% debt-to-GDP ratios compared with only 10% for those above—a factor of three in difference. Similarly, GDP growth is four times as large among those with lighter debt burdens, but the unemployment rates are not very different. This rich variation in both the micro and macro data is what enables our analysis to tease out the relationships of interest.

3 Empirical Strategy

To estimate the effects of fiscal policy on economic sentiment, I consider regressions of the form:

$$y_{ict} = \gamma d_{ct} + \beta X_{it} + \gamma Z_{ct} + \phi_c + \lambda_t + \varepsilon_{ict} \tag{1}$$

where y_{ict} denotes individual i's economic confidence in country c and year t, d denotes the debt-to-GDP ratio, X denotes a vector of individual demographic factors, Z denotes a vector of

time-varying country controls, and ϕ and λ denote country and year fixed effects. Standard errors are clustered at the country-level and observations are weighted by the World Poll sample weights.

There are two threats to identification in Equation 1. First, individuals who are more optimistic than others could self-select into some countries, i.e. respondents in Argentina may have different attitudes about the economy than those in Germany. Second, there could be other aggregate shocks that are related with fiscal policy, like unemployment, that affect economic sentiment together with debt ratios. To address these possibilities, I not only include standard demographics (i.e., age, number of children, education fixed effects (secondary and four years or beyond, normalized to primary), male, married, employed, full-time status, and log income), but also country controls include (i.e., employment share in agriculture, employment share in services, and the unemployment rate). Furthermore, I use country and year fixed effects to isolate within-country variation, rather than cross-sectional comparisons between, say, Argentina and the United States.

4 Main Results

Table 2 documents the main results for two measures of economic sentiment. Starting in column 1, there is a strong negative association of -0.389 in the raw data between economic confidence and debt-to-GDP ratios. Controlling for demographic factors in column 2 does little to alter the coefficient estimate. However, when adding country and year fixed effects, the coefficient nearly doubles to -0.705—still statistically significant at the 1% level. Column 4 adds country-level controls, reducing the coefficient to -0.584. Not surprisingly, the unemployment rate has a strong, negative association with economic confidence too. Columns 5-8 replicate these results using an indicator for whether the individual believes the economy is good or excellent. Under the preferred

specification in column 8, an additional unit increase in the debt-to-GDP ratio is associated with a 0.284 percentage point (pp) decline in the probability the respondent believes the economy is good or excellent. This implies that deteriorating fiscal conditions weakens sentiment.[3]

Do these effects matter more during times of crisis? Table 3 reports the results allowing for interaction effects between an indicator for whether GDP drops by over 1.5% (and the three years before and after such a shock) and the debt-to-GDP ratio. The interaction effect is strongly negative when the outcome is the overall economic confidence index, but not statistically significant when the outcome is the indicator for believing the economy is good now. However, in both cases, the coefficient estimate of the direct effect is strongly negative and statistically significant, suggesting that there is some evidence that higher debt burdens during times of economic distress have an especially large effect on economic confidence.

Do these coefficient estimates simply reflect unobserved heterogeneity across individuals? For example, some individuals might simply be more likely to be optimistic compared to others during times of crisis, even after controlling for national unemployment rates. To address this possibility, I use a separate question from the Gallup World Poll on local economic conditions, which is based on the response to two questions: (a) Right now, do you think that economic conditions in the city or area where you live, as a whole, are getting better or getting worse?; (b) How would you rate your economic conditions in this city today - as excellent, good, only fair, or poor? Table A.1 in the Online Appendix shows that there is no association, consistent with a causal interpretation.

As an additional robustness exercise, Table A.2 in the Online Appendix shows that these main

[3]One concern with the empirical strategy is the nature of contemporaneous shocks. As an alternative strategy, I replace the contemporaneous debt-to-GDP ratio with a one-year lag. Doing so with the indicator for believing the economy is good produces a coefficient of -0.179 (p-value = 0.015) instead of -0.28 (p-value = 0.00). Using a two-year lag produces insignificant result. Contemporaneous values, however, are used since the sample is annual, rather than a higher frequency (e.g., monthly or quarterly).

results for both outcome variables are robust to a wide array of income controls. First, I control for an index of financial well-being, which captures the ability to pay current bills, satisfaction with their financial health, etc.[4] Second, I control semi-parametrically for individual income by interacting year fixed effects with log income, as well as (separately) controlling for a quadratic in income. Across every specification, there remains a strong, negative association between the debt-to-GDP ratio and economic sentiment. Not surprisingly, the financial life index is strongly correlated with economic sentiment (i.e., greater anxiety about finances is negatively correlated with positive economic sentiment). In unreported regressions, I also examined whether higher debt-to-GDP levels impact the financial life index and generally find null results, which is a variant of the "balancing test' for assessing the role of unobserved shocks.

