No. 57-2014

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This version: 4 November 2014

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Abstract

Employing data from a representative survey conducted in Germany, this paper examines public preferences for the size and composition of government expenditure. We focus on public attitudes toward taxes, public debt incurrence, and public spending in six different policy areas. Our findings suggest, first, that the current scope of government is supported by a majority of the German population. Second, we find that individual preferences for the composition of government spending differ along various dimensions. Specifically, personal economic well-being, economic literacy, confidence in politicians, political ideology, and time preference are significantly related to individual attitudes toward public spending, taxes, and debt. The magnitude of the effects is particularly large for time preference, economic knowledge, and party preference. Third, public preferences for public spending priorities are only marginally affected when considering a public budget constraint.

1. Introduction

The past decade has witnessed an expansion of the public sector in most OECD countries, reflected by notably higher public expenditure and tax revenue-to-GDP ratios.[1] This trend reached a peak after the recent financial and economic crises, when governments around the world implemented fiscal stimuli in order to stabilise the business cycle. In the aftermath of this expansion, governments are finding it hard to cut back the budget again. Moreover, there has been an intensive debate over what some observers call 'austerity', the reluctance of some countries (e.g., the United Kingdom and Germany) to prolong the period of extensive deficit spending. Economists supporting 'austerity' often believe that large governments might have a detrimental impact on economic growth and social welfare (e.g., Afonso and Furceri, 2010; Fölster and Henrekson, 2001; Barro, 1990). Moreover, in the public choice literature, policymakers and bureaucrats are typically assumed to be primarily concerned with their personal utility rather than public benefit (e.g., Niskanen, 1971; Alesina et al., 1997; Drazen, 2002). In their view, markets would supply many currently publicly-provided goods and services more efficiently than do governments.[2]

From a political perspective, the scope of government in a democracy arguably should reflect the electorate's preferences. However, it seems unlikely that a person's demand for publicly-provided goods and services is primarily driven by concerns about economic welfare *per se*. It is hard to imagine that 'common' people (i.e., economic laymen) evaluate fiscal policies from a theoretical economics perspective and employ, for instance, Musgrave's (1959) distinction between the main fiscal functions of allocation, distribution, and stabilisation.

But if not fiscal functions, what does determine the demand for publicly-provided goods? We provide an answer to this question based on an empirical analysis of data from Germany. Thus, in this paper, we study the correlates of peoples' attitudes toward public spending in six different policy areas, as well as of their views on taxes and public debt. In consideration of the various government functions and the implications of different public spending priorities, we formulate and test several hypotheses. In our analysis, we pay particular attention to the influence of redistribution concerns, confidence in politicians' competence and motives, economic literacy, political leaning, and time preferences.

For this purpose, we designed a representative survey of the German population. The survey was conducted on our behalf by GfK, one of the biggest private survey institutes in

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[1] According to IMF International Financial Statistics, the expenditure-to-GDP quota in the euro area increased between 1991 and 2013 from 43.4% to 50% (on average). In the same period, the revenue-to-GDP ratio rose from 42.0% to 46.7%.

[2] Throughout this paper, we use the term 'public good' for goods characterised by non-rivalry and non-excludability and the term 'publicly-provided good' for goods that are actually provided by the government, irrespective of whether they are characterised by non-rivalry and/or non-excludability.

Germany, specialised in market and public opinion research. In the first quarter of 2013, roughly 2,000 representatively selected German citizens aged 14 or older were interviewed face to face using pen-pads. Respondents were asked for which policy areas public expenditure should be increased, decreased, or held constant relative to the current level. We consider two different scenarios: in the first scenario, respondents are required to take the public budget constraint into account; that is, respondents who opt for spending hikes (spending cuts) need to state how this hike should be financed or, alternatively, if they opt for spending cuts, to what purpose the additional funds should be used. The choice is between changing the level of public spending in any other policy area, increasing or decreasing taxes, or incurring or not incurring public debt. In this way, we circumvent the so-called 'more for less' paradox (Welch, 1985), according to which people want more spending but less taxation, and thus overcome a shortcoming found in many other surveys, for example, the International Social Survey Programme. In the second scenario, there is no binding budget constraint, that is, respondents are asked how additional unexpected revenues should be used. These two scenarios allow studying the importance of a budget constraint when measuring public support for government activities.

Surveys are frequently used to elicit public attitudes on fiscal policy measures. Based on cross-country data from the World Values Survey and the International Social Survey Programme, Alesina and Giuliano (2009), Blekesaune and Quadagno (2003), and Corneo and Grüner (2002) analyse individual attitudes toward political redistribution. Stix (2013), Blinder and Holtz-Eakin (1984), Blinder and Krueger (2004), and Walstad (1997) employ survey data to evaluate individual opinions on fiscal consolidation and public deficits. Hayo and Neumeier (2013) shed light on public attitudes toward different fiscal consolidation measures. However, to date, only a few studies focus on individual attitudes toward public spending priorities. Based on survey data from the United States, Mueller (1963), Welch (1985), Jacoby (1994), and Hansen (1998) evaluate public attitudes toward various fiscal programmes, such as public spending on certain welfare measures, education, health care, and defence. However, their analyses are primarily descriptive and they do not investigate the relationship between individual characteristics and fiscal policies. Hockley and Harbour (1983) employ a coupon scale questionnaire to elicit attitudes toward different public spending priorities in the United Kingdom. Compared to our study, though, their number of covariates is limited, as the authors examine only the effects of age, sex, education, and wage.

Our findings suggest that a large part of the German citizenry supports the current scope of government. Put differently, majority voting would yield few changes with regard to the level of public spending on diverse policy areas or the composition of public expenditure. The only policy area in which a spending cut is preferred by a majority of respondents is defence. In the case of

public spending on education, roughly 61% opt for increasing expenditure. We also find that preferences for different public spending priorities are relatively stable, irrespective of whether or not respondents consider the budget constraint. This means that the share of interviewees who opt for a spending hike in any particular policy area if unexpected additional funds become available is approximately the same as in the scenario where spending hikes involve costs. With regard to the determinants of attitudes toward public spending on the individual level, we find that—inter alia—economic well-being, confidence in politicians, economic knowledge, and time and party preferences exert a significant and sizable influence on preferences for public spending, tax policy, and public debt.

The remainder of the paper is organised as follows. The next section introduces the survey instrument and sets out some important descriptive statistics. Section 3 formulates and tests several hypotheses with respect to individual attitudes toward public spending priorities as well as toward taxes and public debt. This section also presents our empirical model, along with the results from ordered logit estimations. Section 4 concludes.

2. Survey Instrument and Descriptive Statistics

The survey started by listing and briefly describing six major policy areas. The current amount of public spending devoted to these areas was given both in terms of euros per capita as well as in relation to total public spending.[3] The six policy areas covered in our survey are those on which the German government spends the most: social security, public safety and order, education, infrastructure, economic development, and defence.

We adopted two strategies for eliciting respondents' preferences for different public spending priorities. First, we asked the interviewees in which of the six aforementioned policy areas the German government should spend more and in which areas it should spend less. Those interviewees who preferred spending hikes or cuts in at least one policy area were then asked how the additional public spending should be financed or what the additional funds should be used for, respectively. In both cases, three options were available: spending hikes (spending cuts) can be financed via (used for) a tax hike (tax cut), public borrowing (public debt reduction), or by a decrease (increase) in public spending in another other policy area. We allowed multiple answers, that is, the respondents could choose several policy areas in which they would prefer a change in spending. Note that the survey instrument is designed in such a way that the interviewees have to answer consistently; that is, interviewees who prefer an increase in public spending in any policy area and at the same time state that the increase should be financed via a reduction of public

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[3] The descriptions and figures used in the survey are given in Appendix A.1.

spending in another area were obliged to name at least one policy area in which public spending should be cut. Before the interview commenced, the scope and sequence of questions was introduced by an interviewer and the interviewee was permitted to ask questions at any time during the interview. By directly relating public spending to public revenues, we compelled interviewees to think about the public budget constraint when making their choices and, thereby, circumvented the 'more for less paradox' (Welch, 1985).

Figure 1 illustrates the share of people opting for spending hikes (light columns) and cuts (dark columns) in different policy areas, as well as for increases or decreases in taxes and public debt, respectively.

