Public Preferences Towards Fiscal Policies: Survey Experiments on Budgetary Priorities and Trade-Offs

*Pre-Analysis Plan**

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Abstract

In Europe, austerity has been the predominant response to the Great Recession since 2010, defining the post-crisis political economy. The resulting political conflicts across Europe have shown that fiscal policies are not only a crucial tool for influencing the macroeconomic trajectory of countries, but that they also have significant distributive consequences for individual citizens. While citizens benefit from a large amount of government spending in advanced economies, this spending has to be financed by taxes or government debt. Consequently, fiscal policies are a constant source of political contestation in democratic states but, despite living in times of "permanent austerity" (Pierson, 1998, 2001), we know surprisingly little about the public preferences towards fiscal policies. In particular, the existing literature cannot account for the trade-offs that are inherent in designing government budgets. Most prior research studies preferences towards fiscal policies on a single dimension that is independent from other aspects of the government's budget. This conception is unrealistic and risks misrepresenting the underlying preferences that citizens have towards fiscal policies. We attempt to capture the multidimensionality of fiscal policies by using original survey experiments in four European countries (Germany, Italy, Spain, UK) that isolate attitudes towards different aspects of government budgets (including government spending, taxation, and debt). Disentangling the preferences towards different elements of fiscal policy by using a conjoint experiment and a split-sample experiment allows us to analyze the priorities that citizens have with respect to the composition of government budgets.

Keywords: Fiscal policies, government debt, austerity, public opinion, conjoint experiments

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> "How much the government shall spend, and for whom, obviously is the major political question of the next decades ... [but] the pressure to increase services is not necessarily matched by the mechanisms to pay for them, either a rising debt or rising taxes."
>
> *Daniel Bell, The Cultural Contradictions of Capitalism (1976, p.227)*

Project Description

Fiscal policies are not only a crucial tool for influencing the macroeconomic trajectory of countries, but they also have significant distributive consequences for individual citizens. As the former British Prime Minister and Chancellor of the Exchequer Willem Gladstone already said "budgets are not merely a matter of arithmetic, but in a thousand ways go to the root of prosperity of individuals, and relations of classes, and the strength of kingdoms." Recently, we have been reminded of these words by the economic crisis in Europe, during which austerity has become the pre-dominant response of governments. However, despite living in times of "permanent austerity" (Pierson 1998, 2001), we know surprisingly little about the public preferences towards fiscal policies. In particular, the existing literature has identified a 'schizophrenia' among citizens, which is puzzling: while citizens, on average, favor high government spending, they are reluctant to pay for it through higher taxation or government debt. The problem with this finding is that the existing research has largely studied attitudes towards these elements of government budgets on a single dimension, which is unrealistic and ignores the trade-offs that are inherent in designing government budgets. It risks misrepresenting the underlying preferences that citizens have towards fiscal policies.

Only recently there have been some first studies that have tried to capture the importance of policy trade-offs (Häusermann et al., 2016; Gallego and Marx, 2016; Busemeyer and Neimanns, 2017). We build on this research to analyze the preferences and priorities of citizens towards different elements of fiscal policies (including government spending, taxation, and government debt) by using original survey experiments in Germany, Italy,

Spain, and the United Kingdom. These experiments aim to isolate attitudes towards different aspects of budget reforms including taxation, government spending, and public debt in a realistic setting. Disentangling the preferences towards different elements of fiscal policy in this way allows us to shed light on the causal effect that different fiscal policies have on the support for government budgets. We, therefore, explicitly focus on the trade-offs that voters are willing to make between different elements of fiscal policy in order to draw out the priorities of respondents with respect to them. Moreover, we aim to study how support for different elements of government budgets varies across socio-economic groups (such as education, income, political orientation, employment status, age, and sex). Thereby, we aim to answer the question to what extent citizens are willing to use taxation and government debt to finance government spending, when they are confronted with real trade-offs.

Part 1: Conjoint Survey Experiment

Research design

Existing surveys do not allow us to answer the questions posed above because they largely pose uni-dimensional questions and fail to measure priorities and trade-offs (Giger and Nelson, 2013). In order to address this weakness, we use a research design that overcomes the problems with conventional surveys. In the first part of our project, we use a conjoint survey experiment that simultaneously varies six characteristics of a government budget in order to measure how citizens evaluate different fiscal policies. Previously, conjoint surveys have been used widely in product analysis in order to measure how people value different attributes of a product or service. Recently, conjoint experiments have also successfully been employed by social scientists (e.g. Bechtel and Scheve, 2013; Hainmueller et al., 2014; Hainmueller and Hopkins, 2015; Bansak et al., 2016) and they are increasingly used in comparative political economy to capture the importance of trade-offs (Gallego and Marx, 2016; Häusermann et al., 2016; Kölln and Wlezien, 2016). Conjoint analysis is well suited for this purpose because it requires respondents to evaluate entire packages

instead of simply asking about support for individual measures (Häusermann et al., 2016).

