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Abstract

Government debts have been increasing over the past several decades in many advanced economies, often raising concerns about fiscal sustainability. In this paper, we conduct an information provision experiment to understand the public's view on fiscal consolidation. The public tends to underestimate the current debt-to-GDP ratio. We find that the provision of the current debt-to-GDP ratio tends to increase support for fiscal consolidation, whereas additional provision of a realistic future projection tends to attenuate that effect. We also find that fiscal policy views are heterogeneous along key socio-economic attributes, but the responses to information provision are not.

JEL Classification: E62, H31, H68

Keywords: Fiscal Consolidation; Government Debt; Information Provision Experiment; Randomized Controlled Trial

*This experiment is registered in the AEA RCT Registry as AEARCTR-0012973, available at https://www.socialscienceregistry.org/trials/12973. All experimental instructions are available upon request. We obtain ethics approval from the University of Tokyo. We thank Chun-Che Chi and Shuhei Kitamura for their discussions and helpful comments. We are also grateful to the participants at the 2024 NTU-AS International Symposium on Macroeconomics, the 2nd RISE Workshop on Understanding Macroeconomic Regimes and Their Implications for Modeling and Policymaking, SWET 2024, the R. K. Cho Memorial Conference, the 10th Annual CIGS End of Year Macroeconomic Conference, and the 2025 Japan Economic Association Spring Meeting for their helpful comments.

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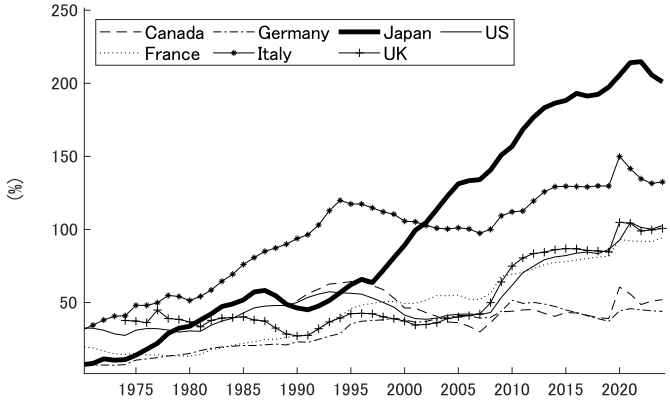
1 Introduction

Government debts have been increasing over the past several decades in many advanced economies. Figure 1 depicts this trend for G7 countries. Most recently, the COVID-19 crisis increased the debt-to-GDP ratio, prompting discussion on the need for fiscal consolidation. As with any policy, broad public support is essential if the government wishes to implement fiscal consolidation. Thus, it is beneficial for policymakers to understand the extent to which the public supports fiscal consolidation and examine whether government communication can influence their support.

Figure 1: Debt-to-GDP Ratio for G7 Countries



Source: IMF Public Finances in Modern History Database (Retrieved on October 2025)

In this paper, we investigate how the provision of information regarding the debt-to-GDP ratio influences the public's fiscal policy views. We conduct our analysis in Japan—a country with the highest debt-to-GDP ratio among advanced economies. We begin by asking our survey participants about their perceptions of the current debt-to-GDP ratio and their projections of the debt-to-GDP ratio. We then provide three types of information: (i) the current debt-to-GDP ratio, (ii) a government's debt-to-GDP ratio projection together with the current ratio, and (iii) another government's debt-to-GDP ratio projection together with the current ratio. After providing the information, we ask our survey participants various questions regarding their fiscal policy views, including their support for debt reduction, expenditure cuts, and tax hikes. Throughout the analysis, we pay close attention to the heterogeneity associated with demographic and socio-economic characteristics.[1]

We find that the public tends to underestimate the current debt-to-GDP ratio. Our survey participants, on average, think that the debt-to-GDP ratio is 175%, whereas the actual ratio was 214%. 85% of the participants underestimate the current debt-to-GDP ratio. Most participants—approximately 75%—project an increase in the debt-to-GDP ratio over the next decade. On average, our participants expect around a 30 p.p. increase in the debt-to-GDP ratio over the next

[1]The set of analyses we conduct in the paper is identical to the set of analyses we described in our pre-analysis plan, though we relegate some analyses to the Appendix for the sake of brevity.

ten years. Those who are young, less educated, female, and do not know much about the economy tend to think the current level of the debt-to-GDP ratio is higher and expect a smaller increase in the debt-to-GDP ratio in the future.

In the control group, our survey participants tend to think that the debt-to-GDP ratio is excessive and should be reduced. About two-thirds of our participants either agree or strongly agree with the statement that the government debt is excessive. Three-quarters of our participants either agree or strongly agree with the statement that the government debt should be reduced. Those who are old, highly educated, and underestimate the current debt-to-GDP ratio by less are more likely to think that the debt-to-GDP ratio is excessive and that it should be reduced.

We find that the provision of information on the current debt-to-GDP ratio raises support for fiscal consolidation. However, the additional information provision of a debt-to-GDP ratio projection dilutes the effect of the information provision of the current debt-to-GDP ratio. The latter result makes sense because both of the two debt-to-GDP projections we provided were more optimistic than our survey participants' projections. Those with a lower perceived debt-to-GDP ratio react more to the information provision than those with a higher perceived debt-to-GDP ratio. We do not find any noticeable heterogeneity in the response to information provision in most individual characteristics, including age, education, gender, income, and economic literacy, except for gender and whether the respondent holds the Japanese government bond.

Turning to the public's view on spending cuts and tax hikes, we find that (i) support for overall spending cuts and tax hikes is weaker than support for debt reduction, and that (ii) support for overall spending cuts is stronger than support for tax hikes. Interestingly, our survey participants tend to support higher spending on specific spending categories, even though they tend to support overall spending cuts. Our survey participants demonstrate strong support for increasing tax rates for the wealthy, despite being more likely to support tax reductions overall and in other specific categories. Finally, information provisions affect support for some spending cuts and tax hikes in a statistically significant way. Overall, support for spending cuts tends to be more responsive to information provision than support for tax hikes.

Our analysis of fiscal policy in Japan is of interest to other countries with an increasing trend in government debt. In Japan, the aging process began earlier than in other advanced economies, which has likely contributed to a more rapid rise in the debt-to-GDP ratio. Some other advanced economies are following a similar demographic and fiscal trend, and they could see a further increase in the debt-to-GDP ratio unless fiscal consolidation is undertaken. A better understanding of fiscal policy views in Japan could shed light on how the public may form their fiscal policy views in other countries with similar demographic and fiscal trends.

Our paper builds on a recent literature using information provision experiments to investigate how the public shapes its policy views. See, for example, Alesina et al. (2021), Alesina et al. (2023), Cattaneo et al. (2020), Dechezleprêtre et al. (2022), Facchini et al. (2022), Haaland and Roth (2023), Henkel et al. (2025), Kishishita et al. (2024), Kuziemko et al. (2015), and Settele (2022). Within this literature, our work is closely related to Kawata and Nakabayashi (2023),

Parlevliet et al. (2023), and Roth et al. (2022) who examine the effects of information provision on the public's fiscal policy views. In particular, our work is most closely related to Roth et al. (2022) in that we provide our respondents with information on the current debt-to-GDP ratio and how that affects their views on various fiscal policy instruments. Our paper differs from Roth et al. (2022) in two key dimensions. First, we study fiscal policy views in Japan—a country with the highest debt-to-GDP ratio—while they study those in the U.S. Second, we study not only the effect of the correction information on the current debt-to-GDP ratio, but also the effect of different projections of the future debt-to-GDP ratio, whereas they focus on the former.

Our paper is related to the extensive literature using information-provision experiments to understand how the public forms expectations in macroeconomics. Many have analyzed how information provision affects inflation expectations of households (for example, Binetti et al., 2024; Coibion et al., 2022, 2023, among others) and firms (Baumann et al., 2024; Kumar et al., 2023; Ropele et al., 2024; Weber et al., 2023).[2] Some have analyzed how changes in inflation expectations induced by information provision affect households' spending decisions (Coibion et al., 2024; van Rooij et al., 2024). Within this literature, our work is most closely related to Andrade et al. (2025), Coibion et al. (2021), Grigoli and Sandri (2024) who study the effect of fiscal information on inflation and/or debt-to-GDP expectations. We differ from these studies because we conduct an information-provision experiment to understand how the public shapes their views on fiscal policy, as opposed to how they form expectations and/or change their economic behaviors.

Our paper is also related to the theoretical literature analyzing fiscal consolidation or debt sustainability. Barnichon et al. (2022) and House et al. (2020) investigate the effects of fiscal austerity on output, whereas Bi et al. (2013) studies the economic consequences of uncertainties concerning the timing and composition of fiscal consolidation. Blanchard (2019), Ghosh et al. (2013), Jiang et al. (2024), Kocherlakota (2023), and Mehrotra and Sergeyev (2021) theoretically analyze debt sustainability in macroeconomic models. Braun and Joines (2015), Hansen and İmrohoroğlu (2016), İmrohoroğlu et al. (2019), Hansen and İmrohoroğlu (2023), and Kitao and Mikoshiba (2024) analyze the various tax reforms for achieving fiscal sustainability in Japan. We conduct information provision experiments to shed light on what kind of fiscal reforms the public is likely to support and what communication might be helpful if the government were to implement a specific policy aimed at reducing its debt.

The rest of the paper is organized as follows. Section 2 describes the experimental design. Section 3 presents the respondents' beliefs about the current and future debt-to-GDP ratios. Section 4 shows the respondents' views on fiscal consolidation in the control group. Section 5 presents the results of the information provision experiment on the fiscal consolidation view. Section 6 presents results related to spending cuts and tax hikes. Section 8 concludes.

[2]See D'Acunto and Weber (2024) for a recent review of household inflation expectations.

2 Survey Design

We conducted our main survey from February 14 to 22, 2024, and a follow-up survey four weeks after the main survey, i.e., from March 11 to 18, 2024. We worked with an online survey company, MyVoice Communications, Inc. The entire questionnaire for our survey is presented in Appendix A. In this section, we provide a concise summary of our survey questions.

Our respondents range in age from 20 to 79. They are randomly chosen and stratified so that the age and gender distributions match those of the latest Population Census in Japan in 2020. We screened our respondents based on the instructional manipulation check (IMC) to ensure that they pay proper attention to our survey.[3] We recruited 6,400 respondents who passed the IMC for the main survey. We have 800 participants in each arm.[4]

Our respondents are financially incentivized to participate in our survey: they receive a modest amount of vouchers for online shopping. However, they are not provided with an additional financial incentive to give correct answers to questions that have correct answers.[5]

2.1 Main Survey

2.1.1 Current and Future Debt-to-GDP Ratio

We ask our participants about their perceptions of the current debt-to-GDP ratio and their projections of the debt-to-GDP ratio 10 years ahead. We provide explanations about what we mean by "debt" and "GDP" in plain language in case the respondents are familiar with those terms.

Before they answer these two questions, we provide our respondents with one of the following two nominal anchors to reduce the possibility of outliers in the response. The first anchor is the debt-to-GDP ratio in Japan in 2010, which is 164% (Anchor 1).[6] The second anchor is the average debt-to-GDP ratio in Japan from 2002 to 2010, which is 134% (Anchor 2). Respondents are randomly assigned to these two anchors.

2.1.2 Information Provision

We consider a control group and three randomly selected treatment groups. For all four groups, we remind all the respondents about how they answered about the current debt-to-GDP ratio. We provide the respondents in treatment group 1 with the actual current debt-to-GDP ratio (214%). We provide the respondents in treatment group 2 with the actual current debt-to-GDP ratio and

[3] Details of the IMC and results are shown in Appendix A.

[4] We set the sample size to detect a 0.1 standard deviation change in the outcome variable with 80% power at the 5% significance level, following Haaland et al. (2023).

[5] Questions that have correct answers include a question about the current debt-to-GDP ratio or the current Governor of the Bank of Japan, for example.