Figure 1: Preferences for public spending priorities when accounting for the public budget constraint—distribution of answers
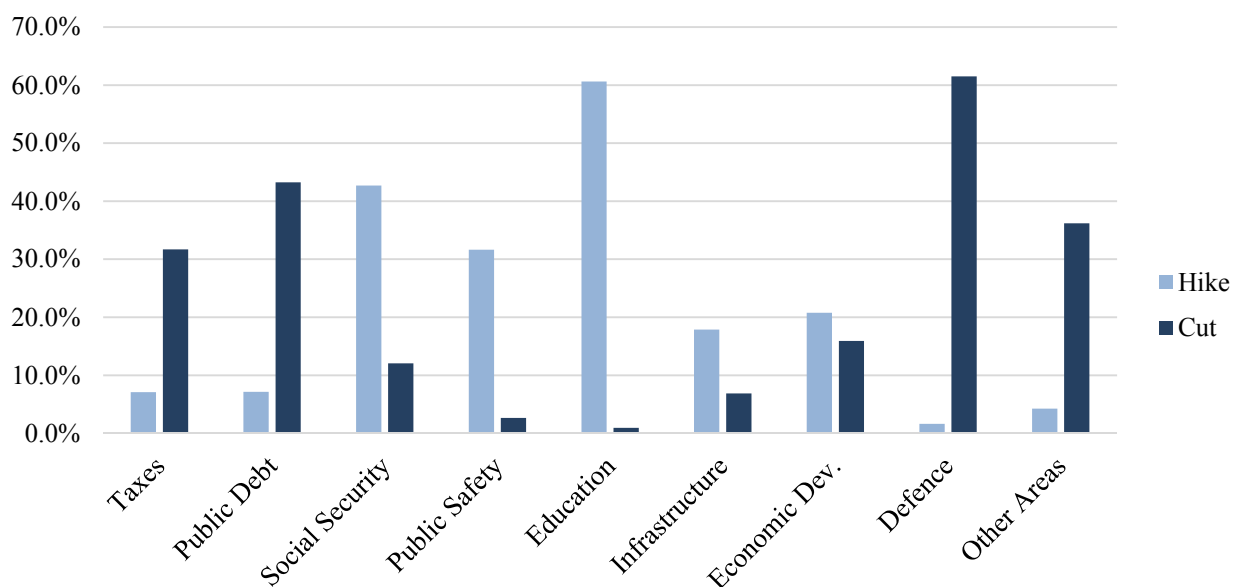
Only 18% of the respondents opt for a tax hike or the incurrence of additional public debt in order to increase public spending. Generally, expenditure cuts are also unpopular, except for defence spending, which more than 60% of the German population would like to see reduced. Note, though, that only 2.5% of total public expenditure is devoted to defence. With regard to increasing public spending, roughly 60% opt for additional expenditure on education. With respect to other policy areas, majority voting would not result in any changes in expenditure.

Next, we introduce a scenario in which money comes out of the blue and, thus, fiscal adjustments are associated with no additional costs. Some people may regard public spending in one area as more important than spending in another, but, at the same time, be reluctant to call for a spending hike when costs are involved. To obtain some insight into whether and how consideration of the public budget constraint affects peoples' attitudes toward public spending priorities, we confronted the interviewees with the latest release of the official tax estimate,

according to which the German government is going to collect €23 billion more tax revenues between 2013 and 2016 than previously expected. We then asked the respondents how the government should use these additional revenues. The choice was between increasing public spending in one of the six policy areas listed above, cutting taxes, or repaying public debt. Respondents were allowed to mention a maximum of three ordered preferences. Ordering allows evaluating the relative importance respondents attach to different fiscal policy measures. The distribution of answers is illustrated in Figure 2.

Figure 2: Preferences for public spending priorities when unexpected funds can be used— distribution of answers
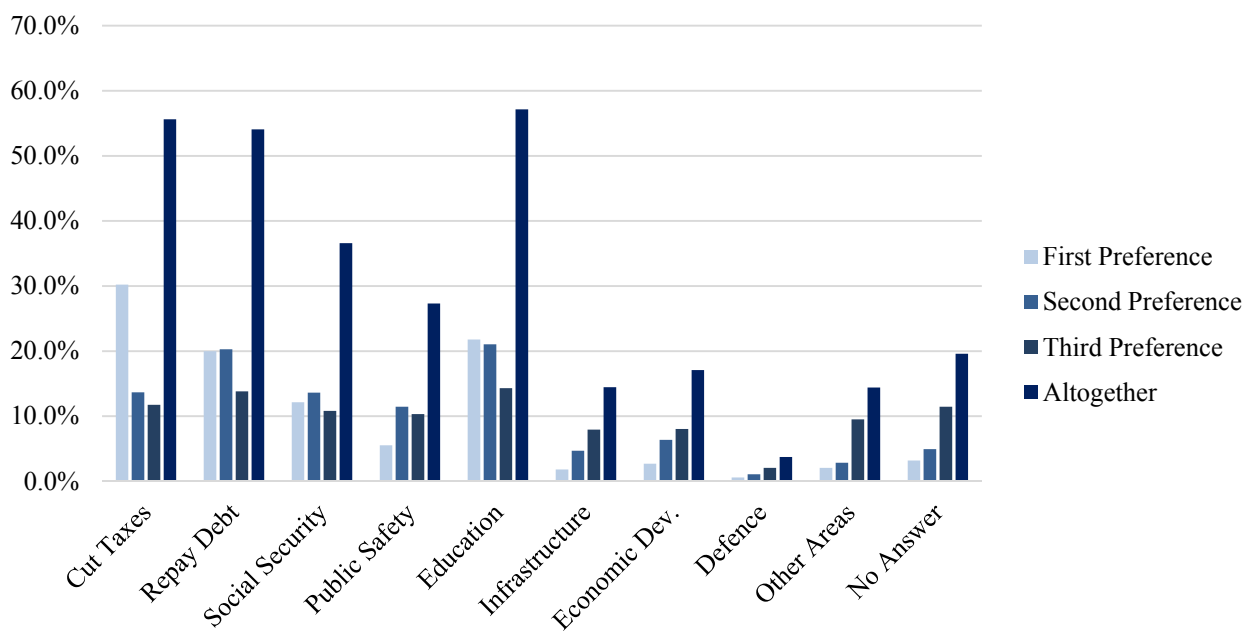
The share of people opting for a spending hike in any particular policy area is roughly equal to the scenario in which respondents were required to take the public budget constraint into account. Thus, preferences over different public spending priorities appear relatively stable, irrespective of whether or not spending hikes involve a budget constraint. However, we see a different picture when looking at preferences as to taxes and public debt. In the first scenario, about 32% of the interviewees opt for a tax cut. But when unexpected funds are available, more than half the respondents prefer to use them to decrease the tax burden. With regard to public debt, only 42% prefer consolidation efforts when this implies that spending needs to be cut, as compared to 54% when unexpected tax revenues can be used for this purpose. Hence, respondents are more willing to cut taxes and repay debt if no costs are involved, indicating that they prefer not to reduce the scope of government.

3. Determinants of Individual Attitudes Toward Public Spending Priorities

3.1 Empirical Approach and Research Hypotheses

We now turn to the individual-level analysis of preferences for different public spending priorities. Our investigation consists of two parts. First, we study the determinants of individual attitudes toward public spending priorities in the scenario where interviewees' had to take the public budget constraint into account. We set up the following empirical model:

$$(1)\ y_{i,j}^* = x_i'\beta + \varepsilon_i$$

$$y_{i,j} = k\ if\ \rho_{k-1} < y_{i,j}^* \leq \rho_k$$

where $y_{i,j}^*$ represents a latent continuous variable. The subscript i refers to the interviewee and j to the policy area. We estimate eight specifications of Equation (1), one for social security, public safety, education, infrastructure, economic development, defence, taxes, and public debt.[4] k is a placeholder for the potential realisations of the discrete variable $y_{i,j}$ and can take one of three values: −1 if the respondent opts for a spending cut in area j (a tax cut/public debt reduction), 1 if the respondent chooses an increase (a tax hike/additional public debt incurrence), or 0 if the respondent prefers to maintain the current level of spending (tax amount/level of public debt).

Second, we study variables related to respondents' *relative* preferences. In the following equation, we focus on the scenario where additional public funds become available unexpectedly.

$$(2)\ z_{i,j}^* = x_i'\delta + \vartheta_i$$

$$z_{i,j} = l\ if\ \sigma_{k-1} < z_{i,j}^* \leq \sigma_k$$

The main difference from Equation (1) is that the discrete variable $z_{i,j}$ can take on one of four values: 3 if the respondent chooses the respective policy measure—i.e., a reduction of taxes or public debt or a spending hike in any policy area—as his or her first preference, 2 if the respondent chooses it as the second preference, 1 if the respondent mentions it as a third preference, or 0 if the policy measure is not mentioned at all. We use ordered logit regressions to estimate Equations (1) and (2).

