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Public Attitudes Toward Fiscal Consolidation: Evidence from a Representative German Household Survey

Abstract

The poor state of public finances in many countries has led to calls for fiscal consolidation. In practice, implementing concrete consolidation measures appears to meet with public resistance, suggesting that the success of consolidation efforts strongly depends on the popularity of the chosen measures. To identify public attitudes toward fiscal consolidation and alternative consolidation measures, we conducted a survey among 2,000 German citizens. Applying ordered and multinominal logit models, we test theory-based hypotheses about the determinants of individual attitudes toward public debt. We find that, *inter alia*, personal economic situation, time preferences, fiscal illusion, and trust in politicians exert a significant impact on attitudes toward fiscal consolidation and preferences for alternative consolidation measures.

JEL: D72; H31; H63

Keywords: Public debt; fiscal consolidation; sovereign debt crisis; public attitudes; Germany.

1. Introduction

Over the course of the financial and economic crisis, many countries' public finances have been stretched to the breaking point due to bailing out financial institutions and attempting to stabilise the business cycle. The poor state of public finances has raised concerns not only about the solvency of sovereigns, but also in regard to the very survival of the euro area itself, not to mention the process of European integration. As a consequence, many economists and policy-makers are calling for fiscal consolidation, which, in turn, has led to a resurgence of macroeconomic research on the effects on fiscal consolidation and determinants of the likelihood of its success (e.g., IMF, 2010; Perotti, 2011; Alesina et al., 2012).

However, in many countries, the implementation of consolidation measures has been less than a success, not necessarily due to poorly chosen policies, but because of public opposition to the measures. There is a substantial literature emphasising the importance of public support for economic reforms, suggesting that the success of fiscal consolidation efforts strongly depends on the popularity of the measures to be implemented (see, e.g., the surveys by Rodrik, 1996; Drazen, 2000). However, most empirical studies focus on support for the introduction of a new economic system or specific economic policies rather than the issue of budget consolidation (e.g., Shiller et al., 1991; Fidrmuc, 2000; Warner, 2001; Hayo, 2004; Valev, 2004). Hence, there is little research into public attitudes toward fiscal consolidation and different consolidation measures.

To address this issue, we use data from a unique survey of German households conducted on our behalf by Gesellschaft für Konsumforschung (GfK), one of the biggest private German institutes specialising in collecting public opinion data. Fieldwork was done in February 2013 and involved completing a structured questionnaire with the help of pen pads during face-to-face interviews. Our sample is comprised of 2,042 representatively selected German citizens aged 14 or older.

Interviewees were asked questions about the public debt situation in Germany, in particular about their attitudes toward fiscal consolidation, the desired pattern of public debt reduction, and their preferences for different consolidation measures. We collected additional information about the respondents, allowing us to test several theory-based hypotheses concerning determinants of individual attitudes toward fiscal consolidation. The determinants we find to be important include personal economic situation, time preferences, fiscal illusion, trust in politics, and party preferences.

We believe that there are two reasons making Germany an especially interesting country to study in regard to the topic of this paper. First, Germany is the largest economy

within the European Union, which is why its fiscal policy decisions might cause notable spillovers to other member countries. Second, of all member countries of the euro area, Germany makes the largest contribution to the European Stability Mechanism (roughly 27%). Thus, the state of Germany's public finances is of utmost importance for the whole euro area.

Survey data are frequently used to elicit public attitudes toward policy measures. Alesina and Giuliano (2009), Blekesaune and Quadagno (2003), and Corneo and Grüner (2002) evaluate individual attitudes toward political redistribution utilising cross-country data from the World Values Survey and the International Social Survey Programme. The authors test several hypotheses about preferences for redistribution, especially concerning the impact of current and future income as well as absolute and relative personal income. Alesina and La Ferrara (2005) study the same topic using data from the US General Social Survey. Huckley and Harbour (1983) employ a coupon-scale questionnaire to discover individuals' preferences between public expenditures and tax cuts. By forcing respondents to take both public expenditures and revenues into account, the authors circumvent the so-called more for less paradox (Welch, 1985). Surveys are also used to assess consumers' responses to tax policy changes (e.g., Shapiro and Slemrod, 2001).

Blinder and Krueger (2004), as well as Walstad (1997), use survey data from the United States to examine individual attitudes toward a variety of economic issues, including public deficits. Both studies primarily focus on the role of knowledge and political ideology. Their findings suggest that opinions on economic policy are significantly affected by a person's factual economic knowledge. Blinder and Holtz-Eakin (1984) use US opinion poll data to elicit individual attitudes toward a proposed balanced budget amendment to the constitution.

To the best of our knowledge, the only survey-based empirical analyses of individual preferences toward fiscal consolidation are provided by Stix (2013) and Heinemann and Henninghausen (2012). Stix (2013) uses data from a survey conducted in Austria in 2010 to evaluate public attitudes toward public debt reduction and different debt reduction paths. Heinemann and Henninghausen (2012) utilize data from a telephone survey conducted in Germany in 2011 to assess individual support toward the German federal government's intention not to incur any additional debt throughout the coming years. However, there are some important differences between these approaches and ours. For example, in the questionnaires of both studies, people were asked whether they would support fiscal consolidation, assuming that the *government* will choose the consolidation measures. Given this wording, it seems likely that consolidation preferences are influenced by the respondents'

expectations about which measures the government may implement. Thus, the survey questions used by Stix (2013) and Heinemann and Henninghausen (2012) mimic a single item referendum. In contrast, we designed our survey in such a way that the respondents themselves choose the consolidation measures to be implemented. This not only allows us to assess the *general feasibility* of public debt consolidation, but also to shed light on the specific course policy-makers should adopt to successfully reduce public debt. Moreover, the number of variables employed in our analysis is much larger than in the other two studies. This has two important advantages. First, it allows us to test several theoretical conjectures and hypotheses, which have not been analysed in the extant empirical literature. Second, it helps avoid omitted variable biases.

Our paper also relates to macro-level studies on the association between governments' fiscal performance and election outcomes. For example, Peltzman (1992) studies voting behaviour in US presidential, senatorial, and gubernatorial elections. His findings suggest that voters punish increases in overall public spending, but not an increasing reliance on deficit spending. On the contrary, Brender and Drazen (2008) find that in developed countries, incurring public deficits significantly reduces the incumbent government's chances of re-election.

The main findings of our paper are as follows. Descriptive statistics show that although the median respondent is in favour of fiscal consolidation in Germany, no specific consolidation measure is supported by a majority. We run (ordered) logit estimations and find that individual attitudes toward fiscal consolidation are affected by various factors. People who are well-off, forward-looking, informed about the costs associated with deficit spending, and who have little faith in the government's ability to appropriately manage tax revenues are significantly more likely to opt for a debt reduction. In contrast, people who regard their personal economic situation as poor, reveal high discount rates, and believe in the government's fiscal competence exhibit a larger likelihood of opposing consolidation efforts. Preferences for alternative consolidation measures are also systematically related to several explanatory variables. Respondents characterised by high income and social class tend to favour a tax hike, whereas people who have less or no confidence in the fiscal competence of politicians are generally opposed to such a policy measure. Finally, respondents who are particularly concerned about the present situation tend to oppose a reduction of public spending.

The remainder of the paper is organised as follows. Section 2 introduces the questionnaire and sets forth some descriptive statistics. In Section 3, we study the

determinants of individual attitudes toward fiscal consolidation. We discuss our main research hypotheses and present the results of our empirical analysis. In Section 4, we examine public preferences for alternative consolidation measures. Section 5 concludes.