Figure 3 examines whether there are heterogeneous treatment effects. While the lowest income bracket is not as responsive in their economic sentiment to debt-to-GDP changes, the remaining income brackets are. These income brackets are defined within-country, rather than across-country, and the coefficient estimates are based on the fully saturated model.

What is a potential reason for the deterioration in economic confidence? One potential explanation is a decline in confidence over national institutions. To learn more, I leverage the National Institutions Index, which is based on responses to the following four questions: (a) Do you have confidence in each of the following, or not? How about the military?; (b) Do you have confidence in each of the following, or not? How about the judicial system and courts?; (c) Do you have confidence in each of the following, or not? How about the national government?; (d) Do you

[4]The Financial Life Index is measured in response to four questions: (a) Which one of these phrases comes closest to your own feelings about your household's income these days: living comfortably on present income, getting by on present income, finding it difficult on present income, or finding it very difficult on present income?; (b) Are you satisfied or dissatisfied with your standard of living, all the things you can buy and do?; (c) Right now, do you feel your standard of living is getting better or getting worse?; (d) Right now, do you think that economic conditions in the city or area where you live, as a whole, are getting better or getting worse?

have confidence in each of the following, or not? How about the honesty of elections?[5] Table 4 reports these results. In the preferred specifications that contain country and year fixed effects and country controls (columns 3 and 4), there is a statistically significant negative effect, suggesting that economic confidence spills over into broader institutional confidence.[6]

The results thus far suggest that debt burdens lead to declines in economic sentiment. However, is that because higher debt burdens lead to a surge in interest rates and/or inflation? To understand the mechanism, Table 5 reports similar results as those from Table 2 with one critical exception: each specification controls flexibly for either the inflation rate, real interest rate, tax revenue as a share of GDP, or debt service as a share of exports with year fixed effects. The interactions control for the possibility that higher debt-to-GDP ratios affect other macroeconomic factors that, in turn, affect consumers. While debt-to-GDP remains statistically and economically significant in most specifications, there are a few where the coefficient becomes statistically insignificant. That suggests debt-to-GDP influences beliefs directly, as well as through other channels.

Given that the relationship between debt-to-GDP and macroeconomic expectations is not fully explained by contemporaneous changes in inflation, interest rates, or tax burdens, what can account for these persistent effects? I now discuss one candidate mechanism: media as a source of amplification. A growing body of research suggests that individuals form macroeconomic beliefs not just from direct experience, but also from the narratives and signals conveyed through media. In the context of fiscal policy, this means that rising public debt may shape sentiment because

[5]The four items are recoded so that positive answers are scored as a "1" and all other answers (including don't know and refused) are assigned a score of "0." An individual record has an index calculated if it has valid scores for at least two of the four items.

[6]When binarizing each of the four inputs to the index, the effects are statistically significant for both trust in national government (coef = -0.175, p-value = 0.00) and trust in elections (coef = -0.117, p-value = 0.035. This is consistent with a causal interpretation: debt effects trust in the continuity of national government activities, including confidence in the efficacy of elections.

it is framed by media outlets and political actors as a harbinger of future austerity, economic instability, or diminished government competence. For example, Barsky and Sims (2011) show that news shocks—defined as innovations in expectations about future productivity—can generate real effects by shifting sentiment well before any changes in fundamentals. Similarly, Angeletos et al. (2018) argue that belief-driven fluctuations can emerge from the interaction of dispersed information and narrative channels, which amplify otherwise modest signals. These insights extend to fiscal narratives: when debt levels become politicized or central to public discourse—as during crisis episodes—their salience rises, magnifying their impact on individual beliefs.

There is also direct empirical evidence that media plays a pivotal role in shaping economic sentiment. For instance, D'Acunto et al. (2021) find that exposure to inflation-related news increases inflation expectations, even when actual price levels remain stable. In a similar vein, Coibion et al. (2022) document that economic sentiment is highly responsive to information treatments that prime fiscal and monetary issues, suggesting that beliefs are sensitive to framing rather than simply data per se. Moreover, Gentzkow and Shapiro (2010) show how ideological slant in media can systematically shape consumer beliefs, implying that heterogeneity in fiscal narratives may also drive heterogeneous responses to debt across contexts. Taken together, these studies underscore that media can operate as a transmission mechanism—filtering, amplifying, and at times distorting the information that individuals use to interpret fiscal conditions. Thus, the observed link between debt and sentiment may reflect not only forward-looking behavior or structural economic effects, but also a socially mediated process in which macroeconomic news is translated into individual-level expectations through narrative construction and repetition.

5 Conclusion

Using nearly two decades of individual-level data from the Gallup World Poll matched with macro-fiscal indicators across a large set of countries, this paper estimates how rising public debt levels influence economic sentiment. While canonical macroeconomic models often assume that government borrowing has neutral effects on private expectations—whether due to Ricardian equivalence or forward-looking rationality—I find consistent evidence that higher public debt is associated with lower economic confidence. These effects are often stronger during periods of fiscal adjustment and crisis, and they persist even after accounting for conventional macroeconomic variables like inflation, unemployment, and tax burdens. These results suggest that the public reacts growth in debt-to-GDP, potentially because of the signals and consequences it conveys—e.g., anticipated austerity, fiscal stress, or erosion of future policy space. In that sense, the behavioral channel matters: debt shapes sentiment when it foreshadows distributional impacts or future instability.