There is not much theoretical or empirical research into variables that are related to individual demand for publicly-provided goods and services. Thus, our analysis is to some extent explorative and the choice of explanatory variables is thus somewhat conjectural.[5]

Economic Well-Being: Personal economic situation may affect individual attitudes toward public spending in several policy areas. Both theoretical (e.g., Meltzer and Richard, 1981) as well as empirical public choice approaches (e.g., Alesina and Giuliano, 2009; Alesina and La Ferrara,

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[4] Due to its high degree of heterogeneity, we do not use the miscellaneous expenditure category in the regression models below.

[5] Details on explanatory variables can be found in the Appendix.

2005; Corneo and Grüner, 2002) suggest that those who are relatively better-off tend to prefer less public spending on redistributive policies. In this regard, the label 'redistributive' is typically applied to publicly-provided goods and services that are (i) financed through proportional or progressive income tax, (ii) 'private' in the sense that they are typically characterised by excludability and/or rivalry, and (iii) provided by the government free of charge (e.g., Besley and Coate, 1991). Public spending on social security and public education are commonly considered prime examples of redistributive policies. Social security spending directly benefits those living in poor economic conditions. Public spending on education may reduce social inequality by enhancing the educational participation of the lower class and improving its future economic prospects.

In contrast, evidence on the association between personal economic well-being and attitudes toward public spending on policies that are not necessarily 'redistributive' is absent from the literature. Only in the case of public safety is there some empirical evidence based on hedonic pricing models. Employing information on housing prices and wages from 113 US cities, Clark and Cosgrove (1990) find that willingness to pay for public safety increases with income. Using a formal theoretical model, they argue that public safety is a normal good. To summarise, we expect that relatively worse-off people are more likely to opt for spending hikes on social security and public education, whereas those who are better-off are assumed to call for additional public spending on public safety and order.

We further hypothesise that the well-to-do prefer lower taxes and less public debt. The first conjecture is based on the notion that publicly-provided goods and services are primarily financed through a progressive income tax. The second claim is supported by several empirical findings suggesting that personal economic well-being is positively related to preferences for fiscal consolidation (e.g., Heinemann and Henninghausen, 2012; Hayo and Neumeier, 2013; Stix, 2013).

The survey contains three indicators for respondents' personal economic well-being: (i) net monthly household income (in €1,000), (ii) homeownership as a proxy for the household's real assets (i.e., whether the respondent lives in a self-owned house, self-owned flat, or a rented house/flat), and (iii) a subjective assessment of the interviewee's personal economic situation, ranging from 1 (absolutely dissatisfied) to 5 (absolutely satisfied).

Attitudes Toward Politics: Trust in politicians could be an important determinant of individual attitudes toward public spending, as people characterised by high trust may be less suspicious of government activity. Many political economy approaches assume that policymakers manipulate the level and composition of public expenditure in their own self-interest, including political budget cycle theory, rent-seeking approaches, and pork-barrel spending models (e.g.,

Rogoff and Sibert, 1988; Alesina et al., 1997; Lizzeri and Persico, 2001). Arguably, people who share this view of politicians' motives are more likely to oppose public spending hikes and opt for a lean state. Accordingly, they should be relatively more likely to call for tax cuts and public debt reduction.

In our survey, we measure interviewees' attitudes toward politics with four pairs of contradictory statements. Three of these capture different dimensions of trust in politicians; the fourth assesses preferences for redistribution. We asked whether interviewees believe that politicians (i) act according to the general public interest versus only in the interest of particular groups, (ii) are concerned about the country's long-term well-being versus being concerned only about the next election, and (iii) manage tax revenues conscientiously versus are wasteful with tax revenues. In each case, we inquired with which statement, on a five-point scale, the respondents agree most. If people are particularly suspicious of government activity in one or more specific policy area, we would expect to see them prefer lower spending.

Additionally, we asked the interviewees about whether they think that (iv) the state should ensure equal living conditions versus the state not interfering in peoples' living conditions. By means of this item, we capture the respondents' inclination toward an egalitarian attitude. Arguably, people characterised by an egalitarian attitude may be more likely to opt for higher spending in policy areas that can be considered 'redistributive' and that reduce social inequality. The most important examples are social security and public education.

Economic Literacy: Following the recent financial and economic crises, many governments accumulated large public debt, which implies that many publicly-provided goods and services were deficit financed. Arguably, awareness of the future burden associated with deficit spending may affect peoples' attitudes toward public expenditure. Persons who lack information about the costs of public indebtedness may be less reluctant to opt for public spending hikes than those who are able to assess the future burden of public debt (e.g., Buchanan and Wagner, 1977). Our survey contains three multiple-choice questions designed to assess interviewees' knowledge of economic variables that are important for assessing public debt: we asked 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, the interviewees could choose between four answers. To evaluate the influence of knowledge on attitudes toward public spending priorities, we employ dummy variables for the number of correct answers. Significantly negative effects of the knowledge measure indicate that the better-informed respondents' believe that spending cuts in the respective policy area are particularly suitable for fiscal consolidation.

Party Preferences: Party preferences might be a particularly important source of variation in individual preferences for public spending priorities. There is a wide range of political parties in Germany. For instance, leftist parties such as the SPD or the Left Party argue in support of a strong welfare state, whereas the FDP is a proponent of the free market. The CDU/CSU stands for the conservative political centre, whereas the Green Party reflects a mix of alternative ideas and liberal bourgeoisie. To achieve some insight into the association between party preferences and preferences for public spending priorities, all respondents were asked which party they would vote for if elections were held next Sunday. The respondents could choose between seven major German parties: the Social Democratic Party (SPD), the Christian Democratic Party (CDU), the Leftist Party, the Green Party, the Pirates, the Liberal Democratic Party (FDP), and the National Democratic Party of Germany (NPD). Alternatively, the respondents could state that they would vote for a different party or that they would not vote at all.

Time Preferences: In theoretical studies, time preferences are believed to be an important determinant of attitudes toward public indebtedness (e.g., Huber and Runkel, 2008). As consolidation efforts have to be financed, time preferences may also affect preferences for public spending priorities. Both theoretical and empirical evidence suggests that people who lack a future orientation and are particularly concerned about the present are more likely to support public debt incurrence and oppose fiscal consolidation (Hayo and Neumeier, 2013; Stix, 2013). Is there reason to suspect that time preferences are linked to preferences for expenditure-based consolidation? Arguably, benefits deriving from spending hikes on some items are immediately visible, whereas those deriving from other items are realised in the future, perhaps not even benefitting the current generation. For instance, increases in social security spending tend to fall into the former category, whereas spending hikes on education and infrastructure belong to the latter, as they can be considered investments in the economy's (human) capital stock. Like in other cases of delayed rewards, individual preferences for spending hikes and cuts on items belonging to one or the other category might be affected by the respondent's degree of forward-lookingness. Hence, people who are particularly concerned about the present may prefer higher spending in areas yielding immediate benefits and spending cuts in areas where welfare losses occur sometime in the future. And, indeed, empirical evidence indicates that a person's future orientation or degree of patience is positively related to willingness to delay rewards (e.g., Ainslie, 1975; Thaler and Shefrin, 1981).

Within the framework of the survey, two 'experiments' were conducted to assess interviewees' time preferences.[6] In the first experiment, respondents were 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 was between a safe payoff of €1,000 paid in six months and a higher payoff of €$X_{i,12}$ paid in 12 months. The respondents' choices of $X_{i,6}$ and $X_{i,12}$ are then used to compute (i) the marginal rate of substitution between two consecutive future periods, i.e., $\beta = 1,000/X_{i,12}$, and (ii) the respondents' degree of short-run impatience, defined as $\delta = X_{i,12}/X_{i,6}$ (Angeletos et al., 2001; Laibson, 1997). The rationale for conducting two 'experiments' is that people are often found to be more impatient in the short run than in the long run, a phenomenon sometimes referred to as 'myopia' and one that can cause time-inconsistent behaviour. Both theoretical (Huber and Runkel, 2008) and empirical (Hayo and Neumeier, 2013; Stix, 2013) evidence suggests that time preferences affect peoples' attitudes toward fiscal consolidation, i.e., the larger the discount rate β and the greater the extent of short-run patience δ, the more likely it is that a person will favour public debt reduction.[7]

Peoples' time perspective could also be related to specific sociodemographic characteristics. For example, given their shorter remaining lifetime, older respondents may be less future-oriented than younger ones. Retired persons may not be very interested in education, as they have left the labour market. In addition, given their own need for resources, they may not care very much about infrastructure investment, which primarily benefits future generations. Moreover, if we define utility maximisation to include caring for other individuals, respondents with children may be more future-oriented. Finally, the social science literature provides evidence that a person's future orientation is positively related to level of education (e.g., Trommsdorf, 1983). Becker and Mulligan (1997: 735) argue that 'schooling focuses students' attention on the future'. Leigh (1986) empirically analyses the relation between education and future orientation using survey data from the United States. His findings suggest that schooling facilitates forward-lookingness. Hence, we expect that better-educated people opt for additional spending on education and infrastructure as well as for public debt reduction. At the same time, well-educated people might prefer lower spending on social security, as they are less likely to become

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[6] The setup of our 'experiments' is shown in Appendix A.3. The term 'experiments' is placed in quotation marks as they were not incentivised. However, both the setup and the wording were taken from the questionnaire of the German Socioeconomic Panel (SOEP), where the experiment was incentivised. 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 had no notable effect on interviewees' choices.