[6] In our survey, we use the debt-to-GDP ratio announced by the Cabinet Office of Japan because we intend to utilize their long-run forecasts under different scenarios for our treatments. Note that they are different from typical numbers available, for example, from the IMF. The major difference is that those numbers from the Cabinet Office are only concerned about debts held by national and local governments and do not include anything related to insurance and pensions.

a 10-year-ahead projection of the debt-to-GDP ratio by the Cabinet Office of Japan (172%). We call this the optimistic projection. We provide the respondents in the treatment group 3 with the actual current debt-to-GDP ratio and an alternative 10-year-ahead projection of the debt-to-GDP ratio (226%) by the Cabinet Office of Japan. We call this the pessimistic projection.

We confirmed that the randomization was successful via a balance check. See Appendix C for the details of our balance check.

2.1.3 Fiscal Policy Views

After the information provision, we ask the respondents three types of questions regarding their views on fiscal policy.

The first type of question is about support for fiscal consolidation. We ask two questions regarding the respondents' views on (i) whether the government debt is excessive and (ii) whether the government should reduce the debt. The responses are on a 5-point Likert scale: "Strongly Disagree," "Disagree," "Neutral," "Agree," and "Strongly Agree."

The second type of question is about support for spending cuts and tax hikes. For the spending side, we ask our respondents their views on whether the government should reduce its overall spending, as well as specific spending on infrastructure, education, childcare, technology, environment, defense, and social security benefits. For the tax side, we ask them their views on (i) whether the government should increase consumption tax, capital gain tax, and inheritance tax, (ii) whether the government should increase the income tax rate for each of the seven income tax brackets,[7] and (iii) whether the government should increase or reduce social security benefits.

2.1.4 Individual Characteristics

Lastly, we asked respondents about various demographic and socio-economic attributes. Demographic attributes include gender, age, residence, marital status, the number of children under the age of 18, occupation, and educational attainment. Socio-economic attributes include household disposable income, holdings of Japanese Government bonds, political stance, and economic literacy.[8] The coding protocol for these variables is discussed in Appendix B.

2.2 Follow-up Survey

We conducted the follow-up survey four weeks after the main survey to examine whether information provision had persistent effects on their policy views. Due to constraints, we conducted the follow-up experiment only for those who received Anchor 1 in the main survey and limited our questions to those spending cuts and tax hikes.[9] As discussed in Section 5 and Appendix D, the response to information provision turned out to be systematically weaker in Anchoring Group 1 than in

[7] The current tax rates associated with these seven income brackets are 5%, 10%, 20%, 23%, 33%, 40%, and 45%

[8] The economic literacy refers to whether a respondent correctly knows the current governor of the Bank of Japan.

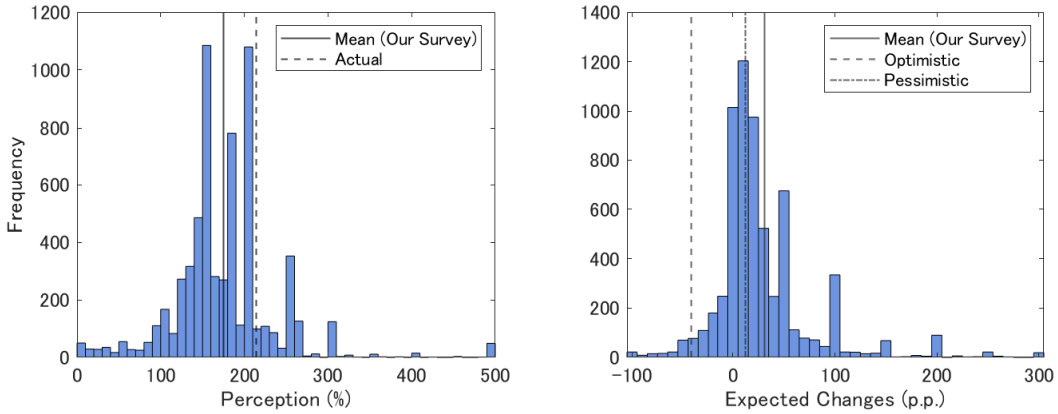
[9] We received 2,958 responses, implying the retention rate of 92%.

Anchoring Group 2. Thus, ex-post, our follow-up survey was not as useful as we initially anticipated. We discuss the results of the follow-up survey in Appendix F.

3 Perceptions and Projections of the Debt-to-GDP Ratio

Figure 2 shows the distribution of respondents' perception of the debt-to-GDP ratio in 2023 (the left panel) and their projections of the ratio over the next ten years (the right panel).[10] According to the left panel, our respondents tend to underestimate the perceived current debt-to-GDP ratio. The mean of the perceived current debt-to-GDP ratio—indicated by the dashed vertical line—is 175%, about 40 percentage points lower than the actual value of 214%—indicated by the solid vertical line.[11] 85% of respondents underestimate the actual debt-to-GDP ratio.[12]

Figure 2: Perception of the Debt-to-GDP Ratio and its Expected Changes



Note: "Optimistic" and "Pessimistic" on the right panel indicate the optimistic and pessimistic projections from the Cabinet Office of Japan.

The right panel of Figure 2 shows the distribution of respondents' expected changes in the debt-to-GDP ratio over the next 10 years.[13] According to the panel, the majority of our respondents (74%) expect the debt-to-GDP ratio to increase in the future. The mean expected change—indicated by the vertical thick line—is 31 percentage points.[14] Interestingly, the mean projection is more pessimistic than the two projections provided by the Cabinet Office of Japan—indicated by vertical dashed ("pessimistic") and dash-dotted lines ("optimistic"). As discussed in the previous section, these two projections are provided to treatment Groups 2 and 3 in our information-provision experiment.

[10] We winsorize the respondents' perception about the debt-to-GDP ratio in 2022 at 500 to deal with outliers. This manipulation affects only a few observations; Only 28 respondents answered higher than 500.

[11] The median of the the perceived current debt-to-GDP ratio is 170%.

[12] There is a tendency for respondents to answer nice round numbers (e.g., 150%, 200%, 250%, etc.). As a result, we observe spikes at these numbers in Figure 2.

[13] We also winsorized the debt-to-GDP in 2023 at 500, above which there are 89 respondents (1.4% of the whole sample).

[14] The median of expected change is 20 percentage points.

Table 1: Factors Associated with the Perceived Debt-to-GDP Ratio and its Expected Changes

	Perception of Current D/GDP Ratio	Expected Change in D/GDP Ratio
(Intercept)	151.101***	56.003***
	(18.607)	(16.264)
Middle-age	9.125***	4.977***
	(1.916)	(1.719)
Old-age	10.756***	3.681*
	(2.313)	(2.061)
High Education	6.554***	5.478***
	(1.555)	(1.332)
Employed	−1.712	0.709
	(1.923)	(1.559)
Female	−9.585***	−8.871***
	(1.585)	(1.340)
Income	0.103	−2.440**
	(1.214)	(1.077)
JGB	1.671	2.498
	(3.081)	(2.821)
Children	−3.134	5.254**
	(2.264)	(2.074)
High Literacy	20.246***	10.954***
	(1.601)	(1.356)
Married	3.675**	−2.043
	(1.839)	(1.654)
Politically Left	9.107***	6.344***
	(2.100)	(1.915)
Politically Right	4.040**	1.083
	(2.047)	(1.790)

Notes: Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 1 shows the result of a regression analysis examining whether the perceived debt-to-GDP ratio and the expected changes are correlated with demographic and socio-economic attributes. In the table, "Middle-age" represents a dummy variable for the ages of 40s and 50s. "Old-age" refers to a dummy variable for the age of 60s and 70s. "High Education" is a dummy variable for having a college degree or higher. "Employed" is a dummy variable for being employed. "Female" takes the value of 1 if the respondent is female. "Income" is the logarithm of the household's disposable income. "JGB" is a dummy variable for holding Japanese government bonds. "Children" is a dummy variable for having children under the age of 18. "High Literacy" is a dummy variable for answering the economic literacy question correctly. "Married" is a dummy variable for being married. "Politically Left" and "Politically Right" are dummy variables indicating whether the respondents are politically left-leaning or right-leaning.

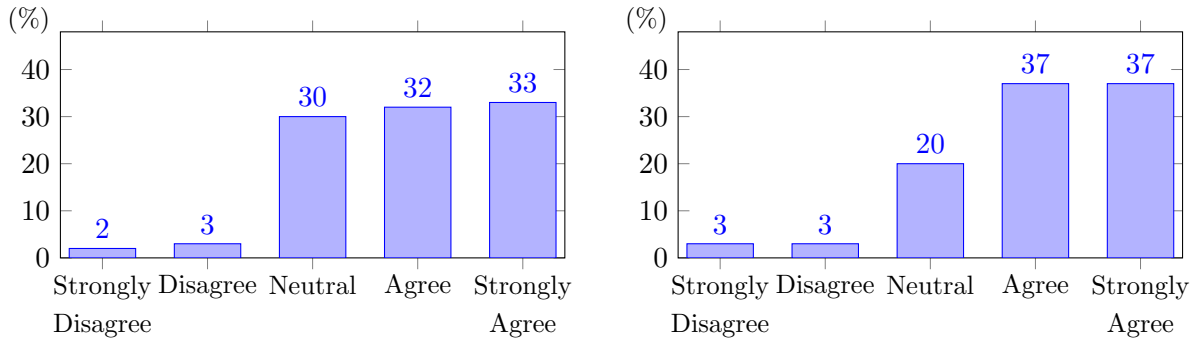
According to the table, those who are middle-aged/old, highly educated, male, more economically literate, married, or politically left-leaning/ right-leaning—as opposed to being at the center of the political spectrum—are more likely to answer a high number for the current debt-to-GDP ratio. In other words, they are less likely to underestimate the current debt-to-GDP ratio. Those

who are middle-aged/old, highly educated, or male are more likely to project a larger increase in the debt-to-GDP ratio in the future. Those who earn high income, those who have children, or those who are more economically literate or politically left-leaning are also more likely to project a larger increase in the debt-to-GDP ratio in the future.

4 Fiscal Consolidation View

Before examining the effect of information provision, it is helpful to understand how the respondents in the control group—those who do not receive any information from us—view fiscal policy. Figure 3 shows the distribution of responses from the control group to the questions about government debt and fiscal policy.

Figure 3: Views on Fiscal Consolidation



(a) Too Much Debt

(b) Should Reduce Debt

Notes: The figures show the distribution of responses from the control group to the statements about government debt. The vertical axis represents the percentage of respondents for the corresponding answers. The statements are as follows: (a) "The government has too much debt," and (b) "The government should reduce its debt." The responses are on a 5-point Likert scale: "Strongly Disagree," "Disagree," "Neutral," "Agree," and "Strongly Agree."

According to the figure, the majority of our respondents either agree or strongly agree with the statement that the government debt is too large and the statement that the government debt should be reduced (65% [=32%+33%] and 74% [=37%+37%], respectively). Very few respondents either disagree or strongly disagree with these two statements of fiscal consolidation (5% [=3%+2%] and 6% [=3%+3%]).

Fiscal policy views are correlated with several demographic and socio-economic characteristics. According to Table 2, those who are middle-aged/old, highly educated, female, or politically left-leaning—as well as those who hold Japanese government debts—are more likely to agree with the statement that the current debt-to-GDP ratio is too high (the first column). Those who are politically right-leaning are less likely to agree with the statement. According to the second column, those who are middle-aged/old, highly educated, or female are more likely to support debt reduction. Those who earn high income, those without children, those who are married, and those who are politically not in the center are also more likely to support debt reduction.

Table 2: Factors Associated with Fiscal Consolidation Views

	Too Much Debt	Should Reduce Debt
(Intercept)	3.016***	2.961***
	(0.290)	(0.289)
Middle-age	0.169***	0.197***
	(0.030)	(0.031)
Old-age	0.332***	0.380***
	(0.036)	(0.036)
High Education	0.110***	0.056**
	(0.025)	(0.025)
Employed	−0.032	−0.002
	(0.030)	(0.030)
Female	0.203***	0.196***
	(0.025)	(0.024)
Income	0.016	0.032*
	(0.019)	(0.019)
JGB	0.010	0.081
	(0.053)	(0.050)
Children	−0.039	−0.064*
	(0.036)	(0.035)
High Literacy	0.027	−0.036
	(0.026)	(0.025)
Married	0.080***	0.133***
	(0.030)	(0.029)
Politically Left	0.142***	0.142***
	(0.034)	(0.032)
Politically Right	−0.141***	−0.187***
	(0.033)	(0.034)
Perception of Current D/GDP	0.002***	0.001***
	(0.000)	(0.000)
Projected Increase in D/GDP	0.001***	0.001***
	(0.000)	(0.000)

Note: These results are based on the responses of the control group. Positive coefficients mean that respondents agree with the statement. Regressors are the same as those used in Table 1. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate e statistical significance at the 1%, 5%, and 10% levels, respectively.