These findings challenge the view that public debt is inert from a welfare or political economy standpoint until it triggers measurable macroeconomic consequences. They also point to a broader conception of fiscal sustainability—one that accounts for its effect on public trust and perceived economic security. Governments operating in high-debt environments may face hidden costs in the form of diminished confidence or altered expectations, particularly if citizens interpret rising debt as a precursor to painful future adjustments that in turn affect consumption and investment decisions. Future research could build on these findings by exploring the long-run feedback between fiscal conditions, political attitudes, and support for redistribution or structural reform.

Tables and Figures

Table 1: Descriptive Statistics

	Pooled		>100 Pct GDP		<100 Pct GDP	
	(1)		(2)		(3)	
	mean	sd	mean	sd	mean	sd
Age	44.6	18.0	47.8	17.7	44.2	17.9
# Children	0.8	1.3	0.5	1.0	0.8	1.3
Secondary Education	0.52	0.50	0.53	0.50	0.52	0.50
Tertiary Education	0.21	0.41	0.26	0.44	0.21	0.40
Male	0.45	0.50	0.47	0.50	0.45	0.50
Married	0.59	0.49	0.58	0.49	0.59	0.49
Employed	0.56	0.50	0.55	0.50	0.56	0.50
Full-time	0.43	0.49	0.42	0.49	0.43	0.49
Debt-to-GDP Ratio	0.58	0.38	1.45	0.48	0.49	0.23
Believes Good Economy	0.30	0.46	0.10	0.30	0.33	0.47
Agriculture, % Share	0.18	0.18	0.07	0.08	0.19	0.18
Services, % Share	0.59	0.16	0.71	0.07	0.58	0.17
Unemployment Rate	0.07	0.05	0.09	0.06	0.07	0.04
GDP Growth Rate	0.04	0.04	0.01	0.04	0.04	0.04
Population Growth Rate	0.01	0.01	0.00	0.01	0.01	0.01
Observations	1388185		149395		1238790	

Notes.—Sources: IMF, Gallup World Poll, World Bank (2006-2023). The table reports the means and standard deviations of individual demographic factors, annual country factors, and debt-to-GDP ratio, by countries with over 100% debt-to-GDP ratios in a particular year and those under. Economic sentiment ("believes good economy") is measured as an indicator for whether the respondent rates current economic conditions in the country as excellent or good. Observations are weighted by the survey weights.

Table 2: Baseline Effects of Debt-to-Income Ratios on Economic Confidence

Dep. var. =	Economic Confidence				Economy is Good			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Debt-to-GDP Ratio	-.389***	-.407***	-.705***	-.584***	-.202***	-.231***	-.359***	-.284***
	[.098]	[.111]	[.129]	[.214]	[.051]	[.053]	[.044]	[.050]
Age		-.003***	-.002***	-.002***		-.001**	-.001***	-.001***
		[.001]	[.000]	[.000]		[.000]	[.000]	[.000]
# Children		.021*	-.002	-.002		.008	-.001	-.001
		[.013]	[.003]	[.003]		[.006]	[.002]	[.003]
Secondary Education		-.076	-.023**	-.020**		-.026	-.020***	-.018**
		[.046]	[.009]	[.009]		[.024]	[.007]	[.008]
Tertiary Education		.001	.017	.020		.022	.013	.014
		[.063]	[.013]	[.013]		[.035]	[.010]	[.010]
Male		.048***	.033***	.035***		.030***	.019***	.020***
		[.010]	[.006]	[.006]		[.007]	[.006]	[.006]
Married		.020	-.015***	-.015***		.007	-.001	-.001
		[.027]	[.004]	[.004]		[.013]	[.003]	[.003]
Employed		.061***	-.003	-.003		.029**	-.002	-.002
		[.022]	[.007]	[.007]		[.014]	[.005]	[.005]
Full-time		-.019	.007	.007		-.019	-.001	-.001
		[.020]	[.006]	[.006]		[.012]	[.004]	[.004]
log(Income)		.047***	.026***	.025***		.038***	.010***	.009***
		[.011]	[.004]	[.003]		[.008]	[.003]	[.003]
Agriculture, % Share				2.431**				.538
				[1.129]				[.614]
Services, % Share				3.145*				.028
				[1.653]				[.949]
Unemployment Rate				-3.285***				-1.169***
				[.896]				[.374]
R-squared	.05	.07	.27	.28	.03	.05	.22	.22
Sample Size	522614	452436	452436	445536	543399	468753	468753	461943
Demographics	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Year FE	No	No	Yes	Yes	No	No	Yes	Yes
Country FE	No	No	Yes	Yes	No	No	Yes	Yes
Country Controls	No	No	No	Yes	No	No	No	Yes