[7] In our sample, we observe an unexpectedly high number of interviewees who choose the immediate payment irrespective of what future payoff they are offered. Interestingly, a similar distribution of answers is found in the SOEP data. 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.

beneficiaries of the social safety net. To capture these effects, we include corresponding sociodemographic variables as additional covariates in our model.

Other Controls: Our empirical model contains several additional explanatory variables. We control for the respondent's employment status (regularly employed (reference category), unemployed, student, retiree, or homemaker), marital status (single (reference category), living with a partner, married, or widowed or divorced), and sex. Our empirical model also includes dummies indicating in which state (*Bundesland*) the respondent resides. Finally, we assessed the interviewees' risk preferences by means of an 'experiment'. We confronted the interviewees 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).

Table 1 summarises our hypotheses. A '+' signifies that we expect a positive association, '−' an inverse relationship, and '?' that we do not have a prior.

Table 1: Summary of research hypotheses

	Social Security	Public Safety	Education	Infra-structure	Economic Develop.	Defence	Taxes	Public Debt
Economic well-being	−	+	−	?	?	?	−	−
Trust in politicians	?	?	?	?	?	?	+	+
Egalitarian attitude	+	?	+	?	?	?	?	?
Economic literacy	?	?	?	?	?	?	−	−
Leftist ideology	+	−	+	?	?	−	+	+
Future orientation	−	?	+	+	?	?	?	−
Age	?	?	−	−	?	?	?	+
Retirement	?	?	−	−	?	?	?	+
Children	?	?	+	+	?	?	?	−
Education	−	?	+	+	?	?	?	−

3.2. Results

Table 2 shows the results for Equation (1), i.e., the scenario where respondents have to take the public budget constraint into account. Average marginal effects for the different realisations of the dependent variable are contained in Table A1 of the Appendix.

Table 2: Determinants of individual attitudes toward public spending priorities—accounting for the public budget constraint

Variables	Social Security	Public Safety	Education	Infra-structure	Economic Develop.	Defence	Taxes	Public Debt
Economic situation								
HH income	−0.161 ***	0.017	0.090	0.027	0.005	0.026	0.131 **	−0.120 **
Subjective well-being	−0.104 **	0.141 **	0.068	0.010	0.057	0.037	0.072	−0.030
Property	0.114	−0.189 *	−0.191 *	−0.123	−0.091	−0.039	−0.169	−0.158
Time preferences								
β	−0.748**	−0.267	−0.361	−0.461	−0.413	−0.113	0.282	−0.671**
δ	−0.031	−0.142	−0.147	−0.279	−0.104	−0.037	0.173	−0.269
Economic literacy								
One correct answer	0.101	0.077	0.122	0.109	−0.011	−0.325***	0.035	−0.093
Two correct answers	−0.015	0.027	0.285**	0.139	0.069	−0.536***	0.220	−0.200
Three correct answers	0.302	−0.496*	0.344	0.005	−0.271	−0.373	0.458*	−0.557**
Politic. trust/attitudes								
Public interest	0.082	0.082	−0.024	0.022	−0.041	0.037	0.033	−0.015
Long-run orientation	−0.005	0.052	0.011	0.014	0.109*	0.118**	−0.043	0.013
Fiscal competence	−0.058	−0.175***	−0.158**	0.028	0.057	0.112*	0.272***	−0.016
Egalitarian attitude	0.270***	0.015	0.199***	0.065	−0.004	−0.147***	0.038	0.016
Party preference								
Leftist Party	0.070	0.133	0.010	−0.223	−0.315	−0.397	0.620***	−0.385*
Pirates	0.170	0.026	−0.266	0.433	−0.008	−0.074	0.244	−0.552
SPD	−0.028	0.211	0.002	−0.060	0.027	−0.199	0.350**	−0.056
Green Party	−0.091	−0.070	0.214	−0.436**	−0.260	−0.433**	0.536***	−0.437***
CDU	−0.285**	−0.111	0.109	−0.048	0.103	0.013	−0.036	−0.011
FDP	−0.999***	0.060	0.138	−0.108	0.168	−0.021	−0.121	−0.284
NPD	−0.309	1.098**	0.661	0.231	−0.422	0.923*	−0.134	−1.271**
Other	−0.344	−0.113	−0.226	−0.111	0.101	0.227	−0.214	−0.677***
Education								
Middle sec. school	−0.043	0.131	0.531***	0.287**	0.274**	−0.340***	0.175	−0.225**
Higher sec. school	−0.302**	−0.121	0.909***	0.762***	0.033	−0.500***	0.238*	−0.497***
Employment								
Unemployed	0.336	−0.017	−0.352	−0.426*	0.168	−0.440*	0.129	−0.394*
Retired	0.263	0.240	0.036	−0.521***	−0.284*	−0.097	0.449***	−0.110
Student	−0.110	−0.408	0.234	−0.768*	−0.405	0.273	−0.188	−0.346
Vocational training	−0.363*	0.130	0.567**	0.223	0.174	−0.112	0.271	0.323
Homemaker	0.228	−0.032	0.264	−0.436	−0.060	0.040	0.098	0.135
Other controls								
Age	−0.005	0.007	−0.011**	0.009	−0.004	−0.007	0.010**	−0.016***
Children	0.045	0.055	0.380***	0.167	0.077	0.065	0.167	0.062
Female	0.055	0.247**	0.120	−0.302***	−0.175*	0.063	0.101	0.090
Risk preference	0.118	−0.121	−0.129*	0.081	−0.002	−0.052	0.007	0.008
Living in partnership	−0.100	0.038	−0.535***	−0.037	0.053	−0.150	−0.341*	0.023
Married	0.187	0.103	−0.174	0.126	−0.149	−0.237	−0.480***	0.124
Divorced/widowed	0.021	−0.179	−0.220	0.128	−0.059	−0.082	−0.564***	0.202
Dummy β	0.105	0.008	0.065	0.278*	−0.082	−0.310**	−0.041	−0.166
Dummy δ	−0.383***	0.008	−0.028	−0.234	−0.099	0.152	0.331**	−0.118
State dummies	yes	yes	yes	yes	yes	yes	yes	yes
Pseudo-R^2	0.062	0.054	0.076	0.043	0.030	0.057	0.048	0.038

Note: Results are based on ordered logit maximum likelihood estimation. The dependent variable is 1 if a respondent opts for a hike in the respective policy measure, 0 if no change is preferred, and −1 if a decrease is favoured. White (1980) robust standard errors are used. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Economic well-being exerts a significant influence on individual attitudes toward public spending priorities. In line with our prior, people who are comparably worse-off—i.e., those with low household income and a negative assessment of their personal economic situation—tend to opt for an increase in social security spending, whereas the well-to-do prefer a spending cut in this area. A €1,000 increase in net monthly household income (a one-point increase in subjective economic well-being) is associated with a 3.6 percentage point (pp) (2.3 pp) lower likelihood of opting for a spending hike on social security and a 1.6 pp (1.0 pp) greater likelihood of calling for a welfare spending cut. It appears that the well-to-do would like to use the money saved primarily on public safety and reducing public debt. A one-point increase in the subjective assessment of personal economic well-being is associated with a 2.8 pp greater likelihood of preferring a spending hike on public safety, whereas a €1,000 rise in household income makes it 2.8 pp more likely to call for public debt reduction. We also find some evidence that the wealthy prefer a reduction in spending on education, as indicated by the significant negative impact of our property indicator. High-income respondents are also significantly more likely to opt for a tax hike and significantly less likely to call for a tax cut than those with low income. Previous findings indicate that this result may be mediated by public debt aversion: Blinder and Krueger (2004), for the United States, and Hayo and Neumeier (2013), for Germany, report that richer people have a stronger preference for tax-based fiscal consolidation.