Fiscal policy views are also correlated with perceptions of the current debt-to-GDP ratio and projections of the future debt-to-GDP ratio. Those with a higher perception of the current debt-to-GDP ratio are more likely to agree with the statement of "too much debt" and to support debt reduction. Those who project a larger increase in the debt-to-GDP ratio in the future are more likely to agree with the statement of "too much debt" and to support debt reduction.

5 Effect of Information Provision on Fiscal Consolidation View

In this section, we discuss the results of our main exercises on how information provision affects their views on fiscal policy.

5.1 Average Effects

To examine the effects of information provision, we estimate the following equation:

$$y_i = \alpha + \beta_1 \text{Group1}_i + \beta_2 \text{Group2}_i + \beta_3 \text{Group3}_i + \boldsymbol{x}_i' \boldsymbol{\gamma} + \varepsilon_i, \tag{1}$$

where y_i represents our outcome variable of a respondent i, and Group1, Group2, and Group3 are dummy variables indicating the treatment groups. A vector $\boldsymbol{x}_i$ is a set of control variables; it includes age, higher education, employment status, expected changes in the debt-to-GDP ratio, gender, income, holding of Japanese Government Bonds, the number of children under 18, economic literacy, marital status, prior beliefs, political stance, and regions of residence.

The first column of Table 3 shows how the information provision affects respondents' views on the level of the current government debt. According to the column, respondents in all three treatment groups are more likely to think that the government has too much debt than those in the control group (the group with no information provision). Respondents in Groups 2 and 3 are less likely to view the current debt level as excessive than respondents in Group 1, though their differences with Group 1 are not statistically significant.[15] This result makes sense because both projections—even the "pessimistic" projections—are more optimistic than our respondents' expectations about the future increase in the debt-to-GDP ratio, as previously discussed and as shown in 2. Our respondents on average expected a 31 percentage-point increase in the debt-to-GDP ratio, while the pessimistic projection by the Cabinet Office expects only a 10 percentage-point increase. Comparing Group 2 and Group 3, the provision of an optimistic debt projection weakens the effect of the current debt-to-GDP ratio by more than the provision of a pessimistic debt projection, though the difference is not significant. This last result is intuitive.

[15] The difference in the point estimates between Group 1 and Group 3 is 0.094, and the associated standard error is 0.297. The difference between Group 1 and Group 2 is 0.135, with the standard error of 0.297.

Table 3: Effect of Information Provision on Fiscal Consolidation Views

	Too Much Debt	Should Reduce Debt	Index
Group1 (Current)	0.238***	0.133***	0.209***
	(0.031)	(0.032)	(0.033)
	[0.001]	[0.001]	
Group2 (Current + Optimistic)	0.102***	0.089***	0.109***
	(0.033)	(0.032)	(0.033)
	[0.004]	[0.004]	
Group3 (Current + Pessimistic)	0.144***	0.025	0.094***
	(0.032)	(0.033)	(0.034)
	[0.001]	[0.292]	

Notes: A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. Group 1 receives the actual debt-to-GDP ratio in 2022. Group 2 receives the actual debt-to-GDP ratio in 2022 and the optimistic forecast. Group 3 receives the actual debt-to-GDP ratio in 2022 and the pessimistic forecast. The index is constructed as a weighted average of those in columns 2 and 3, with the weighting scheme based on Anderson (2008). We control for age, higher education, employment status, expected changes in the debt-to-GDP ratio, gender, income, holding of Japanese Government Bonds, the number of children under 18, economic literacy, marital status, prior beliefs, political stance, and regions. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively. False-discovery-rate-adjusted p-values of Benjamini et al. (2006) are in brackets.

These responses are not only statistically significant but also economically significant. In our setup, a coefficient of 0.1 means that the public is 10 percent more likely to choose a category that is one category more supportive of the excessive-debt statement. Alternatively stated, we obtain a coefficient of 0.1 if, for example, 10 percent of our respondents decide to choose "Agree" instead of "Neutral" as a result of an information provision. In a policy debate where the public's opinion splits, the balance of the debate could change dramatically if 10 percent of the population changed their opinion.

The second column of Table 3 shows the results for the question about whether the government should reduce its debt. According to the column, respondents in Groups 1 and 2 are more likely to agree that the government should reduce its debt than the control group in a statistically significant way, whereas the respondents in Group 3 do not respond to the information provision in a statistically significant way. The response is weaker for Groups 2 and 3 than for Group 1, which is intuitive given that, as discussed earlier, both of the provided projections were more optimistic than our respondents' projection on average.

To deal with a potential issue of multiple hypothesis testing, we construct the index following the procedures described in Anderson (2008). The third column of Table 3 reports the specification based on an index summarizing views on fiscal consolidation. The respondents in the treatment groups tend to be more supportive of fiscal consolidation for all three types of information provision. The coefficients for Groups 2 and 3 are smaller than those for Group 1, consistent with the finding that additionally providing projections may attenuate the effect of informing the current debt-to-GDP ratio from the first two columns.

To summarize, our result shows that information provision of a simple fact—the current debt-

Table 4: Effects of Information Provision on Views Related to Government Trust

	Trustworthy	Forward-Looking Spending	Forward-Looking Tax	Not Sustainable	Less Demand for JGB
Group1	0.085**	0.056*	0.039	0.002	0.026
	(0.034)	(0.030)	(0.032)	(0.033)	(0.033)
Group2	0.040	0.043	−0.004	0.004	0.007
	(0.034)	(0.030)	(0.032)	(0.032)	(0.033)
Group3	0.088***	0.046	0.020	−0.011	−0.059*
	(0.034)	(0.031)	(0.032)	(0.032)	(0.033)

Notes: A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

to-GDP ratio—can influence the public's support for fiscal consolidation in an economically and statistically significant way. However, the effect becomes weaker if we additionally provide our respondents with a relatively more optimistic projection.

Why do people become more supportive of fiscal consolidation once they learn that the current debt-to-GDP ratio is higher than they initially thought? One possible reason is that they become more skeptical of the government's ability to manage fiscal policy once they learn about the current debt-to-GDP ratio. To explore this possibility, we examine how various measures related to the public's trust in the government or the government's ability to manage fiscal policy react to information provision. To measure the public's trust in the government, we ask five questions; (i) whether they trust the government, (ii) whether they think the government is forward-looking in its spending decisions, (iii) whether they think the government is forward-looking in its tax policies, (iv) the government's primary balance is sustainable, and (v) the demand for the Japanese government bond will remain strong.

Table 4 shows the result of this analysis. Interestingly, information provision enhances the public's trust in government. According to the first column, the respondents in Groups 1 and 3 are more likely to trust the government than those in the control group. Other measures of trust are largely unresponsive to information provision, except for forward-looking spending decisions and more demand for government debt. Group 1 respondents are more likely to think that the government's spending decision is forward-looking than in the control group, whereas Group 3 respondents are more likely to think that the demand for the Japanese government bond will remain strong.

5.2 Heterogeneity

To better understand how the information provision affects the public's views on fiscal policy, we now investigate how different groups of people respond to the information provision. For that purpose, we group our respondents into sub-groups according to individual characteristics and estimate the following equation:

$$y_i = \alpha + \sum_{j=1}^{3} \beta_j \text{Group}j_i + \sum_{j=1}^{3} \eta_j \text{Group}j_i \times H_i + \delta H_i + \boldsymbol{x}_i' \boldsymbol{\gamma} + \varepsilon_i, \tag{2}$$

where H_i is a dummy variable representing which subgroup the respondent belongs to in terms of individual characteristics or prior perceptions. As before, $\boldsymbol{x}_i$ is a vector of control variables.

We begin our analysis of heterogeneous effects of the information provision by investigating how different respondents with low and high perceptions of the current debt-to-GDP ratio react to the information provision. Let us define a variable $LowPerception_i$ that takes the value of one if the perceived debt-to-GDP ratio of the respondent i is below the median and zero otherwise. We set $H_i = LowPerception_i$ in (2).[16] Given that our respondents tend to underestimate the current debt-to-GDP ratio, low perception means more underestimation, whereas high perception means less underestimation.

Table 5 shows the results of this analysis. According to the first column, for the question of whether the level of the government debt is too high, those with low perceptions of the current debt-to-GDP ratio react more to all three types of information provision. For the question of whether the government debt should be reduced, those with low perceptions of the current debt-to-GDP ratio react more to the joint provision of the current debt-to-GDP ratio and a pessimistic projection. According to the index that summarizes these two responses—reported in the third column—those with low perceptions are more likely to shift towards supporting fiscal consolidation in response to all three types of information provision.[17]

[16] We also considered an alternative definition of $LowPerception_i$ where the variable takes the value of one if the perceived debt-to-GDP ratio is below the actual rate and zero otherwise. The results are qualitatively unchanged under this alternative specification. See Appendix E for details.

[17] An alternative way to capture the role of perceived debt-to-GDP ratio is to examine the heterogeneity across two anchoring groups because the perceived debt-to-GDP ratio is systematically different across the two anchoring groups. In particular, those in Anchoring Group 2 have a higher perceived debt-to-GDP ratio than those in Anchoring Group 1. Such a heterogeneity analysis shows indeed that those in Anchoring Group 2 react more to information provision than those in Anchoring Group 1. See Appendix D for details.

Table 5: Effect of Information Provision: Role of the Perceived Current Debt-to-GDP Ratio

	Too Much Debt	Should Reduce Debt	Index
Group1	0.124***	0.099**	0.127***
	(0.043)	(0.046)	(0.046)
	[0.009]	[0.015]	
Group1 × Low Perception	0.245***	0.073	0.178***
	(0.063)	(0.064)	(0.066)
	[0.001]	[0.146]	
Group2	−0.036	0.055	0.012
	(0.046)	(0.046)	(0.047)
	[0.764]	[0.764]	
Group2 × Low Perception	0.293***	0.074	0.205***
	(0.065)	(0.065)	(0.066)
	[0.001]	[0.146]	
Group3	0.005	−0.036	−0.019
	(0.045)	(0.047)	(0.048)
	[1.000]	[1.000]	
Group3 × Low Perception	0.295***	0.130**	0.239***
	(0.064)	(0.066)	(0.067)
	[0.001]	[0.025]	

Notes: Low perception takes the value of 1 if the perceived debt-to-GDP ratio is below the median, and the value of 0 otherwise. A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. The index is constructed based on Anderson (2008). We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively. False-discovery-rate-adjusted p-values of Benjamini et al. (2006) are in brackets.

For heterogeneity in terms of demographic and socio-economic characteristics, we report the detailed results in Appendix G and discuss key takeaways from the analysis below to economize on the space.

Our heterogeneity analysis reveals that most of the individual characteristics do not play an important role in determining the strengths of the information provision effects. These individual characteristics include education, employment status, income level, children, economic literacy, marital status, and political stance. Importantly, we do not find heterogeneity in terms of age. Our finding contrasts with the result of Roth et al. (2022), who find stronger treatment effects for young people than for old people. Among individual characteristics that generate heterogeneous responses are gender and whether the respondent holds the Japanese government bond. Females respond more to all three types of information provision. JGB holders respond to Group-2 and Group-3 information in the opposite direction: they become less likely to think that the government debt is excessive.

6 Spending Cuts and Tax Hikes

We have discussed fiscal consolidation views and their responses to information provision, focusing on the two main questions: (i) whether our respondents think that there is too much government debt, and (ii) whether they think that the debt should be reduced. In this section, we present analyses related to the respondents' policy views on spending and taxes.