Notes.—Sources: IMF, Gallup World Poll, World Bank (2006-2023). The table reports the coefficients associated with regressions of economic sentiment on the debt-to-GDP ratio, individual demographic factors, and annual country controls, conditional on country and year fixed effects. Economic sentiment is measured in two ways. The first is the economic confidence index, which is the result of responses to two questions: (a) Right now, do you think that economic conditions in this country, as a whole, are getting better or getting worse? (b) How would you rate your economic conditions in this country today - as excellent, good, only fair, or poor? The second is an indicator for whether the respondent rates the current state of the economy as excellent or good. Demographic controls include: age, number of children, education fixed effects (secondary and four years or beyond, normalized to primary), male, married, employed, full-time status, and log income. Country controls include: employment share in agriculture, employment share in services, and the unemployment rate. Standard errors are clustered at the country-level and observations are weighted by the survey weights.

Table 3: Examining Heterogeneity During Times of Crisis

Dep. var. =	Economic Confidence	Economy is Good
	(1)	(2)
Debt-to-GDP Ratio	-.521**	-.271***
	[.228]	[.051]
GDP Drops Over 1.5%	.005	-.009
	[.046]	[.021]
× Debt-to-GDP Ratio	-.139***	-.018
	[.045]	[.021]
Age	-.002***	-.001***
	[.000]	[.000]
# Children	-.002	-.001
	[.003]	[.003]
Secondary Education	-.020**	-.018**
	[.010]	[.008]
Tertiary Education	.020	.013
	[.013]	[.010]
Male	.035***	.020***
	[.006]	[.006]
Married	-.015***	-.001
	[.004]	[.003]
Employed	-.002	-.002
	[.007]	[.005]
Full-time	.006	-.001
	[.006]	[.004]
log(Income)	.025***	.009***
	[.003]	[.003]
Agriculture, % Share	2.218*	.469
	[1.176]	[.617]
Services, % Share	3.287*	.048
	[1.661]	[.923]
Unemployment Rate	-2.877***	-1.092***
	[.852]	[.356]
R-squared	.28	.22
Sample Size	445536	461943
Demographics	Yes	Yes
Year FE	Yes	Yes
Country FE	Yes	Yes
Country Controls	Yes	Yes

Notes.—Sources: IMF, Gallup World Poll, World Bank (2006-2023). The table reports the coefficients associated with regressions of economic sentiment on the debt-to-GDP ratio, interacted with an indicator for whether GDP dropped over 1.5% and the three years before and after, individual demographic factors, and annual country controls, conditional on country and year fixed effects. Economic sentiment is measured in two ways. The first is the economic confidence index, which is the result of responses to two questions: (a) Right now, do you think that economic conditions in this country, as a whole, are getting better or getting worse? (b) How would you rate your economic conditions in this country today - as excellent, good, only fair, or poor? The second is an indicator for whether the respondent rates the current state of the economy as excellent or good. Demographic controls include: age, number of children, education fixed effects (secondary and four years or beyond, normalized to primary), male, married, employed, full-time status, and log income. Country controls include: employment share in agriculture, employment share in services, and the unemployment rate. Standard errors are clustered at the country-level and observations are weighted by the survey weights.

Table 4: Baseline Effects of Debt-to-Income Ratios on National Institutions

Dep. var. =	National Institution Confidence			
	(1)	(2)	(3)	(4)
Debt-to-GDP Ratio	.003	.009	-.130***	-.128**
	[.035]	[.036]	[.045]	[.053]
Age		.000	.000**	.000**
		[.000]	[.000]	[.000]
# Children		.008*	.003*	.003*
		[.004]	[.001]	[.001]
Secondary Education		-.057***	-.035***	-.035***
		[.016]	[.007]	[.007]
Tertiary Education		-.034*	-.018*	-.017
		[.019]	[.010]	[.010]
Male		.017***	.013***	.014***
		[.005]	[.003]	[.003]
Married		.015	.006***	.007***
		[.009]	[.002]	[.002]
Employed		.018**	-.002	-.002
		[.008]	[.003]	[.003]
Full-time		-.018***	-.002	-.002
		[.007]	[.003]	[.003]
log(Income)		.014**	.003**	.003**
		[.007]	[.001]	[.001]
Agriculture, % Share				.013
				[.368]
Services, % Share				.185
				[.425]
Unemployment Rate				-.220
				[.213]
R-squared	.00	.01	.18	.18
Sample Size	1134862	954966	954966	940962
Demographics	No	Yes	Yes	Yes
Year FE	No	No	Yes	Yes
Country FE	No	No	Yes	Yes
Country Controls	No	No	No	Yes

Notes.—Sources: IMF, Gallup World Poll, World Bank (2006-2023). The table reports the coefficients associated with regressions of national institutional confidence on the debt-to-GDP ratio, individual demographic factors, and annual country controls, conditional on country and year fixed effects. National institutions are measured in response to the following four questions: (a) Do you have confidence in each of the following, or not? How about the military?; (b) Do you have confidence in each of the following, or not? How about the judicial system and courts?; (c) Do you have confidence in each of the following, or not? How about the national government?; (d) Do you have confidence in each of the following, or not? How about the honesty of elections. Demographic controls include: age, number of children, education fixed effects (secondary and four years or beyond, normalized to primary), male, married, employed, full-time status, and log income. Country controls include: employment share in agriculture, employment share in services, and the unemployment rate. Standard errors are clustered at the country-level and observations are weighted by the survey weights.