Supporting our conjecture, *time preference* appears to be an important determinant of individual attitudes toward public debt incurrence. The greater a person's concern about the future, the more likely he or she is to a call for public debt reduction. The effect is of considerable magnitude: a one-point increase in the discount parameter β implies a 15.5 pp greater likelihood of favouring a public debt cut. Cutting public spending on social security appears to be the most preferred consolidation measure of the forward-looking respondents. A one-point hike in β invokes a 7.5 pp higher likelihood of opting for a welfare spending cut and a 16.5 pp lower likelihood of calling for more spending in that area. Older people and retirees prefer less spending on education and infrastructure, whereas respondents with children strongly support an increase in education expenditure. The latter effect is of especially notable size: having children increases the likelihood of calling for additional spending on education by 8.1 pp and reduces the likelihood of opting for less spending in this area by 7.8 pp. We also obtain particularly large estimates for our education indicators. Respondents who completed higher secondary school (*Abitur*) are 19.7 pp more likely to call for additional spending on education and 11.5 pp more likely to opt for an increase in infrastructure investment than are interviewees with a lower secondary school degree (*Hauptschule*; reference category). At the same time, the better educated have a 11.5 pp higher likelihood of supporting fiscal consolidation.

In line with our prior, *economic literacy* is strongly related to individual attitudes toward public indebtedness and to public spending priorities. Respondents who are perfectly informed about debt-related economic measures—i.e., who answered all three knowledge questions correctly—are 13 pp more likely to support public debt reduction. Cutting public spending on defence appears to be the most preferred consolidation measure of the well-informed, as they are roughly 10 pp more likely to favour lower public expenditure in this area.

The effects of our *trust indicators* reveal that people who lack confidence in politicians appear to be particularly concerned about government expenditure on economic development and defence, whereas spending on public safety and education is viewed with less suspicion. Interviewees who consider the government to be wasteful with tax revenues would like to see less public spending on defence, but more spending on public safety and education, indicating the belief that tax money may be better spent in these areas. Those who regard politicians as fiscally incompetent strongly opt for a tax cut. Specifically, a one-point decrease in the respective indicator (implying stronger support for the notion that the government is wasteful with tax revenues) raises the probability of supporting a tax cut by 5.5 pp. Despite the fact that the German welfare system has been permanently under reform during the past decades and the subject of heated public debate, the confidence in politicians' motives and competence does not reveal a statistically significant influence on attitudes toward spending on social security. Propensity toward egalitarianism exerts a notable influence on attitudes toward public spending in policy areas that tend to reduce social inequality. In line with our conjecture, respondents with an egalitarian attitude have a 6 pp and 4 pp higher probability of supporting more spending on social security and education, respectively. In contrast, more egalitarian respondents prefer lower spending on defence and economic development.

Supporters of different *political parties* differ notably in their attitudes toward welfare spending. In line with our conjecture, voters for the Christian Democratic Party (CDU) and the Liberal Democratic Party (FDP) are significantly less likely than non-voters (reference group) as well as voters for the Social Democrats (SPD) and the Green Party to prefer a spending hike on social security. FDP voters are especially reluctant to support an expansion of the welfare state; they are 12.8 pp more likely to opt for a cut in social security spending and 20.5 pp less likely to call for a welfare spending hike compared to non-voters. The difference between FDP voters and voters for the Leftist Party or the Pirates is even larger. In contrast, differences between political camps with respect to public spending on other areas are generally negligible. Supporters of the Green Party are significantly more likely to opt for spending cuts on infrastructure, economic development, and defence than are non-voters. However, they do not differ significantly from those who vote for most of the other parties. There are some notable differences regarding public

revenues, though. Supporters of the left-wing parties, i.e., SPD, the Leftist Party, and the Green Party, are significantly more likely to call for a tax hike than are non-voters and those who vote for right-wing parties, i.e., the CDU and FDP, indicating that they would like to see an expansion of the public sector. Yet again, differences between political camps with regard to attitudes toward public debt incurrence or reduction, respectively, are less pronounced than differences between voters and non-voters.

Next, we turn to the estimation results for Equation (2), i.e., the scenario in which unexpected additional funds can be used to increase public spending in any policy area, cut taxes, or repay public debt. To conserve space, we only report the coefficients of the latent variable model in Table A2 in the Appendix. We find that the estimates explaining individual attitudes toward public spending in various policy areas are very similar, both in terms of signs and p-values, to the scenario assuming a fiscal budget constraint. Thus, people's attitudes toward public spending are not affected by a public budget constraint.

To confirm this impression and test whether the results across Equations (1) and (2) are statistically different, we apply seemingly unrelated regression (SUR) estimation. For each different policy area, we estimate two binary SUR equations, which differ only with respect to the dependent variable. In the first equation, the binary dependent variable refers to the scenario in which the public budget constraint must be taken into account. In the second equation, the binary dependent variable refers to the scenario in which unexpected additional funds become available. The left-hand-side variables take the value 1 if the interviewee opts for a spending hike in the respective policy area (or a *decrease* in taxes or public debt, respectively) and 0 if she prefers not to change public spending in that area or even advocates for a spending cut (or no change/an *increase* in taxes or public debt). We then test—for each policy area separately—whether the coefficients in both equations are equal. Our findings indicate that the impact of our explanatory variables on individual attitudes toward public spending priorities is the same across both scenarios. For each single policy area, the null hypothesis that all coefficients are indistinguishable cannot be rejected at any reasonable level of significance. This conclusion also holds with respect to public debt reduction. Only with regard to tax cuts do the coefficients differ statistically significantly between the two scenarios.[8]

This finding is not only interesting in the current context but has more general implications for survey methodology. It is important to realise that the two scenarios are notably different in terms of their complexity and the intellectual demand they place on interviewees. Forcing respondents to

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[8] This result is driven by the trust indicators. The null that the coefficients of the trust measures are equal across both equations can be rejected at the 1% level (p = 0.0084). People who have confidence in politicians' motives and competence are more reluctant to opt for a tax cut if there is a budget constraint.

consider the public budget constraint not only makes designing the survey instrument more difficult but also has consequences for the form in which the interviews are conducted. For instance, a scenario assuming a budget constraint is less suited for a telephone survey, as the resulting complexity can be more easily dealt with by using of computer-assisted face-to-face interviews.

4. Conclusion

Following the financial crisis, public expenditure-to-GDP ratios increased greatly in most developed countries. This paper examines the demand for public spending in several policy areas using a unique dataset from a representative household survey carried out in Germany at the beginning of 2013. The interviewees were asked about their attitudes toward public spending in different areas (social security, public safety, education, infrastructure, economic development, defence, and miscellaneous) as well as about their views on taxation and public indebtedness. Our findings suggest that majority voting would yield very few changes in the level of public spending in diverse policy areas or in the composition of public expenditure, respectively. The only policy area in which a spending cut is preferred by a majority of respondents is defence. In the case of public spending on education, roughly 61% opt for higher expenditures.

Our dataset contains detailed information about the interviewees, allowing us to investigate the factors associated with individual attitudes toward different fiscal policy measures. Using theoretical and empirical findings from the literature, we develop a number of testable conjectures and find that individual preferences for public spending differ notably across respondents. Economic well-being, confidence in politicians, economic knowledge, and time and party preferences all exert a statistically significant influence on preferences for public spending, tax policy, and public debt. The magnitude of the effects is particularly large for time preference, economic knowledge, and party preference. A one-point increase in the discount parameter implies an almost 16 pp greater likelihood of favouring a public debt cut and an almost 17 pp lower likelihood of calling for higher social security spending. Respondents who completed higher secondary school (*Abitur*) are 20 pp more likely to prefer additional spending on education and almost 12 pp more likely to favour more infrastructure investment than are interviewees with a lower secondary school degree. Respondents who are very well informed about debt-related economic variables, i.e., have good economic knowledge, are 13 pp more likely to support public debt reduction. Voters supporting the liberal party FDP are almost 21 pp less likely to call for a welfare spending hike compared to non-voters. Thus, the common assumption made in public choice research that voters differ only along a single dimension does not appear to be realistic.

Moreover, we find that preferences for public spending are almost unaffected by consideration of the public budget constraint. Hence, the share of respondents who opt for additional spending in any particular policy area is approximately the same, irrespective of whether spending hikes involve costs (such as decreasing spending in another policy area or increasing taxes or public debt) or unexpected additional funds are available. This finding has important implications for survey methodology, as it suggests that it may not be necessary to design complicated survey questions and use expensive interview methods to obtain people's preferences toward public expenditure.