Following the existing literature (e.g Sanders, 1988; Hansen, 1998), we assume that people do not need to know a lot about government budgets to evaluate different alternatives. As governments usually decide on their budgets annually, budgetary debates are a regular feature of political debate that is familiar to many citizens. Thus, voters only need to know the rough contours of a policy to decide whether they like it. This is also true because citizens can use of a lot of information to help them. First, the media covers budgetary debates regularly and extensively. Second, political parties are mediators of positions on budgetary policies. They develop and formulate a set of positions, which they continuously communicate to voters. Thus, in our survey we ask respondents to evaluate different proposals for changes to the government budget in a set of choice tasks. Each task presents respondents with two profiles of possible budgetary changes and respondents have to select their most preferred alternative. Profiles comprise six attributes corresponding to particular elements of a government budget and each attribute can take on a set of discrete and pre-defined levels, which represent different policy options. The profiles are then generated randomly, i.e. they contain a fixed number of attributes attributes, which are shown to respondents in random order and with a random display of an attribute level.

Concretely, our reform profiles contain six attributes (as shown in Table 1) that were chosen to represent the three dimensions that are salient for government budgets: spending, taxation, and government debt. With regard to spending we distinguish between two categories in order to measure attitudes towards investment versus consumption spending separately: while we use education as a proxy for investment spending, pensions are used as a proxy for consumption spending. With regard to taxation, we distinguish between three different characteristics that influence the amount of taxes that citizens pay: the level of income taxes, the progressivity of income taxes, and the level of indirect taxes. Finally, we also include government debt as an attribute given that the government can also incur debt to finance government spending. Note that we are only interested in attitudes towards government policies that have a social character with a direct impact on

Table 1: Attributes and Levels of the Conjoint Experiment

	Attribute	**Attribute Levels**
Spending	Old-age pensions	Increase spending No change Decrease spending
	Education	Increase spending No change Decrease spending
Taxation	Income tax (for all citizens)	Decrease No change Increase
	Tax on high incomes	Decrease No change Increase
	Value added tax (VAT)	Decrease No change Increase
Debt	Government Debt	Decrease No change Increase

citizens, i.e. we ignore some important areas of government spending (like defense) and taxation (like corporate tax). Furthermore, we ignore spending on health for two reasons: first, there are large differences between the funding of health care in the countries that we study, which makes a comparison difficult; second, spending on health care has both an element of investment and consumption and, hence, it is difficult to categorize.

For each attribute, we developed three levels, allowing us to test attitudes towards combination of government spending, taxation, and government debt, as shown in Table 1. In theory, there would be 729 combinations of the levels in a fully randomized setting but since taxes and government debt are use to pay for government spending, we introduce restrictions in order to avoid illogical combinations. For example, when government spending increases while taxation decreases in a given profile, government debt cannot decrease or stay the same. To address this problem, we only allowed combinations in which every increase in expenditure or decrease is revenues is matched by a simultaneous decreases in expenditure or increase in revenues. As a result, we exclude 588 combinations and are left with 141 possible combinations. Importantly, when the profiles are randomly generated, the likelihood that a level is shown remains the same for all possible levels. Hence, as Hainmueller et al. (2014) have shown, respondents do not need to be shown ev-

ery possible combination of attributes and levels to identify the component-specific effect. Our research design exploits this important feature of conjoint experiments, allowing us to efficiently run multiple-treatment choice experiments without needing a sample size large enough to present respondents with every possible comparison.