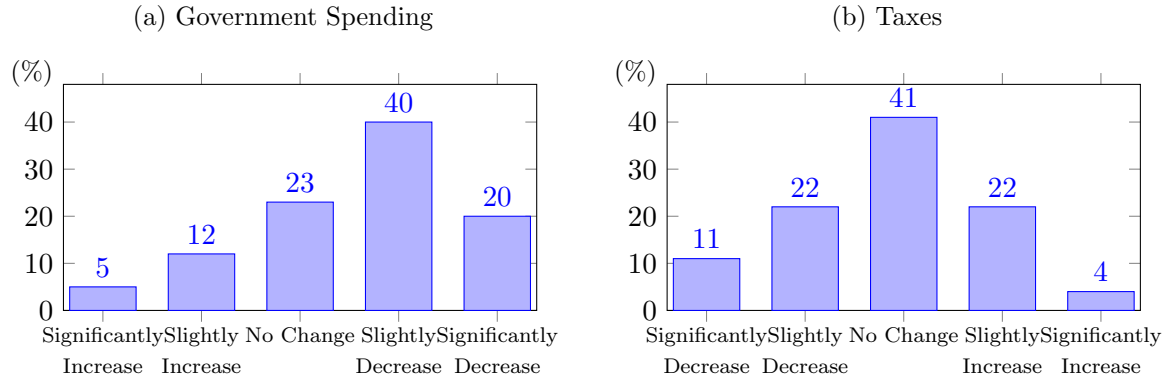
6.1 Views on Spending Cuts and Tax Hikes

Before analyzing the effect of information provision, we first discuss our respondents' views on spending and taxes in the control group, a group without information provision.

According to the left panel of Figure 4, more respondents (60% [= 40%+20%]) support spending reduction than spending increases (17% [= 5%+12%]). However, the support for spending reduction is somewhat weaker than the support for debt reduction (74%)—shown in the right panel of Figure 3—and the support for spending increase (or the opposition to spending reduction) is stronger than the opposition to debt reduction (6%)—again shown in the right panel of Figure 3. To put these results in plain English, some people support debt reduction without necessarily supporting spending cuts.

According to the right panel, our respondents' views on tax are roughly balanced, though slightly more people support tax cuts than tax increases (33% [= 11%+22%] versus 26% [= 22%+4%]). About 40 percent of our respondents support the status quo ("Neutral"). The support for the tax hike is substantially lower than the support for debt reduction (74%) or the support for spending cuts (60%). The support for the tax increase (or the opposition to tax reduction) is substantially higher than the opposition to debt reduction (6%) and the opposition to spending cuts (17%). To put these results in plain English, many people support debt reduction or spending cuts without necessarily supporting tax hikes.

Figure 4: Broad Views on Spending Cuts and Tax Hikes



Note: Figures show the distribution of responses from the control group. The vertical axis represents the percentage of respondents for the corresponding answers.

We now turn to the views related to detailed categories or types of spending and taxes. According to Figure 6, more respondents support increasing government spending than cutting it in all categories (the top panel). This result is interesting because more respondents support spending cuts than spending increases in the aggregate, as discussed in the previous paragraph. One exception is the spending on national defense, where the public's support is roughly balanced. According to the bottom panel, the public's view on tax hikes in specific categories tends to be roughly balanced, with the opposition being somewhat higher than the support for it. An exception is the support for income tax for the wealthy—those in the high-income brackets. In particular, the support for tax hikes is substantially higher than the opposition to a tax reduction for income tax rates for those in high-income brackets currently facing the marginal tax rate above 33%.

Table 6: Views on Government Spending and Taxes

	Significantly Decrease	Slightly Decrease	No Change	Slightly Increase	Significantly Increase
Government Spending					
Infrastructure	4%	12%	41%	33%	10%
Education	3%	8%	36%	37%	17%
Children	5%	7%	29%	35%	24%
Technology	1%	6%	37%	39%	16%
Environment	4%	12%	42%	32%	10%
Defense	11%	20%	37%	21%	11%
SS Benefit	5%	12%	50%	27%	7%
Taxes					
Consumption Tax	17%	20%	50%	11%	2%
Capital Gain Tax	9%	18%	46%	19%	7%
Inheritance Tax	14%	22%	45%	14%	6%
Income Tax (5% Bracket)	16%	18%	56%	7%	3%
Income Tax (10% Bracket)	11%	26%	54%	8%	2%
Income Tax (20% Bracket)	8%	24%	58%	10%	1%
Income Tax (23% Bracket)	5%	15%	55%	21%	3%
Income Tax (33% Bracket)	5%	12%	39%	33%	12%
Income Tax (40% Bracket)	6%	10%	30%	29%	25%
Income Tax (45% Bracket)	7%	8%	27%	22%	35%
SS Cost	9%	21%	52%	16%	1%

Notes: Table shows the distribution of responses from the control group.

6.2 Effect of Information Provision on Fiscal Policy Views: Spending Cuts and Tax Hikes

Table 7 shows the response of views on various spending cuts to information provision. According to the first column, the support for the overall spending cuts responds to the debt-to-GDP information (Group-1 information) in a statistically significant way. The response becomes smaller and less statistically significant when we add the Cabinet Office's projections. The response is statistically

significant at a 10 percent level for Group-2 information, whereas it is not statistically significant for Group-3 information.

The public's views on spending cuts in specific categories tend to be responsive to our information provision. The support for spending cuts increases in response to the current debt-to-GDP ratio (Group 1) in a statistically significant way for all categories except environment and social security benefits. With additional information on the Cabinet Office's debt projection—be they optimistic or pessimistic (Group 2 or Group 3)—some of the responses become statistically less significant. The views on spending on infrastructure and technology respond to all three types of our information provision in a statistically significant way. In contrast, the views on environmental spending and social security benefits do not respond to any of our information provision. Finally, the support for spending cuts responds statistically significantly for all three types of information provision, with the response being the largest when we provide the respondents with the current debt-to-GDP ratio only (the last column).

Table 8 shows the response of the views on various types of taxes to information provision. Contrary to the pattern we have seen so far, the support for overall tax hikes does not change in a statistically significant way if only the debt-to-GDP information is provided, as shown in the first column. However, it does change if additional information regarding the Cabinet Office's projection is given. The response is the largest for Group-3 information.

The public's views on various types of taxes tend to be unresponsive to all three types of information provision. We see statistically significant responses to Group-1 information for the inheritance tax and the income tax rate for 33% segments. We see statistically significant responses to Group-1 and Group-3 information for the income tax rates for the 20% and 23% segments. For all other types of taxes—including social security costs—and for all three types of information provision, the responses are statistically insignificant.

Table 7: Effects of Information Provision on Fiscal Policy Views: Government Spending

	Total Spending	Detailed Spending Categories						SS Benefit	Index
		Infrastructure	Education	Childcare	Technology	Environment	Defense		
Group1	0.125***	0.090***	0.105***	0.079**	0.128***	0.038	0.081**	0.035	0.147***
	(0.037)	(0.034)	(0.033)	(0.037)	(0.030)	(0.033)	(0.037)	(0.031)	(0.036)
	[0.003]	[0.010]	[0.004]	[0.021]	[0.001]	[0.068]	[0.021]	[0.068]	
Group2	0.068*	0.065**	0.034	0.030	0.077***	−0.001	0.075**	0.030	0.089**
	(0.037)	(0.033)	(0.033)	(0.036)	(0.030)	(0.033)	(0.037)	(0.031)	(0.035)
	[0.122]	[0.122]	[0.279]	[0.310]	[0.087]	[0.772]	[0.122]	[0.279]	
Group3	0.038	0.057*	0.097***	0.068*	0.076**	0.051	0.037	0.002	0.084**
	(0.037)	(0.033)	(0.033)	(0.036)	(0.030)	(0.032)	(0.038)	(0.030)	(0.035)
	[0.215]	[0.148]	[0.032]	[0.141]	[0.039]	[0.153]	[0.215]	[0.551]	

Note: A positive coefficient means that respondents in that group are more likely to think that the government spending should be cut than those in the control group. The index is constructed based on Anderson (2008). We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively. False-discovery-rate-adjusted p-values of Benjamini et al. (2006) are in brackets.

Table 8: Effects of Information Provision on Fiscal Policy Views: Taxes

	Total	Consumption	Capital	Inheritance	Progressive Income Tax							SS Cost	Index
					5%	10%	20%	23%	33%	40%	45%		
Group1	0.038	−0.006	0.014	0.071*	0.089***	0.050	0.038	0.062**	0.063**	0.062*	0.052	0.057	0.038
	(0.035)	(0.034)	(0.035)	(0.037)	(0.034)	(0.032)	(0.029)	(0.027)	(0.029)	(0.034)	(0.039)	(0.042)	(0.030)
	[0.244]	[0.340]	[0.340]	[0.134]	[0.117]	[0.187]	[0.195]	[0.121]	[0.121]	[0.140]	[0.195]	[0.195]	
Group2	0.058*	0.015	−0.022	0.025	0.035	0.048	0.028	0.023	0.006	−0.009	0.002	0.005	0.011
	(0.035)	(0.034)	(0.035)	(0.036)	(0.035)	(0.032)	(0.029)	(0.027)	(0.029)	(0.034)	(0.039)	(0.043)	(0.030)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	
Group3	0.086**	0.018	−0.005	0.054	0.078**	0.041	0.043	0.064**	0.056**	0.032	0.049	0.044	0.043
	(0.034)	(0.033)	(0.035)	(0.036)	(0.034)	(0.031)	(0.029)	(0.027)	(0.029)	(0.034)	(0.039)	(0.042)	(0.030)
	[0.094]	[0.449]	[0.449]	[0.235]	[0.094]	[0.261]	[0.235]	[0.094]	[0.127]	[0.373]	[0.261]	[0.353]	

Note: A positive coefficient means that respondents in that group are more likely to think that taxes should be raised than those in the control group. The index is constructed based on Anderson (2008). We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively. False-discovery-rate-adjusted p-values of Benjamini et al. (2006) are in brackets.

7 Discussion

7.1 Age Heterogeneity

The Japanese economy often gets the attention of macroeconomists around the world because Japan is an aging society, and many other advanced economies are aging as well. In our study, one key dimension of interest is whether younger and older generations think differently about fiscal consolidation.

We have seen that (i) older people tend to have a higher perception of the current debt-to-GDP ratio—in other words, they do not underestimate the current debt-to-GDP ratio as much as younger generations—(Section 3), (ii) they tend to project a larger increase in the debt-to-GDP ratio in the future (Section 3), (iii) they are more supportive of fiscal consolidation (Section 4), though (iv) their responses to information provision are typically not different from those of younger people (Section 5).

The results from (i) to (iii) are intuitive in the sense that older people are more likely to be knowledgeable and responsible than younger people. However, these results are somewhat counter-intuitive from the perspective of economic rationality. Fiscal consolidation tends to hurt younger generations more than older generations because younger people pay taxes without necessarily benefiting from various government programs. Also, higher government debt is associated with higher interest expenses and possibly higher tax burdens in the future. These considerations may make younger generations more supportive of undertaking fiscal consolidation than older people. However, these considerations do not manifest in our survey.[18]

Given these results, if policymakers want to increase the public's support for fiscal consolidation, they might want to try to communicate more effectively to younger generations. Our result (iv) means that younger generations are just as responsive to our information provision as older generations are. However, providing different kinds of information or providing the same information via different media—such as SNS versus newspapers—could make younger generations respond more to information provision.

7.2 Marriage and Children

We have seen systematic differences between married and unmarried people in terms of the perception of the current debt-to-GDP ratio and support for fiscal consolidation. Specifically, married people are less likely to underestimate the current debt-to-GDP ratio and are more likely to support fiscal consolidation than unmarried people. However, there are no systematic differences in their responses to information provision between married and unmarried people.

[18] Given that older people tend to have a higher perception of the current debt-to-GDP ratio, homogeneous responses to information provision across age groups are somewhat surprising in light of the heterogeneous responses across low and high perception groups. Thus, we conducted two further analyses to confirm the lack of heterogeneity across age groups: a horse-race regression where we allow age-heterogeneity and perception-heterogeneity simultaneously, and a regression with triple-interaction terms across treatment groups, age groups, and perception groups. Neither of these additional analyses pointed to heterogeneous responses to information provision across age groups.

Those with children may have different views from those without children. On the one hand, those with children may be more likely to favor fiscal consolidation because they may care more about future generations. On the other hand, those with children may be less likely to favor fiscal consolidation because they may benefit or might have benefited directly from various government spending programs related to raising children, such as education. However, we do not find statistically significant differences between those with and without children in terms of (i) perception of the current debt-to-GDP ratio, (ii) support for fiscal consolidation, and (iii) the response to information provision.