2. Individual Attitudes Toward Fiscal Consolidation

In democracies, elected politicians are supposed to act in the voters' best interests and according to their preferences. This behaviour is facilitated by regularly scheduled, free elections. In principle, if politicians have been acting in accordance with the voters' interests, they are re-elected, otherwise they are voted out of office. Thus, the likelihood of successfully implementing a political programme is much higher if it matches voters' preferences (Rodrik, 1996; Drazen, 2000).

In light of economic and political developments in Europe within the past years, two questions are of particular interest: What is the electorate's attitude toward (i) fiscal consolidation in general and (ii) specific consolidation measures? The answers to these questions are important to academic economists, as they may help in formulating and testing relevant theories, and they are also crucial for political decision-makers, as the implementation of concrete consolidation measures has met with remarkably strong public resistance.

To provide answers to these questions, we designed a survey which was conducted on our behalf by Gesellschaft für Konsumforschung (GfK), one of the biggest private survey institutes in Germany. Between 15 February and 1 March 2013, 2,042 representatively selected German citizens aged 14 or older were interviewed face-to-face by professional interviewers with the help of pen pads. Quota sampling was used according to sex, age, household size, city size, occupation of head of household, and state of residence.

The questionnaire contains two questions designed to measure individual attitudes toward fiscal consolidation. First, we ask people whether they think the state should reduce public debt, keep the amount of public debt at the current level, or incur additional public debt. The wording of the question, translated from German into English, is as follows:

At the end of 2012 the outstanding amount of public debt in Germany was above €2 trillion. This equals €26,000 per inhabitant or 80% of gross domestic product (GDP), respectively. In your opinion, should the state reduce public debts, keep the amount of public debt at its current level, or incur additional public debts?

Reduce debt	□
Keep debt at current level	□
Incur additional debt	□

Second, respondents who state that public debt should be reduced are then asked to choose between three alternative debt-reduction paths:

Option A: Debt reduction is distributed evenly over the next years, i.e., *in each year a similar amount of debt* is reduced.	□
Option B: The extent of debt reduction increases over the next years, i.e., *in the near future a smaller part of debt* is reduced and *in the far future a larger part of debt* is reduced.	□
Option C: The extent of debt reduction decreases over the next years, i.e., *in the near future a larger part of debt* is reduced and *in the far future a smaller part of debt* is reduced.	□
Don't know	□

In addition to verbally explaining the possible answers, the alternative debt-reduction paths were illustrated graphically on the interviewer's laptop with pictures of stacks of money.

The design of suitable survey items for the purpose of our paper is a challenging task. As our respondents constitute a representative sample of the German population, the survey questions need to be comprehensible for economic laymen and people with less formal education. For that reason, we refrained from defining specific consolidation goals or referring to technical measures, such as debt-to-GDP ratios. The wording of our questions was chosen in close collaboration with survey experts from GfK and our experience from pre-testing the questions. We got the impression that our wording provides a good compromise between keeping the questions appropriately simple and obtaining informative answers, irrespective of whether interviewees have different debt reduction goals or time horizons in mind.

Based on the two aforementioned questions, we construct an ordinal debt-propensity score, which is used as a dependent variable in the empirical analysis. Respondents who prefer an additional increase in public debt are regarded as the most debt prone and those who

opt for an immediate notable debt reduction as most debt averse. Table 1 documents the construction and distribution of our dependent variable based on sorting answers according to the implied propensity toward fiscal consolidation.

Table 1: Constructing the dependent variable: Distribution of attitudes toward fiscal consolidation

Answer Options	**Count**	**Proportion**
1 Reducing a *larger* part of debt in the *near* future and a *smaller* part of debt in the *far* future	312	15.3%
2 Reducing debt evenly over the years	949	46.5%
3 Reducing a *smaller* part of debt in the *near* future and a *larger* part of debt in the *far* future	164	8.0%
4 Hold amount of debt constant	484	23.7%
5 Incur additional debt	33	1.6%
Don't know/no answer (coded as missing values)	100	4.9%
Total	2,042	100%

Note: Answer categories are sorted according to the implied debt propensity. Larger numbers indicate a higher propensity toward public indebtedness.

Roughly 70% of interviewees call for a reduction of public debt. One-quarter prefers to keep public debt at its current level and only 1.6% supports an increase in public debt. It thus appears that fiscal consolidation is supported by a vast majority of the German population. This raises the question of which consolidation measure should be implemented. The success of any fiscal consolidation effort depends not only on the public's attitude toward public debt reduction in general, but also on the popularity of the specific consolidation measures the government plans to adopt. Thus, all respondents who opted for debt reduction were asked which consolidation measure they prefer. The choice was between raising taxes or cutting public spending in one of seven areas: social security, education, public safety, infrastructure, economic development, defence, or miscellaneous. The first six are those on which the German government currently spends the most. Each interviewee could voice a maximum of three preferences, which were ranked. To ensure that differences in respondents' answers are not driven by differences in their information sets, we listed the current amount of public spending devoted to the respective category (in per-capita terms and as a share of total

public spending) as well as the most important items in each category measured by the amount of money spent.

Table 2 shows the percentage distribution of answers. Only about 21% of those who call for fiscal consolidation prefer tax hikes, whereas 66% favour expenditure-based fiscal adjustments.

Table 2: Supporters of fiscal consolidation: Preferences for different consolidation measures—distribution of answers

Consolidation Measure	**1st Choice**	**2nd Choice**	**3rd Choice**	**Sum**
Tax hike	4.9%	4.1%	11.7%	20.6%
Cut public spending on …				
… social security	11.0%	5.5%	6.4%	22.8%
… public safety and order	1.8%	4.0%	3.0%	8.8%
… education	2.3%	2.5%	1.8%	6.6%
… infrastructure	1.8%	6.6%	5.3%	13.6%
… economic development	7.5%	13.8%	7.3%	28.6%
… defence	41.1%	20.1%	5.8%	67.0%
… other areas	16.5%	21.0%	16.1%	53.6%
Don't know/no answer	13.3%	22.4%	42.8%	78.5%
Total	100%	100%	100%	300%

This is good news for fiscal stabilisation, since expenditure-based fiscal consolidation is associated with lower welfare costs and greater sustainability (Alesina et al., 2012; Alesina and Ardagna, 2010). Two-thirds of the consolidation-supporting respondents opt for reducing public spending on defence. Preferences for other consolidation measures are more heterogeneously distributed.

Note that the figures in Table 2 are derived only from supporters of fiscal consolidation. Policy-makers, however, might also be interested in whether any specific consolidation measure is supported by the majority of the population. Table 3 sheds light on this issue. The figures in Table 3 represent the share of respondents in favour of the implementation of consolidation measure j in relation to *all* respondents, plus the 95% confidence intervals as a measure of the sampling error. The figures reveal what may be the most serious obstacle to public debt reduction and why attempts to implement fiscal consolidation measures in the past have been so unsuccessful: there is no single consolidation measure that achieves majority support.

Table 3: All respondents: Preferences for different consolidation measures—distribution of answers

Consolidation Measure	Proportion	95% CI	
Tax hike	15.4%	13.8%	16.9%
Cut public spending on …			
… social security	17.0%	15.4%	18.7%
… public safety and order	6.6%	5.5%	7.6%
… education	4.9%	4.0%	5.9%
… infrastructure	10.1%	8.8%	11.4%
… economic development	21.4%	19.6%	23.1%
… defence	50.0%	47.8%	52.2%
… other areas	40.0%	37.9%	42.1%

Cutting defence expenditures comes close, though, and a simple majority lies within the 95% confidence bands. However, since only 2.5% of the public budget is devoted to this expense, the potential for reducing public debt by means of cutting defence spending is very limited.