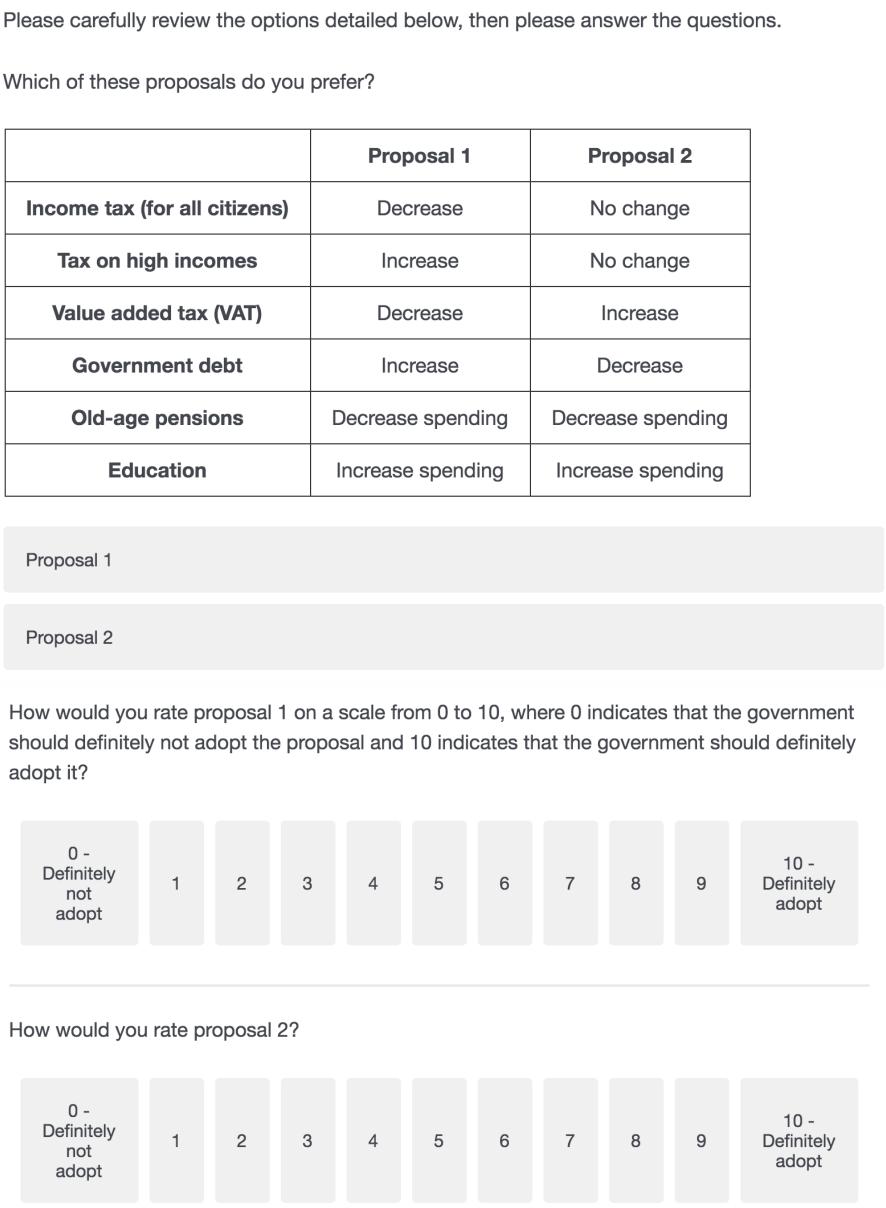
The full instructions for the conjoint tasks are shown below. First, respondents will be presented the following introduction to the experiment.

> Please take your time and read the information below very carefully. It contains the instructions for the next part of the survey.
>
> Every year the British government collects taxes and spends money in a variety of different areas. A large share of taxes are paid by citizens like you and they are used to pay for government spending on education or pensions. We are interested in what you think about how your government should change its budget.
>
> We will now show you several proposals for possible changes to the government's budget. We will always show you two possible proposals in comparison. For each comparison we would like to know which of the two proposals you prefer. You may like both proposals or neither. In any case, please choose the proposal that you like the most. In total, we will show you five comparisons.
>
> The possible proposals only include changes with regard to a few selected types of government spending and taxation. Please assume that spending in all other areas as well as all other taxes do not change.
>
> People have different opinions about this issue and there are no right or wrong answers. Please always take your time when reading the proposals.

This introduction will be followed by a screen with two proposals for a budgetary change, as shown below in Figure 1. In this way, respondents are asked five times to choose (i) between two packages ("choice" variable) and (ii) to indicate how likely they are to support each of the proposals ("ranking" variable).