7.3 Economic Literacy and Education

Not surprisingly, those with higher education or higher economic literacy are less likely to underestimate the current debt-to-GDP ratio than those without them. However, there is no strong evidence for systematic differences in their support for fiscal consolidation between these two groups, though those with higher levels of education tend to think that the government debt is excessive. There is also no strong evidence for systematic differences in their responses to information provision between these two groups, though some differences exist between those with and without higher education in how information provision affects their response to the "excessive debt" question.

8 Conclusion

In this paper, we conducted an information provision experiment to understand the public's view on fiscal consolidation. We find that (i) the public tends to underestimate the current debt-to-GDP ratio, (ii) the provision of the current debt-to-GDP ratio tends to increase support for fiscal consolidation, and (iii) the additional provision of a realistic future projection tends to attenuate that effect. We also find that the responses to information provision are not heterogeneous along key socio-economic attributes, though fiscal policy views are heterogeneous.

Our results from Japan are of interest to other countries with an increasing trend in government debt. Many advanced economies are likely to see their population aging and their fiscal situation worsening further in the future, as in Japan. They would see a further increase in the debt-to-GDP ratio unless fiscal consolidation is undertaken. Our analysis on how the public forms their views on fiscal consolidation in Japan is likely to be informative for thinking about fiscal consolidation for these countries.

References

Alesina, A., M. F. Ferroni, and S. Stantcheva (2021): "Perceptions of Racial Gaps, their Causes, and Ways to Reduce Them," Working Paper 29245, National Bureau of Economic Research.

Alesina, A., A. Miano, and S. Stantcheva (2023): "Immigration and Redistribution," *The Review of Economic Studies*, 90, 1–39.

Anderson, M. L. (2008): "Multiple Inference and Gender Differences in the Effects of Early Intervention: A Reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects," *Journal of the American Statistical Association*, 103, 1481–1495.

Andrade, P., E. Gautier, E. Mengus, and E. Moench (2025): "Household Beliefs about Fiscal Dominance," Federal reserve bank of boston research department working papers.

Barnichon, R., D. Debortoli, and C. Matthes (2022): "Understanding the Size of the Government Spending Multiplier: It's in the Sign," *Review of Economic Studies*, 89, 87–117.

Baumann, U., A. Ferrando, D. Georgarakos, Y. Gorodnichenko, and T. Reinelt (2024): "SAFE to Update Inflation Expectations? New Survey Evidence on Euro Area Firms," Working Paper 32504, National Bureau of Economic Research.

Benjamini, Y., A. M. Krieger, and D. Yekutieli (2006): "Adaptive linear step-up procedures that control the false discovery rate," *Biometrika*, 93, 491–507.

Bi, H., E. M. Leeper, and C. Leith (2013): "Uncertain Fiscal Consolidations," *Economic Journal*, 123, F31–F63.

Binetti, A., F. Nuzzi, and S. Stantcheva (2024): "People's Understanding of Inflation," Working Paper 32497, National Bureau of Economic Research.

Blanchard, O. (2019): "Public Debt and Low Interest Rates," *American Economic Review*, 109, 1197–1229.

Braun, R. A. and D. H. Joines (2015): "The implications of a graying Japan for government policy," *Journal of Economic Dynamics and Control*, 57, 1–23.

Cattaneo, M., P. Lergetporer, G. Schwerdt, K. Werner, L. Woessmann, and S. C. Wolter (2020): "Information provision and preferences for education spending: Evidence from representative survey experiments in three countries," *European Journal of Political Economy*, 63.

Coibion, O., D. Georgarakos, Y. Gorodnichenko, G. Kenny, and M. Weber (2024): "The Effect of Macroeconomic Uncertainty on Household Spending," *American Economic Review*, 114, 645–77.

Coibion, O., D. Georgarakos, Y. Gorodnichenko, and M. Weber (2023): "Forward Guidance and Household Expectations," *Journal of the European Economic Association*, 21, 2131–2171.

Coibion, O., Y. Gorodnichenko, and M. Weber (2021): "Fiscal Policy and Households' Inflation Expectations: Evidence from a Randomized Control Trial," Working Paper 28485, National Bureau of Economic Research.

——— (2022): "Monetary Policy Communications and Their Effects on Household Inflation Expectations," *Journal of Political Economy*, 130, 1537–1584.

D'Acunto, F. and M. Weber (2024): "Why Survey-Based Subjective Expectations Are Meaningful and Important," *Annual Review of Economics*, 16, 329–357.

Dechezleprêtre, A., A. Fabre, T. Kruse, B. Planterose, A. Sanchez Chico, and S. Stantcheva (2022): "Fighting Climate Change: International Attitudes Toward Climate Policies," Working Paper 30265, National Bureau of Economic Research.

Facchini, G., Y. Margalit, and H. Nakata (2022): "Countering public opposition to immigration: The impact of information campaigns," *European Economic Review*, 141.

Ghosh, A. R., J. I. Kim, E. G. Mendoza, J. D. Ostry, and M. S. Qureshi (2013): "Fiscal Fatigue, Fiscal Space and Debt Sustainability in Advanced Economies," *The Economic Journal*, 123, F4–F30.

Grigoli, F. and D. Sandri (2024): "Public debt and household inflation expectations," *Journal of International Economics*, 152.

Haaland, I. and C. Roth (2023): "Beliefs about Racial Discrimination and Support for Pro-Black Policies," *The Review of Economics and Statistics*, 105, 40–53.

Haaland, I., C. Roth, and J. Wohlfart (2023): "Designing Information Provision Experiments," *Journal of Economic Literature*, 61, 3–40.

Hansen, G. D. and S. İmrohoroğlu (2016): "Fiscal Reform and Government Debt in Japan: A Neoclassical Perspective," *Review of Economic Dynamics*, 21, 201–224.

——— (2023): "Demographic Change, Government Debt and Fiscal Sustainability in Japan: The Impact of Bond Purchases by the Bank of Japan," *Review of Economic Dynamics*, 50, 88–105.

Henkel, A., E. Fehr, J. Senn, and T. Epper (2025): "Beliefs about inequality and the nature of support for redistribution," *Journal of Public Economics*, 246.

House, C. L., C. Proebsting, and L. L. Tesar (2020): "Austerity in the aftermath of the great recession," *Journal of Monetary Economics*, 115, 37–63.

İmrohoroğlu, S., S. Kitao, and T. Yamada (2019): "Fiscal Sustainability in Japan: What to Tackle?" *The Journal of the Economics of Ageing*, 14, 100205.

Jiang, Z., H. Lustig, S. Van Nieuwerburgh, and M. Z. Xiaolan (2024): "The US public debt valuation puzzle," *Econometrica*, 92, 1309–1347.

Kawata, K. and M. Nakabayashi (2023): "Persistent mind: The effects of information provision on policy preferences," *Journal of Policy Modeling*, 45, 522–537.

Kerwin, J., N. Rostom, and O. Sterck (2024): "Striking the Right Balance: Why Standard Balance Tests Over-Reject the Null, and How to Fix It," Tech. rep., IZA Discussion Papers.

Kishishita, D., A. Yamagishi, and T. Matsumoto (2024): "Public goods provision, preferences over public finance, and distributional effects," Working paper.

Kitao, S. and M. Mikoshiba (2024): "Demography, Fiscal Sustainability, and Social Security System in Japan," *Mimeo*.

Kocherlakota, N. R. (2023): "Infinite Debt Rollover in Stochastic Economies," *Econometrica*, 91, 1629–1658.

Kumar, S., Y. Gorodnichenko, and O. Coibion (2023): "The Effect of Macroeconomic Uncertainty on Firm Decisions," *Econometrica*, 91, 1297–1332.

Kuziemko, I., M. I. Norton, E. Saez, and S. Stantcheva (2015): "How Elastic Are Preferences for Redistribution? Evidence from Randomized Survey Experiments," *American Economic Review*, 105, 1478–1508.

Mehrotra, N. R. and D. Sergeyev (2021): "Debt Sustainability in a Low Interest Rate World," *Journal of Monetary Economics*, 124, S1–S18.

Parlevliet, J., M. Giuliodori, and M. Rooduijn (2023): "Populist attitudes, fiscal illusion and fiscal preferences: evidence from Dutch households," *Public Choice*, 197, 201–225.

Ropele, T., Y. Gorodnichenko, and O. Coibion (2024): "Inflation Expectations and Misallocation of Resources: Evidence from Italy," *American Economic Review: Insights*, 6, 246–61.

Roth, C., S. Settele, and J. Wohlfart (2022): "Beliefs about Public Eebt and the Demand for Government Spending," *Journal of Econometrics*, 231, 165–187.

Settele, S. (2022): "How Do Beliefs about the Gender Wage Gap Affect the Demand for Public Policy?" *American Economic Journal: Economic Policy*, 14, 475–508.

van Rooij, M., O. Coibion, D. Georgarakos, B. Candia, and Y. Gorodnichenko (2024): "Keeping Up with the Jansens: Causal Peer Effects on Household Spending, Beliefs and Happiness," Working Paper 32107, National Bureau of Economic Research.

Weber, M., B. Candia, H. Afrouzi, T. Ropele, R. Lluberas, S. Frache, B. H. Meyer, S. Kumar, Y. Gorodnichenko, D. Georgarakos, O. Coibion, G. Kenny, and J. Ponce (2023): "Tell Me Something I Don't Already Know: Learning in Low and High-Inflation Settings," Working Paper 31485, National Bureau of Economic Research.

Appendix

Appendix A explains the details of our experiment. Appendix B discusses how we construct variables. Appendix C shows the result of the balance test. Appendix D discusses how the response to information provision differs across Anchoring Groups 1 and 2. Appendix F presents the results related to the follow-up survey. Appendix G presents the results on heterogeneous treatment effects.

A Experimental Details

Section A.1 explains our instructional manipulation check to screen our respondents. Sections A.2 and A.3 show questions in the main and follow-up surveys, respectively.

A.1 Instructional Manipulation Check (IMC)

We ask the respondents to read the following instructions and answer the subsequent question.

> *When conducting surveys through online questionnaires, some participants may quickly click on choices and respond without carefully reading the survey questions. This consideration can lead to an increase in random responses, potentially compromising the results of academic research. We encourage participants to read the survey questions carefully and provide more accurate insights into their thoughts. To demonstrate that you have carefully read our questions, please select only the two options, "Completely interested" and "Not interested at all," regardless of your actual opinion, in the following question.*
>
> How interested are you in Japan's fiscal situation?
>
> (1) Completely interested
>
> (2) Very interested
>
> (3) Slightly interested
>
> (4) Not very interested
>
> (5) Not interested at all

Those who pay less attention to the instructions are likely to read the question quickly and select one of the multiple-choice options despite the instructions. We use the IMC to filter out these respondents.

Figure A1: Results of the IMC

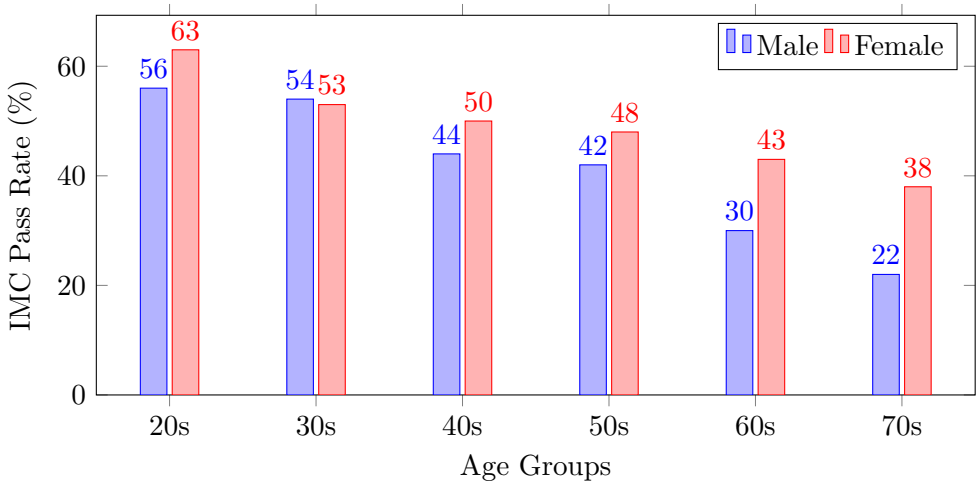


Figure A1 shows the pass rates of the IMC by age group and gender. Female respondents are more likely to pay attention to the survey instructions than male respondents. The pass rate decreases as age increases.