3. Eliciting Individual Attitudes Toward Fiscal Consolidation

This section sheds light on whether differences between peoples' attitudes toward fiscal consolidation can be attributed to specific characteristics. As a starting point, the public choice and political economy literature puts forward several theories and conjectures about the determinants of individual attitudes toward public indebtedness. However, there is very little empirical evidence as to the usefulness of these approaches. In this section, we discuss some of these claims and describe how we test them empirically.[1]

3.1. Explanatory Variables and Research Hypotheses

The extant public choice and political economics literature contains hypotheses intended to explain why, or under which conditions, voters may tolerate or even support public debt accumulation. Some approaches are well-defined formal theories, others more or less *ad hoc*. In this section, we discuss several of these arguments and relate them to items included in our questionnaire.

[1] A description of all questionnaire items is provided in Appendix A.1.

Economic well-being: Cukierman and Meltzer (1989) argue that deficit spending can be used to reallocate resources over time and even generations. They provide a formal model in which people trade off their current living conditions against that of future generations. Their main conclusion is that individual attitudes toward public indebtedness depend on personal economic situation: People are less reluctant to live at the expense of future generations if they are relatively worse off. Even in a neo-Ricardian framework in which individuals care about the next generations' well-being, people facing poorer economic conditions are more likely to be in favour of public indebtedness.[2]

The questionnaire contains four variables measuring the interviewee's personal economic situation, three objective indicators and a subjective one: (i) net monthly household income (in €1,000), (ii) the household's real assets (i.e., whether the respondent lives in a self-owned house, self-owned flat, or a rented house/flat), (iii) a social class indicator, i.e., a variable combining information about respondents' relative income and occupational status and ranging from 1 (lower class) to 5 (upper class), and (iv) a subjective assessment of the interviewee's personal economic situation, ranging from 1 (absolutely dissatisfied) to 5 (absolutely satisfied). Our first hypothesis is:

H1: Relatively well-off people are more debt averse than those who are relatively worse off.

Time preference: In Barro's (1979) tax-smoothing hypothesis, deficit spending helps minimise the net present value of the excess burden of taxation. Hence, socially optimal fiscal policy is countercyclical, i.e., a benevolent social planner incurs fiscal deficits during recessions and consolidates the public budget once the economy recovers. However, whether such a course of fiscal policy is in the (representative) voter's interest strongly depends (*inter alia*) on her time preferences, represented by the shape and parameters of the discount function she applies to evaluate the welfare effect of future fiscal policies. The crucial assumption here is that the discount function applied by the (representative) individual corresponds to the yield curve of government bonds. However, two frequently observed anomalies in empirical intertemporal choice research challenge this view. First, people's subjective discount factors between two consecutive periods are typically larger than the corresponding interest rate, indicating that they are less forward-looking than they are assumed to be. Second, people are especially impatient in the short run, commonly referred to as 'myopia' (e.g., Thaler and Shefrin, 1981; Ainslie, 1975). These two anomalies are typically

[2] Personal economic situation is also found to be an important determinant of attitudes toward private indebtedness. See Lea et al. (1995) and Lunt and Livingston (1991) for a discussion of possible explanations.

illustrated by means of a quasi-hyperbolic discount function, with W indicating an individual's welfare and u her utility from consuming good x at time t and in different future periods t + i (i = 1,…,N):

$$W_t^j = u(x_t) + \delta \sum_{i=1}^{N} \beta^i u(x_{t+i})$$

β represents the subjective discount rate between two consecutive future periods, i.e., the individual degree of forward-lookingness, and δ measures the degree of short-run impatience. A quasi-hyperbolic discount function is frequently applied in theoretical and empirical setups and describes individual intertemporal decision-making quite well (e.g., Angeletos et al., 2001; Laibson, 1997). However, a lack of forward-lookingness and short-run impatience could also be an important determinant of public indebtedness. Huber and Runkel (2008) show that when hyperbolic discounting is applied in the context of the Barro (1979) model, a benevolent social planner will persistently accumulate public debt, and the size of the deficit is inversely related to the discount factor.

We conduct two 'experiments' to elicit the interviewees' time preferences. In the first experiment, respondents are asked to choose between a safe payoff of €1,000 paid immediately and a higher payoff of €$X_{i,6}$ paid in six months. In the second experiment, the choice is between a safe payoff of €1,000 paid in six months and a higher payoff of €$X_{i,12}$ paid in 12 months.[3] The respondents' choices of $X_{i,6}$ and $X_{i,12}$ can then be used to calculate β and δ (cf. Angeletos et al., 2001; Laibson, 1997):

$$\beta = \frac{1{,}000}{X_{i,12}}, \qquad \delta = \frac{1{,}000}{\beta \cdot X_{i,6}}$$

Accordingly, our second hypothesis is:

> *H2: The smaller an individual's subjective discount rate (β) and short-run patience (δ), the greater her propensity toward public indebtedness.*

Information set: Survey evidence documents that knowledge about economic facts shapes a person's opinion of economic policy (Blinder and Krueger, 2004; Walstad, 1997). Hence, factual knowledge may also affect individual attitudes toward fiscal consolidation. One of the earliest arguments made in the public choice literature to explain the electorate's apparent debt tolerance is that voters may suffer from 'fiscal illusion', i.e., they lack

[3] The setup of our experiment is shown in Appendix A.2. The setup and wording for this experiment are taken from the questionnaire of the German Socioeconomic Panel (SOEP), where the experiment was incentivised. However, since the distribution of answers in our data is very similar to the one in the SOEP data, we are confident that the lack of a material incentive in our version of the experiment has no notable effect on the respondents' choices.

information about the future costs associated with deficit spending (e.g., Buchanan and Wagner, 1977). Arguably, being able to accurately assess the costs of deficit financing presupposes that voters have sufficient knowledge about the economy. Factual knowledge about debt-related economic measures may be a good way of capturing the degree of fiscal illusion. We employ three multiple-choice questions in order to test the interviewees' knowledge. We ask about (i) the size of the federal government's budget deficit in 2012 (in relation to GDP), (ii) the current interest rate on government bonds with a maturity of 10 years, and (iii) 2012's inflation rate. In each case, respondents can choose between four answers. In the subsequent empirical analysis, we employ dummy variables for the number of correct answers to assess the influence of factual knowledge on attitudes toward fiscal consolidation. We expect that those who are better informed are more debt averse, as they have a better understanding of the costs of public debt.

H3: (Factual) knowledge about the costs associated with deficit spending increases public debt aversion.

Believed fiscal position: Subjective assessment of economic conditions by economic agents may play an important role as well, as people tend to act on the information set they have, at least as long as they perceive it to be reasonably accurate. Thus, on the one hand, if a person *believes* that debt-servicing costs or the previous year's deficit are low, she may be more tolerant of incurring additional public debt. On the other hand, if a person *thinks* that the government is spending beyond its limits, she may be more likely to support fiscal consolidation. We use the answers to the knowledge multiple-choice questions as an indicator for the respondents' *beliefs* about the realisation of debt-related economic measures, irrespective of whether they are actually correct.

H4: The larger a person believes the previous year's deficit as well as debt-servicing costs to be, the greater her public debt aversion.