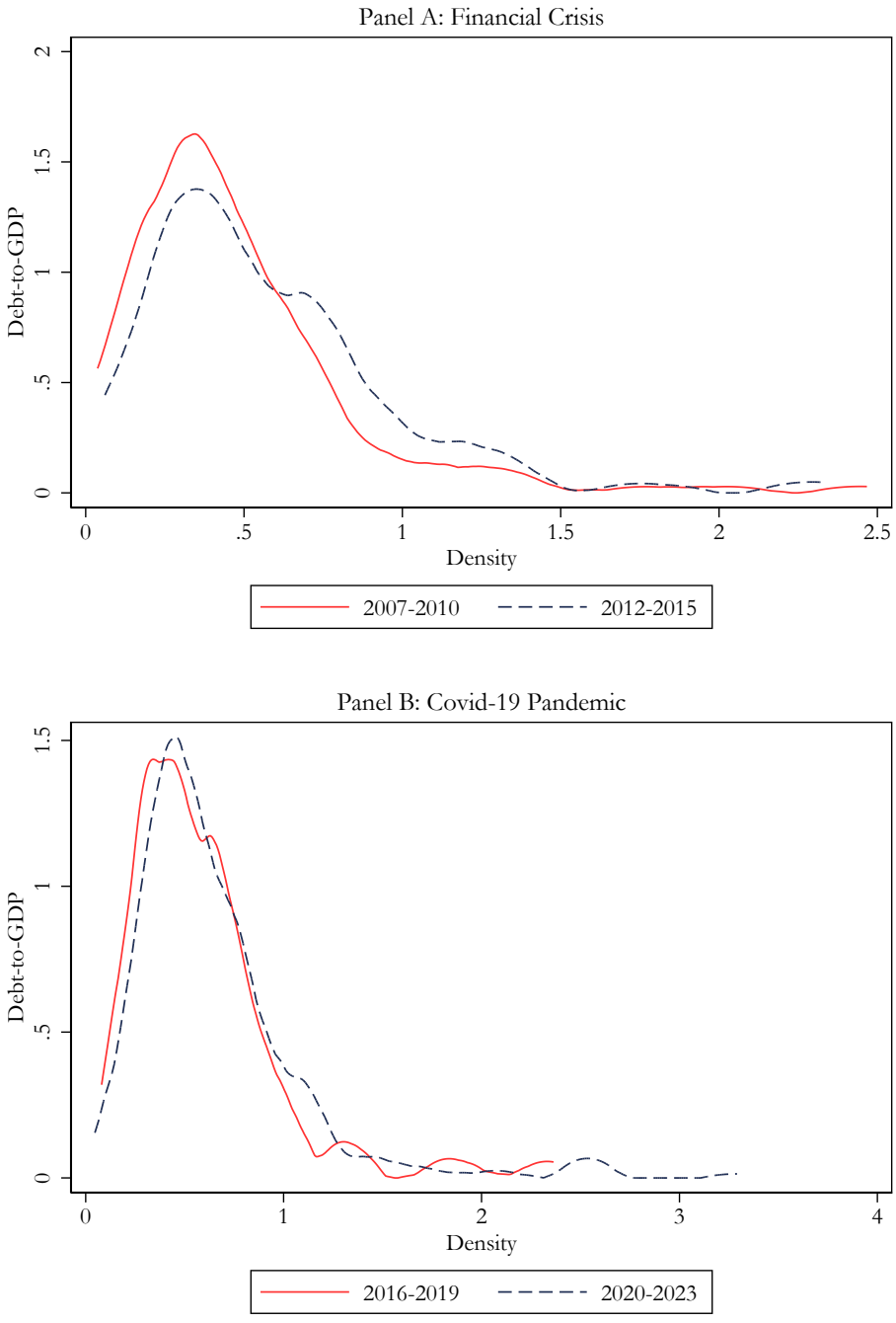


Figure 1: Distribution of Debt-to-GDP Ratios

Source: IMF (2005-2023). The figure plots the distribution fo debt-to-GDP ratios across 75 countries over different time periods.