A.2 Questionaire for the Main Survey

Q1. As of 2022, what percentage do you think is the government debt-to-GDP ratio? The government debt-to-GDP ratio represents how many times the debt of the Japanese government – both central and local governments – (government debt) is compared to the size of the Japanese economy (GDP), which serves as the basis for tax revenue. For example, if the government debt-to-GDP ratio exceeds 100%, then the government's debt is greater than what the Japanese economy generates in a year.

Anchoring 1 It is worth noting that the average government debt-to-GDP ratio in 2010 was approximately 164%.

Anchoring 2 It is worth noting that the average government debt-to-GDP ratio from 2002 to 2010 was approximately 137%.

_____ %

Q2. In the next ten years, do you think the government debt-to-GDP ratio will increase or decrease?

(a) It will significantly increase

(b) It will slightly increase

(c) It will stay the same

(d) It will slightly decrease

(e) It will significantly decrease

Q3. How much do you think the government debt-to-GDP ratio will be ten years from today?

_____ %

Information provision:

Group 1 You answered that the government debt-to-GDP ratio as of 2022 is XXX%. In reality, the government debt-to-GDP ratio as of 2022 is approximately 214%. This means that Japan has a debt (government debt) of about 2.1 times the size of the economy (GDP), which serves as the basis for tax revenue.

Group 2 You answered that the government debt-to-GDP ratio as of 2022 is XXX%. In reality, the government debt-to-GDP ratio as of 2022 is approximately 214%. This means that Japan has a debt (government debt) of about 2.1 times the size of the economy (GDP), which serves as the basis for tax revenue.

Furthermore, according to the "Estimates on Medium to Long-Term Economic and Fiscal Perspectives" released by the Cabinet Office in January 2023, the government debt-to-GDP ratio is predicted to be approximately 172% by the year 2032.

Group 3 You answered that the government debt-to-GDP ratio as of 2022 is XXX%. In reality, the government debt-to-GDP ratio as of 2022 is approximately 214%. This means that Japan has a debt (government debt) of about 2.1 times the size of the economy (GDP), which serves as the basis for tax revenue.

Furthermore, according to the "Estimates on Medium to Long-Term Economic and Fiscal Perspectives" released by the Cabinet Office in January 2023, the government debt-to-GDP ratio is predicted to be approximately 226% by the year 2032.

Group 4 You answered that the government debt-to-GDP ratio as of 2022 is XXX%.

Q4. To what extent do you agree with the following statement? "The current government debt-to-GDP ratio is too high."

(a) Completely agree

(b) Slightly agree

(c) Neither agree nor disagree

(d) Slightly disagree

(e) Completely agree

Q5. To what extent do you agree with the following statement? "The government should reduce government debt (should engage in fiscal reconstruction)"

(a) Completely agree

(b) Slightly agree

(c) Neither agree nor disagree

(d) Slightly disagree

(e) Completely agree

Q6. Do you intend to buy or have personal government bonds in the future?

(a) I definitely want to have it

(b) I would like to have it, to some extent

(c) Neither yes nor no

(d) I prefer not to have it

(e) I definitely don't want to have it

Q7. Do you think the total amount of government spending should be increased, decreased, or kept as it is?

(a) It should be significantly increased

(b) It should be slightly increased

(c) It should be kept as it is

(d) It should be slightly decreased

(e) It should be significantly decreased

Q8. Please share your opinion on whether government spending, categorized by area, should be increased, decreased, or kept as it is.

It should be ...	significantly increased	slightly increased	kept as it is	slightly decreased	significantly decreased
Public structure developtment	◯	◯	◯	◯	◯
Educational support	◯	◯	◯	◯	◯
Declining birthrate countermeasures	◯	◯	◯	◯	◯
Industry and science & technology	◯	◯	◯	◯	◯
Environmental policy	◯	◯	◯	◯	◯
Defense and security	◯	◯	◯	◯	◯

- Public structure development: Spending on infrastructure development such as roads, bridges, airports, and water supply.
- Educational support: Spending on support for early childhood school education and higher education-related educational support.
- Declining birthrate countermeasures: Spending related to expanding support for households raising children, such as insurance coverage for childbirth expenses and enhancing child allowance (elimination of income restrictions and extension of payment period).

- Industry and Science & Technology: Spending related to enhancing the competitiveness of existing industries, such as semiconductors and AI, and creating next-generation technologies.
- Environmental policy: Spending related to Green Transformation (GX) support.
- Defense and Security: Spending related to strengthening defense capabilities and contributing to the stability of the international environment.

Q9. Do you think the government should increase or decrease the total amount of tax revenue?

(a) It should significantly increase it

(b) It should slightly increase it

(c) Keep it as it is

(d) It should slightly decrease it

(e) It should significantly decrease it

Q10. This question concerns income tax. Income tax is a tax applied to the income earned within a year (from January to the end of December). The income tax rate ranges from 5% to 45%, and the higher the amount earned in a year (taxable income), the higher the tax rate becomes. Specifically, there are seven tax brackets based on the income amount (rounded down to the nearest 1,000 yen):

Income	Tax rate
From 1,000 yen to 1,949,000 yen	5%
From 1,950,000 yen to 3,299,000 yen	10%
From 3,300,000 yen to 6,949,000 yen	20%
From 6,950,000 yen to 8,999,000 yen	23%
From 9,000,000 yen to 17,999,000 yen	33%
From 18,000,000 yen to 39,999,000 yen	40%
40,000,000 yen and above	45%

For various income brackets, do you think the income tax rates should be raised, lowered, or kept the same?

It should be ...	significantly raised	slightly raised	kept as it is	slightly lowered	significantly lowered
From 1,000 yen to 1,949,000 yen	◯	◯	◯	◯	◯
From 1,950,000 yen to 3,299,000 yen	◯	◯	◯	◯	◯
From 3,300,000 yen to 6,949,000 yen	◯	◯	◯	◯	◯
From 6,950,000 yen to 8,999,000 yen	◯	◯	◯	◯	◯
From 9,000,000 yen to 17,999,000 yen	◯	◯	◯	◯	◯
From 18,000,000 yen to 39,999,000 yen	◯	◯	◯	◯	◯

Q11. This question concerns the consumption tax. The current consumption tax is 10% (8% on some products). Do you think the consumption tax rate in the future should be raised from 10%, lowered, or maintained?

(a) It should be significantly raised

(b) It should be slightly raised

(c) It should be maintained

(d) It should be slightly lowered

(e) It should be significantly lowered

Q12. This question concerns financial income taxation. Financial income taxation pertains to the tax on income obtained from financial products such as deposits, stocks, and investment trusts. The tax rate for financial income is a flat 20.315%. Regardless of how high financial income may be, the tax rate remains uniform. In the future, do you think the financial income tax should be raised, lowered, or maintained?

(a) It should be significantly raised

(b) It should be slightly raised

(c) It should be maintained

(d) It should be slightly lowered

(e) It should be significantly lowered

Q13. Inheritance tax is a tax imposed on heirs, including spouses, who acquire property through inheritance, based on the inherited assets. In the future, do you think the inheritance tax should be increased, decreased, or maintained?

(a) It should be significantly increased

(b) It should be slightly increased

(c) It should be maintained

(d) It should be slightly decreased

(e) It should be significantly decreased

Q14. Social security is divided into areas such as pensions, healthcare, long-term care, and child-rearing, and as the largest expenditure item, it accounts for approximately one-third of the national general account expenditures.

This question concerns social security. Do you think the "benefits" (social security expenditures) should be increased, decreased, or maintained?

(a) It should be significantly increased

(b) It should be slightly increased

(c) It should be maintained

(d) It should be slightly decreased

(e) It should be significantly decreased

Q15. This question concerns social security. Do you think the "burden" (taxes and social insurance premiums) related to social security should be increased, decreased, or maintained?

(a) It should be significantly increased

(b) It should be slightly increased

(c) It should be maintained

(d) It should be slightly decreased

(e) It should be significantly decreased

Q16. To what extent do you agree with the following statement? "The current government's spending and taxation levels are not sustainable."

(a) Completely agree

(b) Slightly agree

(c) Neither agree nor disagree

(d) Slightly disagree

(e) Completely agree

Q17. To what extent do you agree with the following statement? "If public debt is not reduced, fiscal sustainability will be lost, and in the future, there is likely to be fewer people willing to buy Japanese government bonds."

(a) Completely agree

(b) Slightly agree

(c) Neither agree nor disagree

(d) Slightly disagree

(e) Completely agree

Q18. To what extent do you agree with the following statement? "The government can be trusted."

(a) Completely agree

(b) Slightly agree

(c) Neither agree nor disagree

(d) Slightly disagree

(e) Completely agree

Q19. To what extent do you agree with the following statement? "The Japanese government is making efficient fiscal expenditures, considering the future."

(a) Completely agree

(b) Slightly agree

(c) Neither agree nor disagree

(d) Slightly disagree

(e) Completely agree

Q20. To what extent do you agree with the following statement? "Considering the future, the government is appropriately determining tax rates and conducting taxation."

(a) Completely agree

(b) Slightly agree

(c) Neither agree nor disagree

(d) Slightly disagree

(e) Completely agree

Q21. Please indicate your gender.

(a) Male

(b) Female

(c) Prefer not to answer

Q22. Please indicate your age. _____ Years old

Q23. Please indicate where you reside.

- Hokkaido
- Aomori
  ⋮
- Okinawa
- Other

Q24. Are you married

(a) No (Unmarried / Divorced or Widowed)

(b) Yes

Q25. Do you have children under the age of majority?

(a) One

(b) Two

(c) Three or more

(d) None

Q26. Please indicate your occupation

(a) Company employee/Executive

(b) Self-employed

(c) Specialist (physician, lawyer, hairdresser, designer, etc.)

(d) Public servant

(e) Student

(f) Housewife/Househusband

(g) Part-time work/Temporary worker/Freelancer

(h) Unemployed/Retired

(i) Other

Q27. Please indicate your current highest level of education.

- Graduate of elementary school/junior high school
- Graduate of high school
- Graduate of a technical college
- Graduate of a vocational school
- Graduate of a junior college
- University graduate
- Graduate school (master's or doctoral program) graduate.

Q28. Please indicate the annual net income for your entire household (total income for the previous year from January to December, excluding taxes and social insurance premiums).

(a) Less than 3 million yen

(b) 3 million yen to less than 4 million yen

(c) 4 million yen to less than 5.5 million yen

(d) 5.5 million yen to less than 7.5 million yen

(e) 7,5 million yen to less than 9.5 million yen

(f) 9.5 million yen to less than 12 million yen

(g) 12 million yen and above

Q29. Do you currently own individual government bonds as part of your assets?

- Yes.
- I do not currently own any, but I am considering owning some in the future.
- I do not own any, and I am not considering any.

Q30. In politics, terms such as left-wing and right-wing are used. On a scale where 1 represents left-wing and 10 represents right-wing, where do you think you would place yourself on this scale? Please choose one option from the following:

Left-wing									Right-wing
1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○

Q31. Please choose the name of the current Governor of the Bank of Japan from the options below:

(a) Haruhiko Kuroda

(b) Masa'aki Shirakawa

(c) Kazuo Ueda

(d) Toshihiko Fukui

(e) I don't know

A.3 Questionaire for the Follow-Up Survey

Q1. Do you think the total amount of government spending should be increased, decreased, or kept as it is?

(a) It should be significantly increased

(b) It should be slightly increased

(c) It should be kept as it is

(d) It should be slightly decreased

(e) It should be significantly decreased

Q2. Please share your opinion on whether government spending, categorized by area, should be increased, decreased, or kept as it is.