Trust in politicians: Several political economy approaches assume that public debt is used as a strategic instrument by opportunistic policy-makers to pursue selfish interests. These approaches include political budget cycle theory and rent-seeking approaches, as well as work by Persson and Svensson (1989) and Alesina and Tabellini (1990) in which the government is supposed to have time-inconsistent preferences. Arguably, voters who share these critical views about politicians' motives may be more inclined to believe that public debt is a consequence of opportunistic political behaviour and, therefore, are more likely to support

fiscal consolidation. In contrast, citizens who have great confidence in the elected politicians may be less inclined to scrutinise their decisions and, thus, voice stronger support for whatever policy is actually implemented. Hence, a person's view of politicians may influence his or her evaluation of public policy. Specifically, voters can either question the motives of political actors—e.g., suspect that their decisions reflect self-interest—or their competence. To capture different dimensions of trust, we ask the interviewees whether they believe that politicians (i) act according to the general public interest vs. only in the interest of particular groups, (ii) are concerned about the country's long-term well-being vs. are concerned only about the next election, and (iii) manage tax revenues conscientiously vs. are wasteful with tax revenues. In each case, the interviewees are asked with which statement, on a five-point scale, they most agree.

H5: People who lack confidence in politicians' motives or competence are more likely to opt for fiscal consolidation.

Party preference: A widespread conjecture is that public debt incurrence is associated with the government's political ideology—i.e., leftist governments are supposed to be more inclined to rely on deficit spending than are their right-wing counterparts (e.g., Buchanan and Wagner, 1977). Accordingly, supporters of leftist parties may be more tolerant of public indebtedness than supporters of conservative parties. We account for party preferences by asking interviewees for which party they would vote if elections were held next Sunday. The interviewees choose between the seven most popular parties in Germany. Alternatively, they can state that they 'would vote for a different party' or 'would not vote at all'.

H6: Supporters of leftist parties are more likely to oppose fiscal consolidation than are supporters of conservative parties.

3.2. Empirical Approach

We now conduct an empirical investigation into the determinants of individual attitudes toward fiscal consolidation by considering the following model:

(1) $P(Y = y^k)$

$= F(economic\ situation, time\ preference, information\ set, trust, party\ preference, X)$

The dependent variable is the debt-propensity measure introduced in Section 2.1. To estimate Equation (1), we assume that F(.) corresponds to the distribution function of the logistic distribution, which yields an ordered logit model. We apply maximum likelihood estimation.

The main explanatory variables of interest are the ones described in Section 2.3, namely, the indicators capturing the respondent's economic situation, the time preference parameters β and δ,[4] indicators reflecting the respondent's information about public indebtedness, i.e., the measures of factual knowledge about the costs of public indebtedness as well as the respondent's subjective assessments of debt-related economic measures (i.e., the previous year's deficit, interest rate, and inflation rate; measured in percentage points), the indicators of confidence in government, and party preferences.[5] We further consider various control variables describing respondents' characteristics: education (dummies for those who completed the lower (Hauptschule; reference category), middle (Realschule), and upper secondary school (Abitur)), employment status of the household head (regularly employed (reference category), unemployed, students, retirees, and those who are jobless for other reasons), marital status (singles (reference category), people living together with a partner, married people, and those who are widowed or divorced), age, sex, and children (dummy), head of the household (dummy), union member (dummy), and living in East Germany (dummy). Additionally, we ask all interviewees about their attitudes toward political redistribution on a five-point scale, thereby measuring their proximity to an egalitarian ideology. Finally, we gauge the respondents' risk preferences by conducting a simple experiment. Respondents are confronted with the choice of either receiving a safe payoff of €X or taking part in a lottery in which they could win either €1,000 or nothing (odds are 50:50). The choice of X is then used to compute an individual's risk preference parameter, which varies between −1 (maximum risk aversion) and +1 (maximum risk propensity).[6]

3.3. Results

The estimation results from the ordered logit model explaining individual attitudes toward fiscal consolidation are presented in Table 4. The second column contains the estimated parameters of the latent variable model; columns 3–7 show the average marginal effects for each realisation of the debt-propensity indicator. Our findings are as follows.

[4] In our sample, we observe an unexpectedly high number of respondents who choose the immediate payment irrespective of what future payoff they are offered. Interestingly, a similar distribution of answers is found in the SOEP. A possible explanation for this finding is that respondents who are particularly risk averse chose this option. To control for possible spill-over effects and measurement errors, we include additional dummy variables for these categories.

[5] All explanatory variables are described in greater detail in Appendix A.1.

[6] The risk preference parameter is computed as $\frac{X-500}{500}$. The setup of the experiment is described in detail in Appendix A.2.

Table 4: Determinants of individual attitudes toward fiscal consolidation—ordered logit estimation

Variables	**Coefficient**	**Average Marginal Effects**				
		Y = 1	**Y = 2**	**Y = 3**	**Y = 4**	**Y = 5**
Economic situation						
HH income	0.004	−0.001	−0.0003	0.0001	0.001	0.0001
Subjective well-being	−0.194***	0.025***	0.017***	−0.006***	−0.033***	−0.003***
Social class	−0.027	0.003	0.002	−0.001	−0.004	−0.0004
Property	−0.234**	0.030**	0.021**	−0.007**	−0.040**	−0.004**
Time preferences						
β	−0.755***	0.036***	0.024***	−0.008**	−0.047***	−0.005**
δ	−0.450**	0.029**	0.019**	−0.007**	−0.038**	−0.004**
Knowledge						
One correct answer	−0.329**	0.039**	0.034**	−0.009**	−0.058**	−0.006*
Two correct answers	−0.439**	0.054**	0.042**	−0.012**	−0.076**	−0.008**
Three correct answers	−0.714**	0.095**	0.054***	−0.021**	−0.117***	−0.011***
Believed deficit	−0.098***	0.013***	0.008***	−0.003***	−0.017***	−0.002***
Believed interest rate	0.022	−0.003	−0.002	0.001	0.004	0.0004
Believed inflation rate	−0.033	0.004	0.003	−0.001	−0.006	−0.001
Political trust						
Public interest	−0.005	0.001	0.001	−0.0002	−0.001	−0.0001
Long-term orientation	−0.019	0.002	0.002	−0.001	−0.003	−0.0003
Fiscal competence	0.106*	−0.014*	−0.009*	0.003*	0.018*	0.002*
Party preference						
Leftist party	−0.227	0.029	0.019	−0.007	−0.038	−0.004
Pirates	−0.185	0.024	0.016	−0.005	−0.031	−0.003
SPD	−0.063	0.008	0.006	−0.002	−0.011	−0.001
Green party	−0.072	0.009	0.007	−0.002	−0.012	−0.001
CDU	−0.104	0.013	0.010	−0.003	−0.018	−0.002
FDP	0.096	−0.011	−0.010	0.002	0.017	0.002
NPD	−0.624	0.091	0.034***	−0.020	−0.096*	−0.009*
Other	−0.739***	0.111***	0.034***	−0.024***	−0.111***	−0.010***

Table 4 (continued)

Variables	Coefficient	Average Marginal Effects				
		Y = 1	Y = 2	Y = 3	Y = 4	Y = 5
Education						
Middle second. school	−0.059	0.007	0.005	−0.002	−0.010	−0.001
Higher second. school	−0.214	0.028	0.017	−0.006	−0.036	−0.003
Employment HH head						
Unemployed	−0.208	0.027	0.017	−0.006	−0.035	−0.003
Retired	−0.234	0.031	0.019	−0.007	−0.039	−0.004
Student	−0.398	0.055	0.027*	−0.012	−0.064	−0.006
Jobless other	0.239	−0.027	−0.027	0.006	0.043	0.005
Further controls						
Age	−0.009**	0.001*	0.001*	−0.0003*	−0.001**	−0.0002*
Children	−0.125	0.016	0.011	−0.004	−0.021	−0.002
Female	0.144	−0.019	−0.012	0.004	0.024	0.002
East German	0.300**	−0.036***	−0.029**	0.008***	0.052***	0.005**
Egalitarian attitude	−0.086**	0.011**	0.007**	−0.002**	−0.014**	−0.001**
Risk preference	0.115	−0.015	−0.010	0.003	0.019	0.002
Living in partnership	0.304	−0.039	−0.026	0.009	0.051	0.005
Married	0.116	−0.016	−0.009	0.004	0.019	0.002
Divorced/widowed	0.309	−0.039	−0.027	0.009	0.052	0.005
Union member	−0.129	0.016	0.012	−0.004	−0.022	−0.002
Household head	−0.148	0.019	0.012	−0.004	−0.025	−0.002
Dummy β	−0.369***	0.048***	0.030***	−0.011***	−0.062***	−0.006**
Dummy δ	−0.190	0.024	0.016	−0.006	−0.032	−0.003
Observations	1942					
Pseudo-R^2	0.033					
Wald χ^2 (43)	165.27***					