Through randomization and a high number of such pairwise comparisons, conjoint analysis allows us to identify – and quantify – the causal effect that individual reform elements (attribute levels) have on the support for the entire reform, compared to a

Figure 1: Screenshot of a Conjoint Task Presented to Respondents



reform that contains the baseline category on a particular attribute. The order in which the attributes are presented to different respondents is randomized to avoid that the order influences the relative impact of attributes on the acceptance of different reforms. However, the order is held constant within individual respondents across the five different tasks to avoid confusion. Moreover, all attributes relating to government spending are always presented as a block, while all attributes relating to taxation are also presented as a block.

Sample

The survey will be fielded in four large European countries: Germany, Italy, Spain, and the United Kingdom (UK). In each country, 1,200 respondents will be recruited to participate in the survey. For this purpose, we use large online panels provided by Qualtrics. Respondents are drawn from a pool of eligible voters in each country and the sample is representative of all eligible voters based on gender and age. Further, we will weight the sample to match the demographic characteristics of the population in each country as closely as possible using entropy balancing (Hainmueller, 2012; Hainmueller and Xu, 2013). The survey will be fielded in December 2017 in all four countries .

Analysis

Main Analysis

The main variable of interest that we generate from the conjoint experiment is the average component-specific effect (AMCE) of a change in the value of one of our six dimensions on the probability that the budgetary reform is chosen by the respondent. The variable is binary and it takes the value of 1 if a budgetary reform is chosen and 0 if a budgetary reform is not chosen. Following the recommendations from Hainmueller et al. (2014), we estimate the ACME by using linear probability models and regress the dependent variable on dummy variables for each of our levels (where the status quo is used as the baseline for each dummy). To estimate these effects we use the cjoint package in R (Hainmueller et al., 2014) with clustered errors by respondents to account for correlations within responses from a given respondent.

Heterogeneous Effects

In addition to the conjoint experiment, the survey also includes questions about demographics, socio-economic characteristics of individuals (e.g. income, occupation, wealth) and political preferences (or ideological predispositions) of respondents. This allows us to test whether the AMCEs differ between different groups by interacting individual

attribute-levels and respondent characteristics and by using split-sample analyses. We will present the subgroup analysis graphically by showing plots with results for different groups side by side. The subgroup analysis is based on the following variables: country, income level, wealth level, level of education, occupational class, employment status, marital status, sex, age, household size/number of children, urban vs. rural, partisanship, left-right placement, union membership, political interest, trust in government, state of the economy, religiosity, preferences for redistribution, preferences for government debt, attitudes towards the role of women, attitudes towards immigration.

Analysis of Support for Entire Packages

Our analysis includes 141 different packages that are randomly created. Due to the design of our survey, these packages include some profiles, which strongly differ from the status quo as well as some in which very few or no attributes change from the status quo. Moreover, these packages also include different combinations of government spending, taxation and government debt. As a result, both additional taxation and government debt can be used to finance fiscal expansion (i.e additional government spending), while fiscal consolidation can be achieved by cutting government spending or increasing government spending. We will also analyze the overall support for the 141 different packages to check whether there are certain combinations of attribute-levels that are especially popular or unpopular.

Robustness Tests

We will use a series of tests to check whether our results are robust. They are designed to check that the common assumptions involved in conjoint analysis are satisfied and to probe potential concerns about the validity of our results.

On the one hand, we will conduct most of the diagnostic tests suggested by Hainmueller et al. (2014). First, conjoint analyses relies on the assumption that there are no carryover effects between the different rounds of conjoint tasks. To test whether this assumption holds, we will estimate AMCEs separately for each of the five rounds of con-

joint tasks. Second, we check whether there are profile order effects, i.e. whether the AMCEs depend on whether the attribute occurs in the first or second profile in a given task. To this end, we will estimate AMCEs separately for all the observations where attribute levels occurred in the first and the second profile respectively. Third, we will check whether there are attribute-order effects, i.e. whether the AMCE of an attribute depends on the order in which it appears in the conjoint table. We will estimate row-specific AMCEs, testing whether the estimates are significantly different from each other. Fourth, our analysis depends on the fact that profiles are randomly created. Although our design guarantees that this assumption holds, we will still check whether the randomization actually produced experimental groups that are well balanced in our sample. Therefore, we compare the profiles rated by different groups of respondents in our sample and conduct multivariate balance checks by regressing the characteristics of respondents on indicator variables for all profile attributes used in our design. Finally, note that we already addressed the concern about atypical profiles raised by Hainmueller et al. (2014) in our research design. Specifically, we included a large number of restrictions to prevent profiles that are unrealistic and would not occur in the real world.