It should be ...	significantly increased	slightly increased	kept as it is	slightly decreased	significantly decreased
Public structure developtment	○	○	○	○	○
Educational support	○	○	○	○	○
Declining birthrate countermeasures	○	○	○	○	○
Industry and science & technology	○	○	○	○	○
Environmental policy	○	○	○	○	○
Defense and security	○	○	○	○	○

- Public structure development: Spending on infrastructure development such as roads, bridges, airports, and water supply.
- Educational support: Spending on support for early childhood school education and higher education-related educational support.

- Declining birthrate countermeasures: Spending related to expanding support for households raising children, such as insurance coverage for childbirth expenses and enhancing child allowance (elimination of income restrictions and extension of payment period).
- Industry and Science & Technology: Spending related to enhancing the competitiveness of existing industries, such as semiconductors and AI, and creating next-generation technologies.
- Environmental policy: Spending related to Green Transformation (GX) support.
- Defense and Security: Spending related to strengthening defense capabilities and contributing to the stability of the international environment.

Q3. Do you think the government should increase or decrease the total amount of tax revenue?

(a) It should significantly increase it

(b) It should slightly increase it

(c) Keep it as it is

(d) It should slightly decrease it

(e) It should significantly decrease it

Q4. This question concerns income tax. Income tax is a tax applied to the income earned within a year (from January to the end of December). The income tax rate ranges from 5% to 45%, and the higher the amount earned in a year (taxable income), the higher the tax rate becomes. Specifically, there are seven tax brackets based on the income amount (rounded down to the nearest 1,000 yen):

Income	Tax rate
From 1,000 yen to 1,949,000 yen	5%
From 1,950,000 yen to 3,299,000 yen	10%
From 3,300,000 yen to 6,949,000 yen	20%
From 6,950,000 yen to 8,999,000 yen	23%
From 9,000,000 yen to 17,999,000 yen	33%
From 18,000,000 yen to 39,999,000 yen	40%
40,000,000 yen and above	45%

For various income brackets, do you think the income tax rates should be raised, lowered, or kept the same?

It should be ...	significantly raised	slightly raised	kept as it is	slightly lowered	significantly lowered
From 1,000 yen to 1,949,000 yen	○	○	○	○	○
From 1,950,000 yen to 3,299,000 yen	○	○	○	○	○
From 3,300,000 yen to 6,949,000 yen	○	○	○	○	○
From 6,950,000 yen to 8,999,000 yen	○	○	○	○	○
From 9,000,000 yen to 17,999,000 yen	○	○	○	○	○
From 18,000,000 yen to 39,999,000 yen	○	○	○	○	○

Q5. This question concerns the consumption tax. The current consumption tax is 10% (8% on some products). Do you think the consumption tax rate in the future should be raised from 10%, lowered, or maintained?

(a) It should be significantly raised

(b) It should be slightly raised

(c) It should be maintained

(d) It should be slightly lowered

(e) It should be significantly lowered

Q6. This question concerns financial income taxation. Financial income taxation pertains to the tax on income obtained from financial products such as deposits, stocks, and investment trusts. The tax rate for financial income is a flat 20.315%. Regardless of how high financial income may be, the tax rate remains uniform. In the future, do you think the financial income tax should be raised, lowered, or maintained?

(a) It should be significantly raised

(b) It should be slightly raised

(c) It should be maintained

(d) It should be slightly lowered

(e) It should be significantly lowered

Q7. Inheritance tax is a tax imposed on heirs, including spouses, who acquire property through inheritance, based on the inherited assets. In the future, do you think the inheritance tax should be increased, decreased, or maintained?

(a) It should be significantly increased

(b) It should be slightly increased

(c) It should be maintained

(d) It should be slightly decreased

(e) It should be significantly decreased

Q8. Social security is divided into areas such as pensions, healthcare, long-term care, and child-rearing, and as the largest expenditure item, it accounts for approximately one-third of the national general account expenditures.

This question concerns social security. Do you think the "benefits" (social security expenditures) should be increased, decreased, or maintained?

(a) It should be significantly increased

(b) It should be slightly increased

(c) It should be maintained

(d) It should be slightly decreased

(e) It should be significantly decreased

Q9. This question concerns social security. Do you think the "burden" (taxes and social insurance premiums) related to social security should be increased, decreased, or maintained?

(a) It should be significantly increased

(b) It should be slightly increased

(c) It should be maintained

(d) It should be slightly decreased

(e) It should be significantly decreased

Q10. As of 2022, what percentage do you think is the government debt-to-GDP ratio? The government debt-to-GDP ratio represents how many times the debt of the Japanese government – both central and local governments – (government debt) is compared to the size of the Japanese economy (GDP), which serves as the basis for tax revenue. For example, if the government debt-to-GDP ratio exceeds 100%, then the government's debt is greater than what the Japanese economy generates in a year. It is worth noting that the average government debt-to-GDP ratio in 2010 was approximately 164%.

B Coding Protocol

When we use individual characteristics as controls in the regression analysis, we code them as follows:

- We code household income as the log of mean income in each interval specified by the respondent.
- We code education as a dummy for whether the respondent has at least a Bachelor's degree.
- We code employment status as a dummy variable, which takes one if they are employed. It takes zero when the respondent claims that s/he is either one of the following classifications: students, housewives/househusbands, or not employed or retired.
- If the respondent declares to have one or more children, a dummy variable is set to one.
- We code gender as a dummy that takes on the value of one for female respondents.
- We code prior perception about the current debt-to-GDP ratio as a continuous variable.
- We code age as a continuous variable as well as a set of dummy variables.
- We construct the following six regional dummies to represent the residence of the respondent: (1) Hokkaido and Tohoku, (2) Kanto, (3) Chubu, (4) Kinki, (5) Chugoku and Shikoku, and (6) Kyushu and Okinawa.
- A government bond dummy takes on the value of one if the respondent holds government bonds as part of a personal financial portfolio.

- We create two dummy variables for the left and the right in terms of political views. The former takes on the value of one if the respondent chooses values from 1 to 4 on the Likert scale, ranging from 1 to 10. The latter takes on the value of one if the respondent identifies her/himself from 7 to 10 on the same Likert scale. We exclude political centrists (5 and 6 on the Likert scale).
- A dummy variable for economic literacy takes on the value of one if the respondent chooses the current Governor of the Bank of Japan correctly.

C Balance Test

We test whether randomization in our samples successfully balances respondents' characteristics across the treatment groups and the control group by regressing the treatment indicators (Groupj_i) on the control variables $\boldsymbol{x}_i$ that we used in the estimations.

$$\text{Group } j_i = \alpha + \boldsymbol{x}_i'\boldsymbol{\beta} + \epsilon_i$$

Not only do we test the hypothesis that each element of $\boldsymbol{\beta}$ is equal to zero, we also test the joint hypothesis, $\boldsymbol{\beta} = 0$, following Kerwin et al. (2024).

Table A1 summarizes the result. According to the table, most p-values for individual hypotheses are above 0.1. Furthermore, the p-value of a joint F-test when regressing the treatment dummies on all covariates is all above 0.1 (0.596, 0.186, and 0.534 for Groups 1, 2, and 3). In other words, our sample is well balanced across treatment groups.

Table A1: Balance Test

					P-values		
	Grp 1	Grp 2	Grp 3	Grp 4 (Control)	Grp 1	Grp 2	Grp 3
Age	50.783	50.818	50.759	50.828	0.931	0.984	0.896
Education	0.527	0.535	0.529	0.507	0.235	0.107	0.199
Employment	0.833	0.829	0.821	0.827	0.670	0.889	0.677
Female	0.507	0.507	0.507	0.507	1.000	1.000	1.000
Income	15.273	15.302	15.268	15.279	0.804	0.341	0.666
JGB	0.059	0.071	0.056	0.058	0.882	0.149	0.764
Kid	0.172	0.170	0.173	0.191	0.151	0.121	0.188
Literacy	0.628	0.602	0.588	0.618	0.529	0.363	0.087
Married	0.561	0.568	0.544	0.562	0.915	0.768	0.281
Prior	173.856	172.024	173.309	171.691	0.312	0.876	0.460
Expected Change	27.504	26.624	26.302	27.667	0.927	0.567	0.452
Ps Left	0.171	0.158	0.154	0.146	0.055	0.316	0.515
Ps Right	0.196	0.185	0.186	0.191	0.726	0.652	0.718
Region1	0.106	0.087	0.110	0.085	0.048	0.804	0.018
Region3	0.152	0.159	0.134	0.144	0.556	0.258	0.417
Region4	0.179	0.188	0.185	0.198	0.162	0.451	0.340
Region5	0.069	0.086	0.081	0.076	0.417	0.336	0.641
Region6	0.072	0.089	0.074	0.074	0.785	0.140	0.946

Note: First four columns show mean values of each covariate in the treatment groups and the control group. The next three columns show p-values of t-test between a treatment group and the control group.

D Role of Anchoring

In the main body of the paper, we demonstrated that those with a low perception of the current debt-to-GDP ratio react more to information provision. We could also investigate the role of debt perception by comparing the responses to information provision across two Anchoring Groups. This alternative comparison speaks to the role of perception because respondents with Anchoring 1 and Anchoring 2 have systematically different perceptions of the debt-to-GDP ratio. In particular, the average perception of those who receive Anchor 1 is higher—closer to the actual debt-to-GDP ratio—than that of those who receive Anchor 2 (164% versus 134%).

Table A2 shows the results of this analysis. According to the table, respondents in Anchoring Group 2 tend to react more to information provision than those in Anchoring Group 1. This result is consistent with the result shown in Table 5.

Table A2: Role of Anchoring

	Too Much Debt	Should Reduce Debt	Index
Group1	0.158***	0.058	0.121***
	(0.043)	(0.044)	(0.045)
	[0.001]	[0.106]	
Group1 × Anchor 2	0.160**	0.149**	0.175***
	(0.063)	(0.064)	(0.065)
	[0.021]	[0.021]	
Group2	−0.028	−0.002	−0.017
	(0.046)	(0.046)	(0.047)
	[1.000]	[1.000]	
Group2 × Anchor 2	0.261***	0.182***	0.251***
	(0.065)	(0.065)	(0.066)
	[0.001]	[0.003]	
Group3	0.058	−0.010	0.026
	(0.045)	(0.046)	(0.047)
	[0.645]	[0.707]	
Group3 × Anchor 2	0.170***	0.069	0.134**
	(0.064)	(0.066)	(0.067)
	[0.018]	[0.173]	

Notes: Anchor 2 is a dummy variable that takes the value of one if the respondent receives the average debt-to-GDP ratio from 2002 to 2010, and 0 otherwise. A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. The index is constructed based on Anderson (2008). We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively. False-discovery-rate adjusted p-values of Benjamini et al. (2006) are in brackets.

E Low Perception: An Alternative Specification

Table A3: Low Perception: Using the True Value (214%) as a Cutoff

	Too Much Debt	Should Reduce Debt
Group1	0.004	0.178**
	(0.083)	(0.089)
Group1 × Low (True)	0.282***	−0.050
	(0.090)	(0.096)
Group2	−0.136	0.088
	(0.094)	(0.096)
Group2 × Low (True)	0.276***	0.000
	(0.100)	(0.102)
Group3	−0.027	0.086
	(0.090)	(0.096)
Group3 × Low (True)	0.200**	−0.071
	(0.096)	(0.102)

Notes: A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

F Follow-up Survey

As discussed in the main body of the paper, we conducted the follow-up survey four weeks after the main survey. In the follow-up survey, we asked a subset of the questions asked in the main survey to a subset of the respondents from the main survey. In particular, we only followed up the respondents in Anchoring Group 2 and asked questions about spending cuts and tax hikes only.

Table A4 shows the effects of our information provision on views on government spending in the main and follow-up surveys, respectively, limiting our attention to the subset of respondents and questions that appear in both surveys to make an apple-to-apple comparison.