Note: Results are based on an ordered logit maximum likelihood estimation. The dependent variable is the debt-propensity measure introduced in Section 2. White (1980) robust standard errors are used. Average marginal effects for β and δ are calculated based on change of the respective variable from the lower to the upper bound of the 66% confidence interval. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

H1: Economic situation: We find that subjective economic well-being and property ownership, our wealth indicator, reveal a statistically significant and theory-consistent association with attitudes toward fiscal consolidation. The marginal effects appear to be of notable size. A one-unit increase in the subjective assessment of personal economic situation increases the likelihood of opting for a large immediate debt reduction by about 2.5 percentage points (pp) and for an even reduction of debt over time by about 1.7 pp; in contrast, the likelihood of opposing a reduction in public debt decreases by more than 3 pp. This result supports previous findings by Stix (2013), who reports that well-to-do respondents strongly support consolidation efforts. Likewise, homeowners are 3 pp more likely to favour immediate consolidation and 4 pp less likely to prefer an unchanged public debt level. Household income and the social class indicator have no significant impact on the debt-propensity indicator. We check the robustness of our finding by considering the monthly net personal income of the respondent instead of household income. Moreover, we replace the income measures with income quartiles and quintiles to investigate the importance of relative income effects. Our results do not change notably.

H2: Time preference: An increase in β and δ, i.e., lower discount rate and greater patience, is associated with a significantly higher likelihood of supporting immediate fiscal consolidation as well as an even reduction of debt over time. Respondents with lower subjective discount rates and greater short-run impatience are more likely to either oppose consolidation efforts or to put off debt reduction to the future. Note that since both β and δ can vary only between 0 and 1, common marginal effects are of limited interpretative value since they refer to a one-unit increase in the respective right-hand side variable. For this reason, we compute marginal effects based on a change from the lower to the upper bound of the 66% confidence interval of β and δ (corresponding to a two-standard-deviation increase). A two-standard-deviation increase in β (δ) increases the likelihood of favouring an immediate debt reduction by about 3.5 pp (3 pp); in contrast, the likelihood of opposing such a reduction decreases by almost 5 pp (4 pp). Thus, our findings fully confirm hypothesis H2, in which a lack of future orientation or myopia is expected to be an important source of voters' debt tolerance. The findings are consistent with findings by Stix (2013), who reports that a higher preference for the present is associated with weaker consolidation preferences.[7]

H3: Information set: We find that respondents who are informed about the (future) costs of deficit spending are more debt averse, supporting the fiscal illusion argument. The

[7] Note that Stix (2013) does not account for the possibility that interviewees may be 'myopic' and apply quasi-hyperbolic discounting. Thus, he does not differentiate between the effects of general forward-lookingness and short-run impatience.

larger the number of correct answers to the three multiple-choice questions, i.e., the better the factual knowledge about debt-related economic measures, the greater the respondent's public debt aversion. The effects are of a notable size: respondents giving one/two/three correct answers are 3.9 pp/5.4 pp/9.5 pp more likely to support prompt consolidation and 5.8 pp/7.6 pp/11.7 pp less likely to prefer public debt at its current level.

H4: Believed fiscal position: Subjective assessment of debt-related economic measures appears to be important as well. The larger a person believes the previous year's deficit to be, the more likely she is to support fiscal consolidation. An increase in the assessment of the previous year's deficit by 1 pp involves a 1.3 pp higher likelihood of favouring an immediate debt reduction. In contrast, the likelihood of opting for an unchanged public debt level decreases by 1.7 pp. Beliefs about the realisations of the interest rate and inflation rate exert no statistically significant influence on attitudes toward fiscal consolidation.

H5: Trust in politicians: Concerning the importance of trust in politicians, only the evaluation of their fiscal competence matters. People who believe that politicians manage tax revenues conscientiously are less likely to favour fiscal consolidation than those who believe that taxes are wasted. A one-unit increase in the respective indicator decreases the likelihood of supporting immediate debt reduction by 1.4 pp. Opinions about politicians' motives, however, appear to be irrelevant.

H6: Party preference: The attitudes toward fiscal consolidation held by supporters of political parties are not significantly different from those of non-voters, the only exception being voters for parties other than those listed. Voters of 'other' parties are not only significantly more debt averse than non-voters, they are also more likely to support fiscal consolidation than are voters for all the parties listed (except NPD voters).[8] This suggests that those who most desire public debt reduction tend to be disappointed by the policy programmes of the established parties, which may also help explain the recent success of a new party, Alternative für Deutschland, which focuses on this type of macroeconomic policy. Linear parameter tests do not indicate any significant differences between supporters of the parties listed.

A few control variables have significant effects: an egalitarian ideology is associated with stronger support for fiscal consolidation and East Germans are significantly more likely to oppose public debt reduction than are West Germans.

[8] This conclusion is based on linear parameter tests. Results are available on request.

To check the robustness of our results and to glean further insights, we apply some modifications to our original specification. First, we replace our ordinal dependent variable, i.e. the debt propensity measure, by a dummy variable taking on the value 1 if a respondent favours public debt reduction and 0 otherwise. The results are presented in Table A1 of the Appendix. Most of our findings remain remarkably robust. Interestingly, the effects of the time preference indicators β and δ become less significant (δ) or even insignificant (β), indicating that time preferences may affect the preferred timing or pace of fiscal consolidation, but not the general sentiment toward public debt.[9]

Finally, we reduce our sample and exclude all respondents who are less than 18 years old. At the federal government level in Germany, citizens younger than 18 years of age are not entitled to vote, which is why they might lack political interest.[10] However, excluding this age group does not affect our findings[11]

4. Individual Attitudes Toward Alternative Consolidation Policies

As shown in Section 2, preferences for alternative consolidation policies show remarkable variation. In this section, we use two approaches to investigate whether the observed differences are associated with specific individual characteristics. First, we consider only the respondents' first choices and estimate a multinominal logit model with 'tax hike' as a base category. Second, we investigate whether a specific consolidation measure is mentioned at all by estimating eight binary choice logit models, one for each consolidation measure. The binary dependent variables take the value 1 if the respective measure was mentioned; 0 otherwise. As regressors, we employ the same variables as in the previous analysis (cf. Section 2.3). Our analysis is explorative, as there is no well-defined theory from which testable hypotheses can be derived.

The estimation results are presented in Tables A2 and A3 in Appendix 4. To economise on space, we concentrate on the most interesting findings. The respondent's economic situation especially affects the general choice between tax-based and expenditure-based consolidation. The higher net household income and social class, the greater the likelihood of favouring a tax hike over almost any other alternative, irrespective of whether we consider only the respondents' most preferred consolidation policy or all three choices. People who are particularly concerned about the present situation oppose a reduction in public spending on economic development and defence. The former effect is intuitive as, e.g.,

[9] Notethat the coefficient of β is almost significant at the 10% level (p-value: 0.107).
[10] At the state level, citizens are entitled to vote once they are 16 years old.
[11] Only 81 respondents in our sample are aged 16 or 17 years. Results are available on request.

spending on business cycle stabilisation falls into this category. In other words, this finding suggests that people with low discount rates are especially concerned about the present state of the economy.