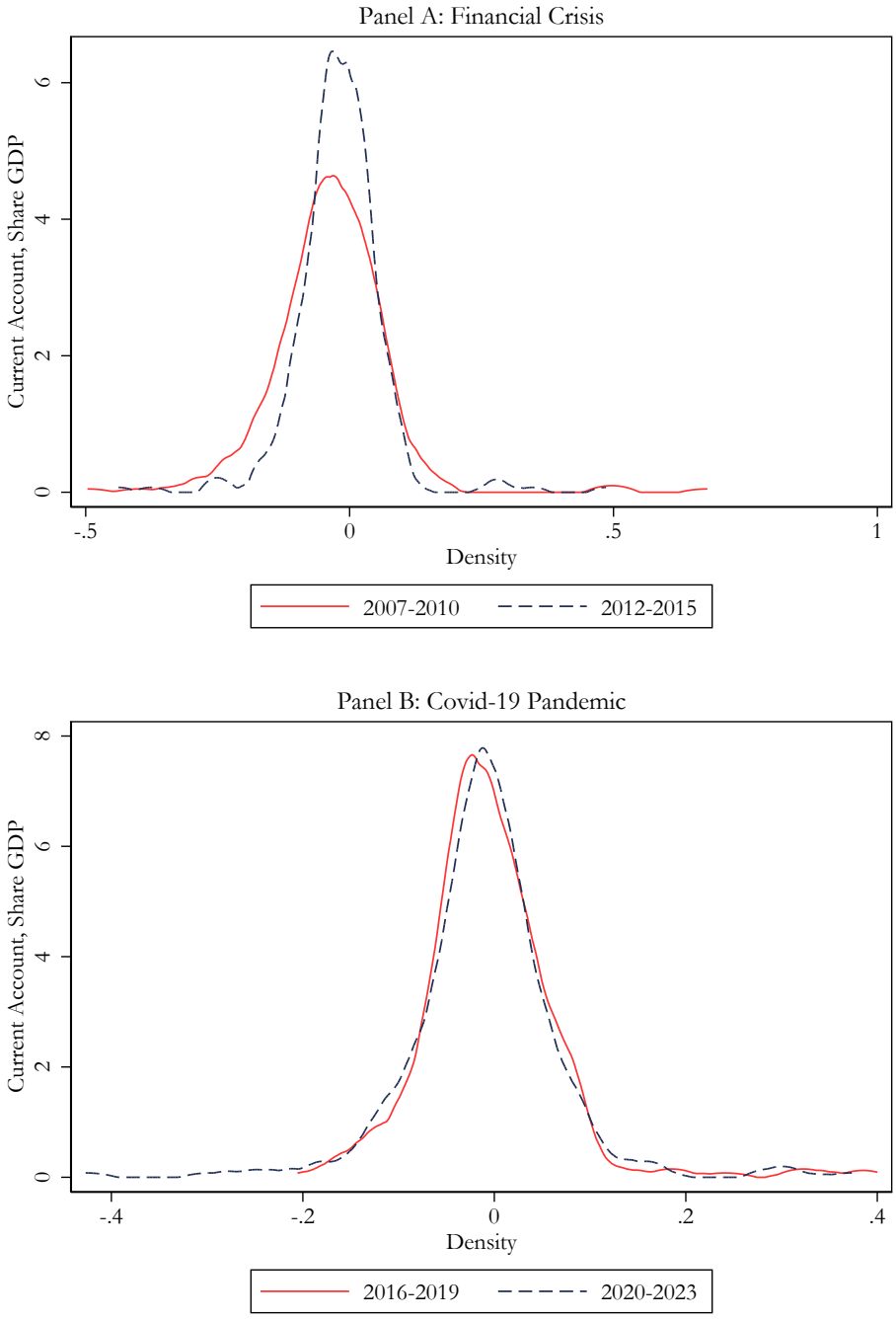


Figure 2: Distribution of Current Account, Share of GDP

Source: IMF (2005-2023). The figure plots the distribution fo the current account as a share of GDP across 75 countries over different time periods.