Appendix

A.1. Description of policy areas and spending figures

Policy area	Description	Spending per capita	Proportion on total
Social security	e.g., unemployment compensation, social welfare, family and youth welfare	€7,660	56.6%
Education	e.g., public schools and universities	€1,125	8.3%
Public safety	e.g., police, justice system	€455	3.3%
Infrastructure	e.g., road and town construction	€350	2.6%
Economic development	e.g., promotion of small and medium-sized companies, investment allowances, financial support for disadvantaged regions	€335	2.5%
Defence	e.g., military equipment, service pay, defence administration	€335	2.5%
Total		€10,260	75.8%

A.2. 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).
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.
Time preference	See Section A.3.
Deficit	Dummy variable taking the value 1 if the respondent can correctly state 2012's federal budget deficit (0 otherwise). How large was the budget deficit of the federal government in 2012? 1% □ 3% □ 5% □ 7% □
Interest rate	Dummy variable taking the value 1 if the respondent can correctly state the interest rate on government bonds with a maturity of 10 years (0 otherwise). What is the current interest rate on long-term government bonds (maturity 10 years) approximately? 1.5% □ 3% □ 5.5% □ 10% □
Inflation	Dummy variable taking the value 1 if the respondent can correctly state 2012's inflation rate (0 otherwise). How large was inflation in 2012 approximately? 0% □ 2% □ 5% □ 10% □

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-run orientation	Most politicians in Germany 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 state manages tax revenues conscientiously		vs.	The state is wasteful with tax revenues	
	+2: □	+1: □	0: □	−1: □	−2: □
Party preference	Party for which respondent would vote if elections were held next Sunday: Social Democratic Party (SPD), Christian Democratic Party (CDU), Leftist Party, Green Party, Pirates, Liberal Democratic Party (FDP), and National Democratic Party of Germany (NPD). Alternatively, the respondents could state that they would vote for a different party or that they would not vote at all.				
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 measured 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).				
Egalitarian attitude	The state should ensure equal living conditions		vs.	The state should not interfere in peoples' living conditions	
	+2: □	+1: □	0: □	−1: □	−2: □
Risk preference	See Section A.3.				
Family status	Family status of respondent, differentiating between single (reference category), living with a partner, married, or divorced/widowed.				

A.3. Measurement of risk and time preferences

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 safe payoff and participation in a lottery which follows the principle 'all or nothing': You have a 50% chance of winning 1,000 Euro and a 50% chance of winning 0 Euro.

You start in row 1 and then proceed row by row. In each row, please choose between the safe payoff (column A) and participation in the lottery (column B). The lottery remains the same in all rows. Only the safe 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 safe		Chance of winning €1,000/€0
2	€100 safe		Chance of winning €1,000/€0
3	€200 safe		Chance of winning €1,000/€0
4	€300 safe		Chance of winning €1,000/€0
5	€400 safe		Chance of winning €1,000/€0
6	€500 safe		Chance of winning €1,000/€0
7	€600 safe		Chance of winning €1,000/€0
8	€700 safe		Chance of winning €1,000/€0
9	€800 safe		Chance of winning €1,000/€0
10	€900 safe		Chance of winning €1,000/€0

Interviewer: Please start with row 1 and the question 'How do you choose? €0 safe or chance of winning €1,000/€0?'. If the interviewee chooses option B, please proceed with row 2 and the question 'How do you choose? €100 safe or 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 in which the respondent chose option A for the first time.

Option A was first chosen in row number: ☐

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 safe payoff of €1,000 which is paid to you **immediately** and a higher safe 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 safe payoff of €1,000 to be paid **immediately** (column A) and the higher safe 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 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 'How do you choose? €1,000 immediately or €1,000 in 6 months?'. If the interviewee chooses option A, please proceed with row 2 and the question 'How 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 in which the interviewee chose option B for the first time.

Option B was first chosen in row number:

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 safe payoff of €1,000 which is paid to you **in 6 months** and a higher safe 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 safe payoff of €1,000 to be paid **in 6 months** (column A) and the higher safe 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 'How do you choose? €1,000 in 6 months or €1,000 in 12 months?'. If the interviewee chooses option A, please proceed with row 2 and the question 'How 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 in which the interviewee chose option B for the first time.

Option B was first chosen in row number: ☐

A.4. Additional results

Table A1: Determinants of individual attitudes toward public spending priorities—average marginal effects

Variables	Social Security			Public Safety			Education		
	Hike	No Change	Cut	Hike	No Change	Cut	Hike	No Change	Cut
HH income	−0.036***	0.019***	0.016***	0.003	−0.003	0.000	0.019	−0.018	−0.001
Subjective well-being	−0.023**	0.013**	0.010**	0.028**	−0.025**	−0.004**	0.014	−0.014	−0.001
Property	0.025	−0.014	−0.012	−0.038	0.033	0.005	−0.041*	0.039*	0.002
β	−0.165**	0.090**	0.075**	−0.053	0.047	0.007	−0.077	0.074	0.003
δ	−0.007	0.004	0.003	−0.028	0.025	0.004	−0.031	0.030	0.001
One correct answer	0.022	−0.012	−0.010	0.016	−0.014	−0.002	0.027	−0.025	−0.001
Two correct answers	−0.003	0.002	0.002	0.005	−0.005	−0.001	0.061**	−0.059**	−0.003*
Three correct answers	0.067	−0.039	−0.028	−0.090**	0.074**	0.016	0.073	−0.070	−0.003
Public interest	0.018	−0.010	−0.008	0.016	−0.014	−0.002	−0.005	0.005	0.000
Long-term orientation	−0.001	0.001	0.000	0.010	−0.009	−0.001	0.002	−0.002	0.000
Fiscal competence	−0.013	0.007	0.006	−0.035***	0.031***	0.004***	−0.034**	0.032**	0.001**
Egalitarian attitude	0.060***	−0.032***	−0.027***	0.003	−0.003	0.000	0.043***	−0.041***	−0.002***
Leftist Party	0.016	−0.010	−0.006	0.027	−0.024	−0.003	0.002	−0.002	0.000
Pirates	0.039	−0.024	−0.015	0.005	−0.005	−0.001	−0.059	0.056	0.003
SPD	−0.006	0.004	0.003	0.043	−0.038	−0.005	0.000	0.000	0.000
Green Party	−0.020	0.012	0.009	−0.014	0.012	0.002	0.045	−0.044	−0.002
CDU	−0.064**	0.035*	0.029*	−0.022	0.019	0.003	0.023	−0.022	−0.001
FDP	−0.205***	0.077***	0.128***	0.012	−0.011	−0.002	0.030	−0.028	−0.001
NPD	−0.069	0.037	0.031	0.244**	−0.227**	−0.018***	0.133	−0.128	−0.005
Other	−0.076*	0.041*	0.035	−0.022	0.019	0.003	−0.050	0.047	0.002
Middle second. school	−0.010	0.006	0.004	0.027	−0.024	−0.003	0.120***	−0.114***	−0.005***
Higher second. school	−0.066**	0.034**	0.032**	−0.024	0.020	0.003	0.197***	−0.189***	−0.008***
Unemployed	0.075	−0.044	−0.031*	−0.003	0.003	0.000	−0.078	0.074	0.004
Retired	0.059	−0.034	−0.025*	0.049	−0.043	−0.006	0.008	−0.008	0.000
Student	−0.025	0.014	0.011	−0.075	0.062	0.013	0.054	−0.051	−0.003
Vocational training	−0.077*	0.034**	0.043	0.026	−0.023	−0.003	0.116**	−0.111**	−0.004**
Homemaker	0.051	−0.029	−0.022	−0.006	0.005	0.001	0.056	−0.054	−0.002
Age	−0.001	0.001	0.001	0.001	−0.001	0.000	−0.002**	0.002**	0.000*
Children	0.010	−0.005	−0.005	0.011	−0.010	−0.001	0.081***	−0.078***	−0.004**
Female	0.012	−0.007	−0.005	0.049**	−0.043**	−0.006**	0.026	−0.025	−0.001
Risk preference	0.026*	−0.014*	−0.012	−0.024	0.021	0.003	−0.028*	0.027*	0.001
Living in partnership	−0.022	0.011	0.011	0.008	−0.007	−0.001	−0.116***	0.111***	0.005**
Married	0.041	−0.023	−0.019	0.021	−0.018	−0.003	−0.037	0.035	0.001
Divorced/widowed	0.005	−0.002	−0.002	−0.034	0.029	0.005	−0.047	0.045	0.002