Trust in politicians has a significant influence on the preferences for different consolidation measures. As one might expect, people who do not have confidence in the fiscal competence of politicians are less likely to opt for a tax hike than those who believe that the government manages tax revenues conscientiously. The distrustful prefer spending cuts, especially in the areas of economic development and defence, which can be interpreted as the belief that tax revenues are wasted in these categories. The distrustful are significantly less likely to favour cutting public spending on social security, which suggests that they do not seem to think that tax revenues are wasted in this area.

The respondents' political orientation also appears to be important, at least with respect to the most preferred consolidation measure. Voters of parties other than those listed prefer cutting spending on any policy area over tax hikes in first place.

5. Concluding Remarks

The poor state of public finances in many countries has led to calls for fiscal consolidation. However, debt-reduction plans have often met with stiff public resistance, which is why many governments seem to avoid adopting concrete consolidation measures. This paper identifies the determinants of individual attitudes toward fiscal consolidation and alternative consolidation measures. More precisely, we examine the role of various factors derived from theory-informed hypotheses, namely, personal economic well-being, time preference, fiscal illusion, trust in politicians, and party preference.

Our results support many of the conjectures found in the public choice and political economy literature. People are more likely to support fiscal consolidation the better their economic situation, the more forward-looking and patient they are, the better their knowledge about the costs of deficit spending, and the lower their trust in the government's fiscal competence. However, opinions about the 'appropriate' fiscal adjustment path diverge widely, which is bad news for policy-makers trying to obtain public support for their policies. There is no sign, though, that preferences for alternative consolidation measures are significantly affected by selfish interests, i.e., well-off people prefer tax hikes over almost any alternative consolidation measure, even over spending cuts in social security.

At least two issues are not addressed in our analysis. First, it is debatable whether all respondents who claim to be in favour of public debt reduction can be regarded as 'serious'

consolidation supporters. Although 70% of the German population supports fiscal consolidation, 8% state that the main part of public debt should be reduced at some (unspecified) time in the future, and 13% refuse to specify concrete consolidation measures. This suggests that about 20% of respondents do not take the public budget constraint into account when voicing their opinion, i.e., they support a policy measure only if it involves no costs.

Second, less than 10% of the respondents know the previous year's budget deficit. This suggests that citizens either (i) find it difficult to acquire this information, (ii) are not overly concerned about acquiring information about public deficits, or (iii) do not believe this specific information to be particularly important for their well-being. Further research is needed to differentiate between these alternative interpretations.

Appendix

A.1. Explanatory Variables

HH income	Monthly net household income in €1,000. In the raw dataset, households are sorted into one of 11 income classes. In the empirical analysis, we consider the centre of each class.
Subjective well-being	Subjective assessment of personal economic well-being, ranging from 1 (absolutely dissatisfied) to 5 (absolutely satisfied).
Social class	Indicator combining information about respondents' relative income and occupational status and ranging from 1 (lower class) to 5 (upper class).
Property	Dummy variable taking the value 1 if the respondent lives in her own house or flat and 0 if the house/flat is rented.
Believed deficit	Measure of the respondent's assessment of 2012's federal budget deficit (four potential realisations; measured in percentage points). This variable is computed based on the following question: How large was the budget deficit of the federal government in 2012? 1% □ 3% □ 5% □ 7% □
Believed interest rate	Measure of the respondent's assessment of the interest rate on government bonds with a maturity of 10 years (four potential realisations; measured in percentage points). This variable is computed based on the following question: What is the current interest rate on long-term government bonds (maturity 10 years), approximately? 1.5% □ 3% □ 5.5% □ 10% □
Believed inflation rate	Measure of the respondent's assessment of 2012's inflation rate (four potential realisations; measured in percentage points). This variable is computed based on the following question: How large was the inflation rate in 2012, approximately? 0% □ 2% □ 5% □ 10% □
Knowledge/number of correct answers	Variable measuring the number of correct answers to the three multiple-choice questions about 2012's deficit, the interest rate on government bonds, and 2012's inflation rate.
Public interest	Most politicians in Germany act in line with the general public's interest vs. Most politicians in Germany only serve the interests of particular groups +2: □ +1: □ 0: □ −1: □ −2: □
Long-term orientation	Most politicians are concerned about the country's long-term well-being vs. Most politicians are only concerned about the next elections +2: □ +1: □ 0: □ −1: □ −2: □

Fiscal competence	The government manages tax revenues conscientiously		vs.	The government wastes tax revenues	
	+2: □	+1: □	0: □	−1: □	−2: □
Education	Education level of the respondent, differentiating between lower secondary education (reference category), middle secondary education, and upper secondary education.				
Employment HH head	Employment status of the household head, differentiating between regularly employed (reference category), unemployed, retired, student, and jobless for other reasons.				
Age	Respondent's age in years.				
Children	Dummy variable taking the value 1 if the respondent has children (0 otherwise).				
Female	Dummy variable taking the value 1 if the respondent is female (0 otherwise).				
East German	Dummy variable taking the value 1 if the respondent lives in East Germany (0 otherwise).				
Egalitarian attitude	The state should ensure equal living conditions		vs.	The state should not interfere with people's living conditions	
	+2: □	+1: □	0: □	−1: □	−2: □
Risk preference	See Section 3.2.				
Family status	Family status of respondent, differentiating between single (reference category), living together with a partner, married, and divorced/widowed.				
Union member	Dummy variable taking the value 1 if the respondent is a union member (0 otherwise).				
Household head	Dummy variable taking the value 1 if the respondent is the head of the household she lives in (0 otherwise).				

A.2. Measurement of Risk and Time Preferences

Questionnaire wording: Next, we would like to conduct some experiments concerned with financial decisions. In the first experiment, you make your decisions according to the following table *(Interviewer: Please show the table below)*. In each row you see two alternatives. You can choose between a certain payoff and participation in a lottery, which follows the principle 'all or nothing': You have a 50% chance of winning €1,000 and a 50% chance of winning €0.

You start in row 1 and then proceed row by row. In each row, please choose between the certain payoff (column A) and participation in the lottery (column B). The lottery remains the same in all rows. Only the certain payoff increases from row to row.

	You get… **Safe**		You get… **€1,000 or nothing** Chance of winning 50:50
	A	**or**	**B**
1	€0		Chance of winning €1,000/€0
2	€100		Chance of winning €1,000/€0
3	€200		Chance of winning €1,000/€0
4	€300		Chance of winning €1,000/€0
5	€400		Chance of winning €1,000/€0
6	€500		Chance of winning €1,000/€0
7	€600		Chance of winning €1,000/€0
8	€700		Chance of winning €1,000/€0
9	€800		Chance of winning €1,000/€0
10	€900		Chance of winning €1,000/€0

Interviewer: Please start with row 1 and the question 'What do you choose? €0 safe or chance of winning €1,000/€0?'. If the interviewee chooses option B, please proceed to row 2 and the question 'What do you choose? 100€ or a chance of winning 1,000€/0€?'. The experiment ends when the interviewee chooses option A for the first time. Please write down the number of the row where the respondent chose option A for the first time.

Option A was first chosen in row number: ☐

Questionnaire wording: In the next experiment you decide according to the following table (*Interviewer: Please show the table below*). In each row, you see two alternatives. You can choose between a certain payoff of €1,000, which is paid to you **immediately** and a higher certain payoff, which will be paid to you **in 6 months**.