Consistent with the analysis allowing for heterogeneous responses in the support for fiscal consolidation across Anchoring Groups 1 and 2 in Appendix D, the effects of information provision on spending cuts tend to be more insignificant in the main survey if the sample is limited to Anchoring Group 2 than otherwise. In the top panel of Table A4, in response to Group-1 information, the view towards total spending and several detailed spending categories (Infrastructure, Education, and Technology), as well as the view towards social security benefits, are revised in a statistically significant way. However, none of the views are revised in response to Group 2. In response to Group-3 information, only one view—the view towards spending in technology—is revised in a statistically significant way. These effects become mostly statistically insignificant in the follow-up survey, shown in the bottom panel. The only exception is the view towards spending on education. Interestingly, the effect on the view towards social security benefits to Group-2 information becomes

Table A4: Effects of Information Provision on Fiscal Policy Views: Government Spending Main versus Follow-up Survey

	Total Spending	Detailed Spending Categories						SS Benefit
		Infrastructure	Education	Childcare	Technology	Environment	Defense	
Main Survey								
Group1	0.118**	0.082*	0.139***	0.136**	0.144***	0.050	0.056	0.096**
	(0.054)	(0.050)	(0.049)	(0.054)	(0.043)	(0.048)	(0.054)	(0.046)
Group2	0.051	0.023	0.048	0.043	0.080*	−0.005	0.023	0.065
	(0.054)	(0.049)	(0.048)	(0.054)	(0.044)	(0.048)	(0.054)	(0.045)
Group3	0.021	0.040	0.055	0.091*	0.123***	0.061	0.074	0.046
	(0.055)	(0.050)	(0.049)	(0.054)	(0.043)	(0.047)	(0.055)	(0.045)
Follow-Up Survey								
Group1	0.031	0.028	0.092*	0.069	0.070	0.026	0.004	0.046
	(0.060)	(0.050)	(0.048)	(0.054)	(0.044)	(0.047)	(0.054)	(0.045)
Group2	0.049	−0.003	0.029	0.050	0.026	−0.011	−0.005	0.083*
	(0.059)	(0.049)	(0.048)	(0.054)	(0.044)	(0.047)	(0.055)	(0.047)
Group3	0.025	0.028	0.006	0.058	0.038	−0.014	0.022	0.055
	(0.060)	(0.050)	(0.047)	(0.055)	(0.043)	(0.047)	(0.055)	(0.046)

Notes: A positive coefficient means that respondents in that group are more likely to think that the government spending should be cut than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

statistically significant in the follow-up survey, though it is not statistically significant in the main survey.

Table A5 compares the main and follow-up surveys for detailed tax categories in a way analogous to Table A4. According to the table, in the main survey, Group-1 and Group-2 information does not affect any of the views related to taxes. Group-3 information does not affect almost all of the views in a statistically significant way, except for the view towards the income tax rate for the 20% bracket. Most of the views remain unrevised in the follow-up survey, shown in the bottom panel. However, interestingly, several response to the information provision turns statistically significant in the follow-up survey. Examples are the view towards total taxes in response to all three types of information, the view towards the income tax rate for the 23% bracket in response to Group-1 information, and the view towards the social security cost in response to Group-2 information.

Table A5: Effects of Information Provision on Fiscal Policy Views: Taxes
Main versus Follow-up Survey

	Total Taxes	Consumption	Capital Gain	Inheritance	Progressive Income Tax							SS Cost
					5%	10%	20%	23%	33%	40%	45%	
Main Survey												
Group1	0.046	−0.007	0.018	0.089	0.040	0.028	0.047	0.039	0.050	0.035	0.051	0.021
	(0.051)	(0.050)	(0.052)	(0.054)	(0.045)	(0.043)	(0.040)	(0.042)	(0.050)	(0.056)	(0.061)	(0.045)
Group2	0.076	−0.043	0.004	0.044	0.038	0.051	0.021	−0.024	−0.022	−0.007	0.019	0.052
	(0.051)	(0.051)	(0.053)	(0.054)	(0.047)	(0.043)	(0.040)	(0.043)	(0.051)	(0.058)	(0.063)	(0.045)
Group3	0.062	−0.024	−0.015	0.015	0.003	0.038	0.042	0.076*	0.043	0.076	0.063	0.037
	(0.050)	(0.050)	(0.053)	(0.054)	(0.046)	(0.043)	(0.041)	(0.043)	(0.051)	(0.057)	(0.061)	(0.044)
Follow-Up Survey												
Group1	0.091*	0.019	−0.005	0.056	0.000	−0.021	0.044	0.087*	0.045	0.058	0.025	0.024
	(0.053)	(0.051)	(0.054)	(0.056)	(0.048)	(0.045)	(0.042)	(0.044)	(0.051)	(0.057)	(0.061)	(0.045)
Group2	0.089*	−0.003	0.062	−0.003	−0.021	−0.006	0.022	0.078*	0.052	0.034	0.024	0.080*
	(0.053)	(0.051)	(0.055)	(0.055)	(0.049)	(0.046)	(0.044)	(0.045)	(0.051)	(0.058)	(0.062)	(0.045)
Group3	0.114**	0.031	0.054	0.058	0.017	0.041	0.074*	0.068	0.005	−0.018	−0.094	0.020
	(0.052)	(0.050)	(0.053)	(0.055)	(0.049)	(0.046)	(0.042)	(0.042)	(0.051)	(0.058)	(0.062)	(0.045)

Notes: A positive coefficient means that respondents in that group are more likely to think that taxes should be raised than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

G Heterogeneous Treatment Effects

Table A6: Heterogeneous Treatment Effects (Age)

	Too Much Debt	Should Reduce Debt
Group1	0.250***	0.124**
	(0.057)	(0.061)
Group1 × Middle-age	0.023	0.049
	(0.078)	(0.082)
Group1 × Old	−0.062	−0.031
	(0.078)	(0.080)
Group2	0.163***	0.138**
	(0.059)	(0.062)
Group2 × Middle-age	−0.026	−0.038
	(0.080)	(0.083)
Group2 × Old	−0.148*	−0.102
	(0.083)	(0.082)
Group3	0.159***	0.013
	(0.057)	(0.062)
Group3 × Middle-age	0.022	0.039
	(0.080)	(0.084)
Group3 × Old	−0.067	−0.008
	(0.079)	(0.081)
Middle-age	0.164***	0.185***
	(0.056)	(0.061)
Old	0.404***	0.418***
	(0.060)	(0.062)

Notes: A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A7: Heterogeneous Treatment Effects (Education)

	Too Much Debt	Should Reduce Debt
Group1	0.304***	0.107**
	(0.045)	(0.045)
Group1 × Education	−0.128**	0.051
	(0.063)	(0.064)
Group2	0.101**	0.039
	(0.047)	(0.045)
Group2 × Education	0.001	0.097
	(0.066)	(0.065)
Group3	0.192***	−0.031
	(0.046)	(0.046)
Group3 × Education	−0.094	0.108
	(0.065)	(0.066)
Education	0.166***	−0.005
	(0.046)	(0.048)

Notes: A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A8: Heterogeneous Treatment Effects (Employed)

	Too Much Debt	Should Reduce Debt
Group1	0.260***	0.048
	(0.071)	(0.075)
Group1 × Employment	−0.027	0.101
	(0.080)	(0.083)
Group2	0.194***	0.092
	(0.075)	(0.074)
Group2 × Employment	−0.111	−0.004
	(0.083)	(0.082)
Group3	0.221***	0.040
	(0.072)	(0.072)
Group3 × Employment	−0.093	−0.019
	(0.080)	(0.081)
Employment	0.009	−0.043
	(0.058)	(0.059)

Notes: A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A9: Heterogeneous Treatment Effects (Gender)

	Too Much Debt	Should Reduce Debt
Group1	0.169***	0.135***
	(0.048)	(0.051)
Group1 × Female	0.137**	−0.005
	(0.063)	(0.064)
Group2	0.006	0.040
	(0.050)	(0.051)
Group2 × Female	0.191***	0.096
	(0.066)	(0.065)
Group3	0.035	−0.028
	(0.048)	(0.052)
Group3 × Female	0.214***	0.104
	(0.064)	(0.066)
Female	0.065	0.143***
	(0.045)	(0.048)

Notes: A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A10: Heterogeneous Treatment Effects (Income)

	Too Much Debt	Should Reduce Debt
Group1	0.229	−0.856
	(0.704)	(0.729)
Group1 × Income	0.001	0.065
	(0.046)	(0.048)
Group2	0.290	−0.801
	(0.728)	(0.739)
Group2 × Income	−0.012	0.058
	(0.048)	(0.048)
Group3	0.968	−0.323
	(0.711)	(0.726)
Group3 × Income	−0.054	0.023
	(0.047)	(0.048)
Income	0.038	0.003
	(0.034)	(0.035)

Notes: A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A11: Heterogeneous Treatment Effects (JGB)

	Too Much Debt	Should Reduce Debt
Group1	0.249***	0.127***
	(0.032)	(0.033)
Group1 × JGB	−0.187	0.087
	(0.132)	(0.137)
Group2	0.125***	0.094***
	(0.034)	(0.033)
Group2 × JGB	−0.364**	−0.070
	(0.146)	(0.140)
Group3	0.165***	0.029
	(0.033)	(0.034)
Group3 × JGB	−0.364**	−0.068
	(0.152)	(0.158)
JGB	0.246**	0.094
	(0.098)	(0.110)

Notes: A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A12: Heterogeneous Treatment Effects (Children)

	Too Much Debt	Should Reduce Debt
Group1	0.241***	0.127***
	(0.034)	(0.035)
Group1 × Kid	−0.017	0.029
	(0.085)	(0.086)
Group2	0.099***	0.077**
	(0.036)	(0.036)
Group2 × Kid	0.017	0.062
	(0.086)	(0.086)
Group3	0.127***	0.006
	(0.035)	(0.036)
Group3 × Kid	0.098	0.105
	(0.084)	(0.087)
Kid	−0.045	−0.088
	(0.062)	(0.064)

Notes: A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A13: Heterogeneous Treatment Effects (Economic Literacy)

	Too Much Debt	Should Reduce Debt
Group1	0.271***	0.146***
	(0.049)	(0.048)
Group1 × Literacy	−0.054	−0.022
	(0.064)	(0.064)
Group2	0.103**	0.039
	(0.049)	(0.049)
Group2 × Literacy	−0.000	0.083
	(0.066)	(0.065)
Group3	0.198***	0.071
	(0.048)	(0.048)
Group3 × Literacy	−0.090	−0.078
	(0.065)	(0.066)
Literacy	0.054	−0.045
	(0.047)	(0.048)

Notes: A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A14: Heterogeneous Treatment Effects (Married)

	Too Much Debt	Should Reduce Debt
Group1	0.275***	0.118**
	(0.047)	(0.051)
Group1 × Married	−0.066	0.026
	(0.063)	(0.065)
Group2	0.149***	0.096*
	(0.050)	(0.052)
Group2 × Married	−0.083	−0.012
	(0.066)	(0.066)
Group3	0.118**	−0.002
	(0.048)	(0.051)
Group3 × Married	0.048	0.049
	(0.065)	(0.067)
Married	0.081*	0.084
	(0.049)	(0.051)

Notes: A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A15: Heterogeneous Treatment Effects (Politically Left)

	Too Much Debt	Should Reduce Debt
Group1	0.245***	0.129***
	(0.034)	(0.035)
Group1 × Left	−0.049	0.023
	(0.088)	(0.088)
Group2	0.104***	0.089**
	(0.036)	(0.035)
Group2 × Left	−0.011	0.002
	(0.092)	(0.091)
Group3	0.160***	0.031
	(0.035)	(0.036)
Group3 × Left	−0.105	−0.041
	(0.091)	(0.093)
Left	0.171***	0.132*
	(0.064)	(0.070)

Notes: A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A16: Heterogeneous Treatment Effects (Politically Right)

	Too Much Debt	Should Reduce Debt
Group1	0.216***	0.099***
	(0.034)	(0.034)
Group1 × Right	0.113	0.176*
	(0.085)	(0.091)
Group2	0.103***	0.065*
	(0.035)	(0.034)
Group2 × Right	−0.001	0.125
	(0.094)	(0.098)
Group3	0.156***	0.014
	(0.035)	(0.035)
Group3 × Right	−0.066	0.054
	(0.090)	(0.096)
Right	−0.159**	−0.280***
	(0.063)	(0.069)

Notes: A positive coefficient means that respondents in that group are more likely to agree with the statement than those in the control group. We include the same control variables as in Table 3. Robust standard errors are in parentheses. Asterisks (***, **, *) indicate statistical significance at the 1%, 5%, and 10% levels, respectively.