Table A1 (continued)

Variables	Infrastructure			Economic Development			Defence		
	Hike	No Change	Cut	Hike	No Change	Cut	Hike	No Change	Cut
HH income	0.004	−0.002	−0.002	0.001	0.000	−0.001	0.000	0.005	−0.006
Subjective well-being	0.001	−0.001	−0.001	0.009	−0.002	−0.007	0.001	0.007	−0.008
Property	−0.017	0.010	0.008	−0.014	0.003	0.012	−0.001	−0.008	0.009
B	−0.065	0.036	0.029	−0.065	0.012	0.054	−0.002	−0.023	0.025
Δ	−0.039	0.022	0.017	−0.017	0.003	0.014	−0.001	−0.007	0.008
One correct answer	0.015	−0.008	−0.007	−0.002	0.000	0.001	−0.006**	−0.067***	0.073***
Two correct answers	0.019	−0.011	−0.009	0.011	−0.002	−0.009	−0.009***	−0.109***	0.118***
Three correct answers	0.001	0.000	0.000	−0.040	0.001	0.038	−0.006	−0.077	0.083
Public interest	0.003	−0.002	−0.001	−0.007	0.001	0.005	0.001	0.008	−0.008
Long-term orientation	0.002	−0.001	−0.001	0.017*	−0.003*	−0.014*	0.002*	0.024**	−0.026**
Fiscal competence	0.004	−0.002	−0.002	0.009	−0.002	−0.007	0.002*	0.023*	−0.024*
Egalitarian attitude	0.009	−0.005	−0.004	−0.001	0.000	0.000	−0.002***	−0.030***	0.032***
Leftist Party	−0.031	0.017	0.014	−0.046	0.001	0.045	−0.006*	−0.080*	0.085*
Pirates	0.072	−0.051	−0.021	−0.001	0.000	0.001	−0.001	−0.015	0.016
SPD	−0.009	0.005	0.004	0.004	−0.001	−0.003	−0.003	−0.041	0.044
Green Party	−0.057**	0.027**	0.030**	−0.039*	0.002	0.036	−0.006**	−0.087**	0.093**
CDU	−0.007	0.004	0.003	0.017	−0.004	−0.013	0.000	0.003	−0.003
FDP	−0.016	0.009	0.006	0.028	−0.008	−0.020	0.000	−0.004	0.005
NPD	0.037	−0.025	−0.012	−0.060	−0.002	0.062	0.025	0.186	−0.211*
Other	−0.016	0.009	0.007	0.017	−0.004	−0.013	0.004	0.047	−0.052
Middle second. school	0.038**	−0.019**	−0.019**	0.044**	−0.009**	−0.035**	−0.006***	−0.070***	0.075***
Higher second. school	0.115***	−0.074***	−0.042***	0.005	0.000	−0.005	−0.008***	−0.101***	0.109***
Unemployed	−0.059*	0.031**	0.027	0.029	−0.009	−0.020	−0.006**	−0.086**	0.092**
Retired	−0.070***	0.035***	0.035**	−0.043*	0.004	0.039*	−0.002	−0.020	0.021
Student	−0.070**	−0.007	0.077	−0.053	−0.010	0.063	0.006	0.057	−0.063
Vocational training	0.037	−0.026	−0.011	0.030	−0.009	−0.020	−0.002	−0.023	0.024
Homemaker	−0.060*	0.032**	0.028	−0.010	0.002	0.008	0.001	0.008	−0.009
Age	0.001	−0.001	−0.001	−0.001	0.000	0.000	0.000	−0.001	0.001
Children	0.023	−0.013	−0.011	0.012	−0.002	−0.010	0.001	0.013	−0.014
Female	−0.043***	0.024**	0.018***	−0.028*	0.005	0.023*	0.001	0.013	−0.014
Risk preference	0.011	−0.006	−0.005	0.000	0.000	0.000	−0.001	−0.010	0.011
Living in partnership	−0.005	0.002	0.002	0.009	−0.002	−0.006	−0.003	−0.031	0.033
Married	0.017	−0.010	−0.008	−0.024	0.004	0.019	−0.004	−0.048	0.052
Divorced/widowed	0.018	−0.010	−0.008	−0.010	0.002	0.007	−0.001	−0.017	0.018

Table A1 (continued)

Variables	Taxes			Public Debt		
	Hike	**No Change**	**Cut**	**Hike**	**No Change**	**Cut**
HH income	0.008**	0.018**	−0.026**	−0.008	−0.020**	0.028**
Subjective well-being	0.005	0.010	−0.014	−0.002	−0.005	0.007
Property	−0.011	−0.023	0.034	−0.010	−0.026	0.036
B	0.018	0.039	−0.057	−0.044	−0.111**	0.155**
Δ	0.011	0.024	−0.035	−0.017	−0.044	0.062
One correct answer	0.002	0.005	−0.007	−0.006	−0.015	0.021
Two correct answers	0.014	0.030	−0.044	−0.013	−0.033	0.046
Three correct answers	0.033	0.055**	−0.088*	−0.032	−0.099**	0.130**
Public interest	0.002	0.005	−0.007	−0.001	−0.003	0.004
Long-term orientation	−0.003	−0.006	0.009	0.001	0.002	−0.003
Fiscal competence	0.017***	0.037***	−0.055***	−0.001	−0.003	0.004
Egalitarian attitude	0.002	0.005	−0.008	0.001	0.003	−0.004
Leftist Party	0.044**	0.076***	−0.120***	−0.024	−0.065*	0.090*
Pirates	0.015	0.036	−0.050	−0.033	−0.097	0.129
SPD	0.022**	0.049**	−0.071**	−0.004	−0.009	0.013
Green Party	0.037***	0.069***	−0.105***	−0.027	−0.075***	0.102***
CDU	−0.002	−0.006	0.008	−0.001	−0.002	0.002
FDP	−0.006	−0.020	0.026	−0.019	−0.047	0.066
NPD	−0.007	−0.022	0.029	−0.057	−0.234**	0.291***
Other	−0.011	−0.037	0.047	−0.038	−0.121***	0.159***
Middle second. school	0.011	0.025	−0.036	−0.016	−0.036**	0.051**
Higher second. school	0.015	0.033*	−0.048*	−0.031	−0.084***	0.115***
Unemployed	0.008	0.019	−0.027	−0.022	−0.070*	0.093*
Retired	0.030**	0.058***	−0.089***	−0.007	−0.019	0.025
Student	−0.010	−0.030	0.040	−0.023	−0.057	0.080
Vocational training	0.017	0.038	−0.055	0.024	0.048	−0.073
Homemaker	0.006	0.015	−0.020	0.009	0.021	−0.031
Age	0.001**	0.001**	−0.002**	−0.001	−0.003***	0.004***
Children	0.011	0.023	−0.034	0.004	0.010	−0.014
Female	0.006	0.014	−0.020	0.006	0.015	−0.021
Risk preference	0.000	0.001	−0.001	0.001	0.001	−0.002
Living in partnership	−0.026*	−0.037	0.064	0.001	0.004	−0.005
Married	−0.035**	−0.057***	0.092***	0.008	0.021	−0.029
Divorced/widowed	−0.040***	−0.070***	0.109***	0.013	0.033	−0.046

Notes: The table contains average marginal effects based on ordered logit estimation of Equation (1). White (1980) robust standard errors are used. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table A2: Determinants of individual attitudes toward public spending priorities—using unexpected additional revenues