You start in row 1 and then proceed row by row. In each row, please choose between the payoff of €1,000 to be paid **immediately** (column A) and the higher payoff to be paid **in 6 months** (column B). The payoff on the left remains the same in all rows. Only the payoff on the right increases from row to row.

	You get… **Immediately** **A**	**or**	You get… **In 6 month** **B**
1	€1,000		€1,000
2	€1,000		€1,010
3	€1,000		€1,020
4	€1,000		€1,030
5	€1,000		€1,050
6	€1,000		€1,075
7	€1,000		€1,100
8	€1,000		€1,150
9	€1,000		€1,200
10	€1,000		€1,300
11	€1,000		€1,400
12	€1,000		€1,500
13	€1,000		€1,750
14	€1,000		€2,000

Interviewer: Please start with row 1 and the question 'What do you choose? €1,000 immediately or €1,000 in 6 months?'. If the interviewee chooses option A, please proceed to row 2 and the question 'What do you choose? €1,000 immediately or €1,010 in 6 months?'. The experiment ends when the interviewee chooses option B for the first time. Please write down the number of the row where the interviewee chose option B for the first time.

Option B was first chosen in row number: ☐

Questionnaire wording: In the last experiment, you decide according to the following table (*Interviewer: Please show the table below*). In each row, you see two alternatives. You can choose between a certain payoff of €1,000, which is paid to you **in 6 months** and a higher certain payoff, which will be paid to you **in 12 months**.

You start in row 1 and then proceed row by row. In each row, please choose between the payoff of €1,000 to be paid **in 6 months** (column A) and the higher payoff to be paid **in 12 months** (column B). The payoff on the left remains the same in all rows. Only the payoff on the right increases from row to row.

	You get… **In 6 months** **A**	**or**	You get… **In 12 months** **B**
1	€1,000		€1,000
2	€1,000		€1,010
3	€1,000		€1,020
4	€1,000		€1,030
5	€1,000		€1,050
6	€1,000		€1,075
7	€1,000		€1,100
8	€1,000		€1,150
9	€1,000		€1,200
10	€1,000		€1,300
11	€1,000		€1,400
12	€1,000		€1,500
13	€1,000		€1,750
14	€1,000		€2,000

Interviewer: Please start with row 1 and the question 'What do you choose? €1,000 in 6 months or €1,000 in 12 months?'. If the interviewee chooses option A, please proceed to row 2 and the question 'What do you choose? €1,000 in 6 months or €1,010 in 12 months?'. The experiment ends when the interviewee chooses option B for the first time. Please write down the number of the row where the interviewee chose option B for the first time.

Option B was first chosen in row number: ☐

A.3. Checks for Robustness

Table A1: Determinants of individual attitudes toward fiscal consolidation—binary choice logit estimation

Variables	**Coefficient**	**Standard Error**	**Average marginal effect**
Economic situation			
HH income	0.054	0.086	0.009
Subjective well-being	0.214***	0.061	0.038
Social class	0.108	0.092	0.019
Property	0.260**	0.116	0.046
Time preferences			
β	0.556	0.345	0.036
δ	0.398*	0.232	0.035
Knowledge			
One correct answer	0.038	0.176	0.007
Two correct answers	0.196	0.228	0.035
Three correct answers	0.747**	0.354	0.115
Believed deficit	0.102***	0.037	0.018
Believed interest rate	−0.010	0.032	−0.002
Believed inflation rate	0.004	0.033	0.001
Political trust			
Public interest	0.022	0.069	0.004
Long-term orientation	0.056	0.070	0.010
Fiscal competence	−0.165**	0.071	−0.029
Party preference			
Leftist party	0.120	0.239	0.021
Pirates	−0.166	0.384	−0.032
SPD	0.002	0.158	0.000
Green party	−0.058	0.183	−0.011
CDU	0.152	0.171	0.027
FDP	0.035	0.319	0.006
NPD	1.063	0.730	0.150
Other	1.078***	0.340	0.151
Education			
Middle second. school	0.302**	0.134	0.054
Higher second. school	0.291	0.199	0.053
Employment HH head			
Unemployed	0.492**	0.231	0.082
Retired	0.300*	0.179	0.052
Student	1.018**	0.441	0.155
Jobless other	−0.189	0.334	−0.036
Observations	2042		
Pseudo-R2	0.061		
Wald $\chi 2$ (42)	133.64***		

Note: Results are based on a logit maximum likelihood estimation. Coefficients of control variables are omitted to save space. The dependent variable is a dummy with value 1 if the respondents favours public debt reduction (0 otherwise). White (1980) robust standard errors are used. Average marginal effects for β and δ are calculated based on change of the respective variable from the lower to the upper bound of the 66% confidence interval. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

A.4. Individual Attitudes Toward Alternative Consolidation Policies

Table A2: Determinants of individual attitudes toward different fiscal consolidation measures—multinominal logit estimation

Variables	**Social Security**	**Public Safety**	**Education**	**Infrastructure**	**Econ. Develop.**	**Defence**	**Other Areas**
Economic situation							
HH income	−0.503**	−0.816**	−0.384	−0.726**	−0.583**	−0.601***	−0.561**
Subjective well-being	−0.114	−0.237	−0.221	−0.015	−0.199	−0.160	−0.290
Social class	−0.619**	−0.485	−0.532	−0.407	−0.661**	−0.569**	−0.667**
Property	0.642*	1.046*	0.479	1.348**	1.275***	0.689**	0.661**
Time preferences							
β	−0.435	2.496	−2.638*	0.926	1.151	0.191	−0.492
δ	1.634**	2.189*	0.646	1.477	2.582***	1.686**	1.410*
Knowledge							
One correct answer	−1.253**	−0.745	−1.382*	−0.946	−0.706	−0.530	−0.513
Two correct answers	−1.376**	−2.098**	−0.389	−2.235**	−1.543**	−0.854	−0.999
Three correct answers	−2.170**	−1.259	−0.900	−1.088	−1.060	−1.264	−1.654*
Believed deficit	−0.151	−0.421***	−0.099	−0.203	−0.045	−0.145*	−0.166*
Believed interest rate	−0.052	0.082	0.043	0.151	0.046	−0.007	0.044
Believed inflation	0.160	0.173	0.199	0.235	0.141	0.126	0.190*
Political trust							
Public interest	0.079	−0.232	0.246	−0.005	0.274	−0.077	0.049
Long-term orientation	−0.272	0.010	0.185	0.069	−0.244	−0.137	−0.062
Fiscal competence	0.012	−0.029	−0.096	−0.233	−0.351*	−0.230	−0.267
Party preference							
Leftist party	−2.744***	−0.785	−1.911	−16.231***	−1.019	−1.059**	−1.038*
Pirates	−15.470***	−15.143***	0.886	1.787	0.748	0.289	0.707
SPD	−0.376	0.362	0.664	0.780	−0.163	−0.127	−0.156
Green party	−0.730	−0.319	−1.645	0.092	−0.148	−0.121	−0.449
CDU	−0.061	0.023	−0.324	0.249	−0.277	−0.248	−0.329
FDP	1.867*	1.130	−14.545***	1.508	0.946	0.764	0.342
NPD	14.377***	−1.661*	15.609***	−1.243	14.881***	13.787***	14.957***
Other	14.951***	14.585***	14.651***	15.689***	14.458***	14.766***	15.289***

Table A2 (continued)