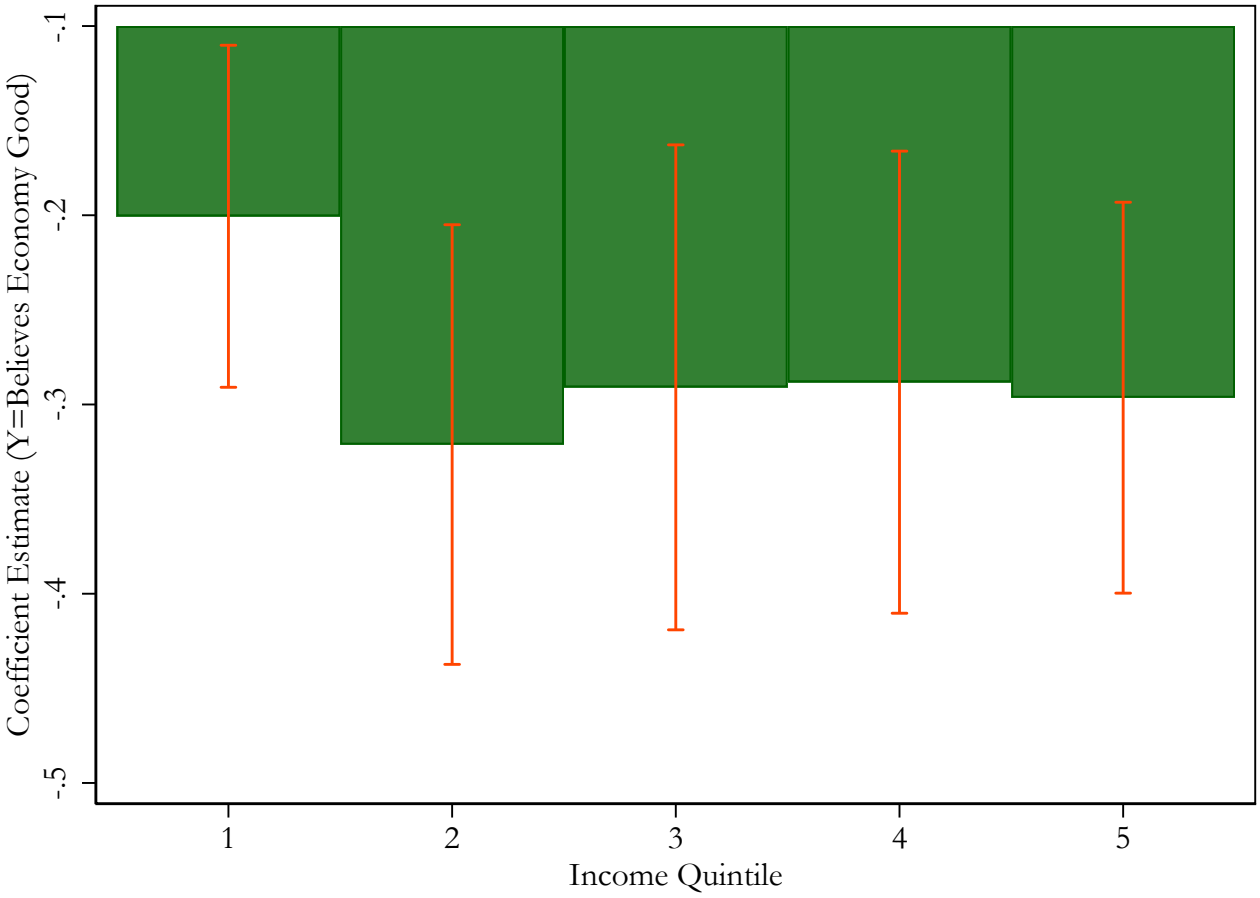


Figure 3: Heterogeneous Treatment Effects, by Income Quintile

Notes.—Sources: IMF, Gallup World Poll, World Bank (2006-2023). The figure reports the coefficients associated with regressions of an indicator for whether the respondent says the economy is good or excellent on the debt-to-GDP ratio, individual demographic factors, and annual country controls, separately by income quintile, conditional on country and year fixed effects. The income quintile is produced within-country, rather than cross-sectionally. Demographic controls include: age, number of children, education fixed effects (secondary and four years or beyond, normalized to primary), male, married, employed, full-time status, and log income. Country controls include: employment share in agriculture, employment share in services, and the unemployment rate. Standard errors are clustered at the country-level and observations are weighted by the survey weights.

Table 5: Understanding the Mechanisms Behind Debt-to-Income Ratios on Economic Confidence

Dep. var. =	Economic Confidence				Economy is Good			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Debt-to-GDP Ratio	-.231	-.472***	-.373	-.466	-.219***	-.176**	-.302***	-.176
	[.180]	[.175]	[.230]	[.361]	[.066]	[.078]	[.069]	[.162]
Inflation Rate, %	-.255				-.131			
	[.516]				[.280]			
Real Interest Rate, %		.702				.397**		
		[.453]				[.184]		
Tax Revenue, % GDP			.006				.005	
			[.013]				[.004]	
Debt Service, % Export				.227				-.058
				[.330]				[.165]
R-squared	.28	.25	.29	.28	.22	.19	.23	.16
Sample Size	442550	274619	393341	209662	459005	278016	407405	203958
Demographics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interactions	Inflation x Year	Interest x Year	TaxRev x Year	Debt x Year	Inflation x Year	Interest x Year	TaxRev x Year	Debt x Year

Notes.—Sources: IMF, Gallup World Poll, World Bank (2006-2023). The table reports the coefficients associated with regressions of economic sentiment on the debt-to-GDP ratio, individual demographic factors, and annual country controls, conditional on country and year fixed effects, as well as interaction effects between year fixed effects and inflation, real interest rates, tax revenues as a share of GDP, and debt servicing as a share of exports. Economic sentiment is measured in two ways. The first is the economic confidence index, which is the result of responses to two questions: (a) Right now, do you think that economic conditions in this country, as a whole, are getting better or getting worse? (b) How would you rate your economic conditions in this country today - as excellent, good, only fair, or poor? The second is an indicator for whether the respondent rates the current state of the economy as excellent or good. Demographic controls include: age, number of children, education fixed effects (secondary and four years or beyond, normalized to primary), male, married, employed, full-time status, and log income. Country controls include: employment share in agriculture, employment share in services, and the unemployment rate. Standard errors are clustered at the country-level and observations are weighted by the survey weights.