Variables	Social Security	Public Safety	Education	Infra-structure	Economic Develop.	Defence	Taxes	Public Debt
Economic situation								
HH income	−0.114**	0.008	0.148***	0.128	0.036	−0.299**	−0.041	0.068
Subjective well-being	−0.130**	0.097	0.122**	−0.031	−0.026	−0.234	−0.070	0.044
Property	−0.143	−0.303**	−0.172*	0.005	−0.210	0.346	0.148	0.155
Time preferences								
β	−0.668**	0.334	−0.256	−0.189	−0.130	0.520	0.045	1.099***
δ	0.405*	−0.043	−0.138	0.359	0.063	−0.170	0.082	0.051
Economic literacy								
One correct answer	0.113	−0.080	0.102	0.241	0.230	−0.487	−0.158	0.060
Two correct answers	−0.022	−0.119	0.184	0.203	0.354**	0.004	−0.387***	0.284**
Three correct answers	0.328	−0.163	0.287	0.173	−0.286	−15.839***	−0.426*	0.442**
Politic. trust/attitudes								
Public interest	−0.014	0.000	0.061	0.047	0.044	0.138	0.005	0.000
Long-run orientation	0.032	−0.008	−0.031	−0.122	−0.003	0.027	0.009	−0.023
Fiscal competence	−0.024	−0.037	−0.107*	0.051	0.078	0.226	−0.080	0.028
Egalitarian attitude	0.173***	−0.002	0.119***	0.001	−0.098*	−0.060	−0.065*	−0.015
Party preference								
Leftist Party	0.236	0.356	0.218	−0.371	−0.456	−0.595	−0.254	0.012
Pirates	−0.331	−0.327	−0.372	−0.275	0.617	0.462	0.147	0.195
SPD	0.182	0.203	−0.024	0.490**	−0.043	−0.183	−0.267*	0.120
Green Party	−0.132	0.112	0.287*	−0.175	−0.173	−0.384	−0.543***	0.382**
CDU	−0.151	0.049	−0.028	−0.101	0.318	−0.430	−0.065	0.255*
FDP	−0.570*	−0.076	0.131	0.435	0.318	−1.207	−0.199	0.050
NPD	−0.028	1.070**	−0.217	−0.062	0.865*	−15.889***	−0.237	0.205
Other	−0.267	0.109	−0.230	−0.613	0.105	−0.321	−0.398*	0.376*
Education								
Middle sec. school	0.084	−0.031	0.418***	0.241	0.283*	−0.245	−0.432***	0.136
Higher sec. school	0.247	0.249	−0.286	−0.977	−1.079	0.931	0.047	0.060
Employment								
Unemployed	−0.028	0.185	−0.072	−0.704*	0.319	0.109	−0.620***	0.143
Retired	0.180	0.357**	0.132	−0.197	−0.388*	−0.159	−0.453***	0.164
Student	−0.123	−0.398**	0.797***	0.601***	0.139	−0.071	−0.587***	0.282**
Vocational training	−0.563**	0.005	0.590***	0.414	0.104	−0.470	−0.716***	0.100
Homemaker	−0.234	0.127	−0.081	0.143	−0.419	0.280	0.014	0.353
Further controls								
Age	−0.002	0.006	−0.008*	0.008	0.005	0.017	−0.019***	0.011**
Children	−0.020	−0.065	0.291**	−0.001	−0.144	−0.384	−0.042	0.180
Female	0.210**	0.198*	0.306***	−0.178	−0.160	−0.367	−0.203**	−0.213**
Risk preference	0.047	−0.117	−0.094	0.193*	0.175*	0.001	−0.137*	−0.098
Living in partnership	0.126	0.268	−0.559***	−0.357	0.036	0.043	0.244	0.002
Married	0.169	0.312	−0.426***	0.152	−0.091	−0.134	0.442***	−0.254
Divorced/widowed	0.102	0.102	−0.380**	0.241	0.120	0.230	0.366**	−0.321*
Dummy β	0.254*	−0.122	0.066	0.379*	0.029	−0.703	−0.126	0.133
Dummy δ	−0.349**	0.181	0.074	−0.212	−0.034	0.473	−0.006	0.267*
State dummies	yes	yes	yes	yes	yes	yes	yes	yes
Pseudo-R²	0.039	0.037	0.047	0.048	0.053	0.092	0.043	0.026

Note: Results are based on ordered logit maximum likelihood estimation. The dependent variable is 3 if a respondent puts the respective policy measure in first place, 2 if it is ranked second, 1 if it is ranked third, and 0 otherwise. White (1980) robust standard errors are used. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

References

Afonso, A. and Furceri, D. (2010), Government size, composition, volatility and economic growth, *European Journal of Political Economy* 26, 517–532.

Ainslie, G. (1975), Specious reward: A behavioral theory of impulsiveness and impulse control, *Psychological Bulletin* 82, 463–496.

Alesina, A. and Giuliano, P. (2009), Preferences for redistribution, *IZA Discussion Paper* 4056.

Alesina, A. and La Ferrara, E. (2005), Preferences for redistribution in the land of opportunities, *Journal of Public Economics* 89, 897–931.

Alesina, A., Roubini, N., and Cohen, G. D. (1997), *Political cycles and the macroeconomy*, Cambridge, MA: MIT Press.

Angeletos, G.-M., Laibson, D., Repetto, A., Tobacman, J., and Weinberg, S. (2001), The hyperbolic consumption model: Calibration, simulation, and empirical evaluation, *Journal of Economic Perspectives* 15, 47–68.

Barro, R. J. (1990), Government spending in a simple model of endogenous growth, *Journal of Political Economy* 98, 103–125.

Becker, G. S. and Mulligan, C. B. (1997), The endogenous determination of time preference, *Quarterly Journal of Economics* 112, 729–758.

Besley, T. and Coate, S. (1991), Public provision of private goods and the redistribution of income, *American Economic Review* 81, 979–984.

Blekesaune, M. and Quadagno, J. (2003), Public attitudes toward welfare state policies: A comparative analysis of 24 nations, *European Sociological Review* 19, 415–427.

Blinder, A. S. and Holtz-Eakin, D. (1984), Public opinion and the balanced budget, *American Economic Review Papers and Proceedings* 74, 144–149.

Blinder, A. S. and Krueger, A. B. (2004), What does the public know about economic policy, and how does it know it? *Brookings Papers in Economic Activity* 1, 327–397.

Buchanan, J. M. and Wagner, R. E. (1977), *Democracy in deficit: The political legacy of Lord Keynes*, New York: Academic Press.

Clark, D. E. and Cosgrove, J. E. (1990), Hedonic prices, identification, and the demand for public safety, *Journal of Regional Science* 30, 105–121.

Corneo, G. and Grüner, H. P. (2002), Individual preferences for political redistribution, *Journal of Public Economics* 83, 83–107.

Drazen, A. (2002), *Political economy in macroeconomics*, Princeton, NJ: Princeton University Press.

Fölster, S. and Henrekson, M. (2001), Growth effects of government expenditure and taxation in rich countries, *European Economic Review* 45, 1501–1520.

Hansen, J. M. (1998), Individuals, institutions, and public preferences over public finance, *American Political Science Review* 92, 513–531.

Hayo, B. and Neumeier, F. (2013), Public attitudes toward fiscal consolidation: Evidence from a representative German population survey, *MAGKS Joint Discussion Paper Series* 51-2013.

Heinemann, F. and Henninghausen, T. (2012), Understanding public debt preferences, *FinanzArchiv* 68, 406–430.

Hockley, G. C. and Harbour, G. (1983), Revealed preferences between public expenditures and taxation cuts: Public sector choice, *Journal of Public Economics* 22, 387–399.

Huber, B. and Runkel, M. (2008), Hyperbolic discounting, public debt and balanced budget rules, *Scottish Journal of Political Economy* 55, 543–560.

Jacoby, W. G. (1994), Attitudes toward government spending, *American Journal of Political Science* 38, 336–361.

Laibson, D. (1997), Golden eggs and hyperbolic discounting, *Quarterly Journal of Economics* 112, 443–477.

Leigh, P. J. (1986), Accounting for tastes: Correlates of risk and time preferences, *Journal of Post Keynesian Economics* 9, 17–31.

Lizzeri, A. and Persico, N. (2001), The provision of public goods under alternative electoral incentives, *American Economic Review* 91, 225–239.

Meltzer, A. H. and Richard, S. F. (1981), A rational theory of the size of government, *Journal of Political Economy* 89, 914–927.

Mueller, E. (1963), Public attitudes toward fiscal programs, *Quarterly Journal of Economics* 77, 210–235.

Musgrave, R. A. (1959), *The theory of public finance*, New York: McGraw-Hill.

Niskanen, W. A. (1971), *Bureaucracy and representative government*, Chicago: Aldine.

Rogoff, K. and Sibert, A. (1988), Elections and macroeconomic policy cycles, *Review of Economic Studies* 55, 1–16.

Stix, H. (2013), Does the broad public want to consolidate public debt? The role of fairness and of policy credibility, *Kyklos* 66, 102–129.

Thaler, R. H. and Shefrin, H. M. (1981), An economic theory of self-control, *Journal of Political Economy* 89, 392–406.

Trommsdorf, G. (1983), Future orientation and socialization, *International Journal of Psychology* 18, 381–406.

Walstad, W. B. (1997), The effect of economic knowledge on public opinion on economic issues, *Journal of Economic Education* 28, 195–205.

Welch, S. (1985), The 'more for less' paradox: Public attitudes on taxing and spending, *Public Opinion Quarterly* 49, 310–316.

White, H. (1980), A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity, *Econometrica* 48, 817–838.