Variables	Social Security	Public Safety	Education	Infrastructure	Econ. Develop.	Defence	Other Areas
Education							
Middle second. school	−0.220	−0.036	−1.168**	−0.037	−0.531	−0.076	−0.618*
Higher second. school	−0.191	0.089	−0.884	0.324	−1.201**	−0.017	−0.440
Employment HH head							
Unemployed	−0.266	0.703	−0.384	−1.198	−0.289	0.220	−1.253
Retired	−0.926*	−1.285*	0.875	−0.261	−1.034**	−0.765*	−0.726
Student	−0.707	0.684	−1.683	1.162	0.474	−0.021	0.252
Jobless other	0.602	−0.066	0.577	−15.200***	1.026	−0.239	0.389
Further controls							
Age	0.002	−0.008	−0.057**	−0.029	0.017	0.012	−0.002
Children	0.460	0.468	0.319	0.458	0.562	0.457	0.835**
Female	−0.195	−0.094	0.007	−0.284	−0.196	−0.251	−0.560*
East German	−0.242	−0.362	0.616	0.509	−0.565	−0.217	−0.314
Egalitarian attitude	−0.361***	−0.265	−0.311	0.089	−0.228	0.028	−0.082
Risk preference	−0.530**	0.155	−0.606*	−0.464	−0.089	−0.307	−0.254
Living in partnership	0.807	0.735	−0.140	0.691	−0.709	0.245	0.350
Married	−0.414	−0.506	0.398	0.522	−0.546	−0.159	−0.224
Divorced/widowed	−0.471	0.492	0.361	0.220	−0.467	−0.010	−0.172
Union member	−0.016	0.823	0.533	0.429	−0.383	0.410	−0.018
Household head	0.160	0.797	0.178	0.718	0.375	0.622	0.427
Dummy β	0.300	0.100	0.089	1.043	0.539	0.759**	0.511
Dummy δ	−0.578	−0.768	−1.419**	−1.700**	−0.995**	−0.817**	−0.723*
Constant	4.080	−1.119	5.139	−0.466	0.116	2.375	3.552
Observations	1525						
Pseudo-R^2	0.106						

Note: Results are based on a maximum likelihood, multinominal logit estimation. The reference category is ‘tax hike’. White (1980) robust standard errors are used. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table A3: Determinants of individual attitudes toward different fiscal consolidation measures—binary choice logit estimation

Variables	Tax Hike	Social Security	Public Safety	Education	Infrastructure	Econ. Develop.	Defence	Other Areas
Economic situation								
HH income	0.030*	−0.005	−0.006	0.008	−0.024	0.005	0.023	−0.016
Subjective well-being	0.008	0.016	−0.017**	−0.005	0.005	−0.021	0.011	−0.012
Social class	0.031*	−0.012	−0.007	0.002	−0.018	0.003	−0.003	−0.035
Property	−0.025	−0.033	−0.000	0.010	−0.015	0.063**	−0.035	−0.006
Time preferences								
β	0.030	0.079	0.006	−0.012	0.021	0.080***	0.123***	0.043
δ	−0.052*	−0.008	0.003	0.008	0.023	0.029	0.030	−0.008
Knowledge								
One correct answer	−0.013	−0.055	−0.009	−0.050***	−0.039	−0.001	0.114***	0.043
Two correct answers	−0.023	−0.073	−0.025	−0.011	−0.054	−0.016	0.091*	0.031
Three correct answers	−0.064	−0.082	0.003	0.013	−0.061	0.057	0.146**	0.071
Believed deficit	−0.009	0.001	−0.006	0.002	−0.002	0.015*	0.012	0.012
Believed interest rate	−0.007	−0.013**	0.002	0.002	0.008	−0.007	−0.016**	−0.008
Believed inflation	−0.023***	0.005	−0.001	0.001	−0.008	0.010	−0.001	−0.002
Political trust								
Public interest	0.010	−0.023*	0.014	0.007	0.000	0.039***	0.001	0.009
Long-term orientation	−0.005	−0.011	−0.005	0.010	0.015	−0.013	−0.037***	−0.025
Fiscal competence	0.024*	0.030**	0.012	0.003	−0.007	−0.035**	−0.027*	−0.032**
Party preference								
Leftist party	0.070	−0.037	−0.032	−0.010	−0.039	0.073	0.043	0.145**
Pirates	0.012	−0.001	0.033	0.049	−0.089**	0.028	−0.062	0.207**
SPD	−0.001	0.001	0.011	0.006	0.036	0.057	0.006	0.086**
Green party	−0.037	−0.031	−0.022	−0.054***	0.044	0.040	0.014	0.042
CDU	0.014	0.057	0.004	−0.017	−0.019	−0.005	−0.002	0.094**
FDP	0.011	0.288***	−0.007	−0.017	−0.010	−0.006	0.035	−0.021
NPD	0.122	0.016	0.047	0.030	−0.005	−0.045	−0.003	0.101
Other	−0.050	0.025	−0.039	−0.011	0.016	−0.009	−0.165***	0.043

Table A3 (continued)

Variables	Tax Hike	Social Security	Public Safety	Education	Infrastructure	Econ. Develop.	Defence	Other Areas
Education								
Middle second. school	0.015	0.021	0.006	−0.019	0.003	0.033	0.058*	0.029
Higher second. school	0.093**	0.039	−0.002	−0.036	0.004	0.044	0.091**	−0.033
Employment HH head								
Unemployed	0.082	−0.034	0.066*	−0.014	0.021	−0.035	0.107***	−0.048
Retired	0.056	−0.015	0.034	0.050*	0.017	0.001	−0.026	−0.065
Student	0.023	−0.077	−0.043	−0.063***	0.055	0.120	−0.054	−0.124
Jobless other	−0.002	−0.017	0.011	−0.037	0.073	0.030	−0.045	0.034
Further controls								
Age	−0.001	0.0003	−0.001*	−0.003***	−0.001	0.002	0.002**	−0.0002
Children	0.016	−0.0001	−0.055**	−0.010	0.0002	−0.052	−0.017	0.083**
Female	0.000	−0.028	0.003	0.021	−0.020	−0.055*	−0.023	−0.044
East German	0.033	0.028	0.005	0.044*	0.038	−0.080***	0.018	0.026
Egalitarian attitude	0.005	−0.031***	−0.006	−0.005	0.019**	−0.004	0.032***	0.010
Risk preference	−0.006	−0.011	0.001	−0.002	−0.030**	−0.003	−0.020	0.019
Living in partnership	−0.013	−0.014	0.017	−0.024	0.002	0.065	−0.003	−0.137**
Married	0.004	−0.053	0.038	0.031	0.011	0.042	−0.002	−0.021
Divorced/widowed	−0.038	−0.060	0.005	0.017	0.027	0.121**	0.044	−0.015
Union member	0.039	−0.006	0.019	0.019	0.030	−0.003	0.052	−0.027
Household head	−0.020	0.005	−0.020	−0.043***	0.044*	0.074**	0.020	0.028
Dummy β	−0.019	−0.013	0.008	0.005	0.030	0.021	0.039	0.030
Dummy δ	0.087**	0.044	−0.038*	−0.036**	−0.011	0.047	0.092***	0.043
Observations	1525	1525	1525	1525	1525	1525	1525	1525
Pseudo-R^2	0.052	0.048	0.063	0.103	0.046	0.038	0.078	0.037
Wald χ^2 (42)	68.59***	73.62***	69.23***	80.96***	54.60*	66.53***	132.76***	72.37***

Note: Results are based on a binary choice, logit maximum likelihood estimation. The table contains average marginal effects. The dependent variable equals 1 if the respective consolidation measure was mentioned; 0 otherwise. White (1980) robust standard errors are used. Average marginal effects for β and δ are calculated based on change of the respective variable from the lower to the upper bound of the 66% confidence interval. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

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