A Online Appendix

Table A.1: Robustness Using Local Economic Confidence

Dep. var. =	Local Economic Confidence			
	(1)	(2)	(3)	(4)
Debt-to-GDP Ratio	-.168***	-.147***	.030	.116
	[.057]	[.047]	[.122]	[.125]
Age		-.003***	-.003***	-.003***
		[.000]	[.000]	[.000]
# Children		-.006	-.007***	-.007***
		[.009]	[.002]	[.002]
Secondary Education		.027	.013	.016*
		[.025]	[.009]	[.009]
Tertiary Education		.069**	.047***	.050***
		[.032]	[.013]	[.013]
Male		.014*	.004	.006
		[.008]	[.006]	[.006]
Married		.025**	.004	.004
		[.012]	[.005]	[.005]
Employed		.009	.010**	.011**
		[.013]	[.005]	[.005]
Full-time		-.002	.010*	.009
		[.013]	[.006]	[.006]
log(Income)		.047***	.028***	.027***
		[.006]	[.003]	[.002]
Agriculture, % Share				-1.267
				[.922]
Services, % Share				-.127
				[.926]
Unemployment Rate				-1.845***
				[.615]
R-squared	.01	.04	.13	.13
Sample Size	512747	498231	498231	490181
Demographics	No	Yes	Yes	Yes
Year FE	No	No	Yes	Yes
Country FE	No	No	Yes	Yes
Country Controls	No	No	No	Yes

Notes.—Sources: IMF, Gallup World Poll, World Bank (2006-2023). The table reports the coefficients associated with regressions of local economic confidence on the debt-to-GDP ratio, individual demographic factors, and annual country controls, conditional on country and year fixed effects. Local economic confidence is an index measured using answers to the following two prompts: (a) Right now, do you think that economic conditions in the city or area where you live, as a whole, are getting better or getting worse?; (b) How would you rate your economic conditions in this city today - as excellent, good, only fair, or poor? Demographic controls include: age, number of children, education fixed effects (secondary and four years or beyond, normalized to primary), male, married, employed, full-time status, and log income. Country controls include: employment share in agriculture, employment share in services, and the unemployment rate. Standard errors are clustered at the country-level and observations are weighted by the survey weights.

Table A.2: Robustness in Economic Beliefs to Income Fluctuations

Dep. var. =	Economic Confidence				Economy is Good			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Debt-to-GDP Ratio	-.584***	-.461***	-.450**	-.460***	-.284***	-.239***	-.241***	-.239***
	[.214]	[.174]	[.178]	[.173]	[.050]	[.042]	[.041]	[.042]
Financial Life Index		.734***	.735***	.746***		.347***	.347***	.349***
		[.023]	[.023]	[.024]		[.015]	[.015]	[.015]
R-squared	.28	.35	.35	.35	.22	.27	.27	.27
Sample Size	445536	413472	413472	413472	461943	411561	411561	411561
Demographics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income x Year FE	No	No	Yes	No	No	No	Yes	No
Income Square	No	No	No	Yes	No	No	No	Yes

Notes.—Sources: IMF, Gallup World Poll, World Bank (2006-2023). The table reports the coefficients associated with regressions of economic sentiment on the debt-to-GDP ratio, the financial life index, individual demographic factors, and annual country controls, conditional on country and year fixed effects. Economic sentiment is measured in two ways. The first is the economic confidence index, which is the result of responses to two questions: (a) Right now, do you think that economic conditions in this country, as a whole, are getting better or getting worse? (b) How would you rate your economic conditions in this country today - as excellent, good, only fair, or poor? The second is an indicator for whether the respondent rates the current state of the economy as excellent or good. The financial life index is measured in response to four questions: (a) Which one of these phrases comes closest to your own feelings about your household's income these days: living comfortably on present income, getting by on present income, finding it difficult on present income, or finding it very difficult on present income?; (b) Are you satisfied or dissatisfied with your standard of living, all the things you can buy and do?; (c) Right now, do you feel your standard of living is getting better or getting worse?; (d) Right now, do you think that economic conditions in the city or area where you live, as a whole, are getting better or getting worse? Demographic controls include: age, number of children, education fixed effects (secondary and four years or beyond, normalized to primary), male, married, employed, full-time status, and log income. Country controls include: employment share in agriculture, employment share in services, and the unemployment rate. Standard errors are clustered at the country-level and observations are weighted by the survey weights.

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