One the other hand, we will also use further robustness tests, which are important due to the design of our survey. First, we will check whether respondents lose concentration throughout the survey by estimating all results based on the first two (out of five) conjoint comparisons only. Moreover, we will include round or task fixed effects to take account of the fact that respondents might make different choices in later stages of the conjoint experiment, for example due to fatigue or lack of concentration. Second, we will assess the relative time that respondents took to complete the conjoint tasks. We will assess results separately by time of survey completion and exclude those respondents that speed through the conjoint tasks, comparing the results with the overall sample. Third, the conjoint survey experiment described above is embedded in a survey, which includes two different set of conjoint tasks.[1] The order in which these conjoint experiments occurs in the survey

[1]More information on the other conjoint experiment is available on the Political Science Registered Studies Dataverse under the title "Public Opinion on Welfare State Recalibration in Times of Austerity: Evidence from Survey Experiments."

is randomized. Still, we check whether respondents are influenced in their evaluations of the conjoint profiles if they have already completed a different set of conjoint tasks beforehand. For this purpose, we will split the sample and analyze the results separately depending on whether the conjoint experiment occurred before or after the other conjoint experiment in the survey. Fourth, there is also a possibility that the screen size might affect the way respondents evaluate the conjoint tasks. We will therefore separately analyze responses from mobile versus non-mobile respondents and check to what extent they differ. Finally, we also repeat our analysis without the weights created with entropy balancing to check whether the results are dependent on the weights.

Part 1: Experiment with Split-Sample Questions

Research Design

To test how respondents perceive and react to budgetary trade-offs, we also confronted respondents with a series of questions that try to measure individuals' support for government spending, taxation, and government debt given different kinds of budgetary trade-offs. Following Busemeyer and Garritzmann (2017), respondents were randomly assigned to four different groups, including one 'control' group and three different 'treatment' groups. In each group, respondents were asked to evaluate six different statements about government spending, taxation, and government debt. Respondents in the 'treatment groups' were presented with statements that raised awareness for different kind of budgetary trade-offs, while the control group was presented with statement that did not allude them to any kind of trade-offs. Subsequently, respondents were asked to evaluate to what extent they agree or disagree with these different statements. Table 2 shows the full list of statements that were included in the four different groups.

Table 2: Design of the split experiment

Split 1 (Control)	**Split 2 (Treatment 1)**	**Split 3 (Treatment 2)**	**Split 4 (Treatment 3)**
The government should increase spending on pensions.	The government should increase spending on old-age pensions, even if that implies higher taxes.	The government should increase spending on old-age pensions, even if that implies higher government debt.	The government should increase spending on pensions, even if that implies lower spending on education.
The government should increase spending on education.	The government should increase spending on education, even if that implies higher government debt.	The government should increase spending on education, even if that implies lower spending on pensions.	The government should increase spending on education, even if that implies higher taxes.
The government should decrease income tax on all citizens.	The government should decrease income tax on all citizens, even if that implies lower government spending.	The government should decrease income tax on all citizens, even if that implies higher VAT.	The government should decrease income tax on all citizens, even if that implies higher government debt.
The government should decrease the tax on high incomes.	The government should decrease the tax on high incomes, even if that implies higher VAT.	The government should the decrease tax on high incomes, even if that implies higher government debt.	The government should the decrease tax on high incomes, even if that implies lower government spending.
The government should decrease value added tax (VAT).	The government should decrease VAT, even if that implies higher income tax for all citizens.	The government should decrease VAT, even if that implies lower government spending.	The government should decrease VAT, even if that implies higher government debt.
The government should reduce the level of government debt.	The government should reduce the level of government debt, even if that lower government spending.	The government should reduce the level of government debt, even if that implies higher taxes.	The government should reduce the level of government debt, even if that implies lower government spending or higher taxes.

Analysis

Main Analysis

To analyze whether support for certain forms of government social spending varies across our four groups, we follow the approach used by Busemeyer and Garritzmann (2017). Specifically, we will first analyze the results descriptively. To the end, we graphically present the means and 95 per cent confidence intervals of the control group and the three different treatment groups for each of the six statements. Using unpaired t-tests of differences in means between the control and each treatment group, respectively we test whether any observed differences between the groups are statistically significant. To assess whether there are significant differences across countries, we will also plot cross-country variations across the four different groups.

Afterwards, we test whether the preferences differ between different groups by interacting the preferences with the respondent characteristics and by using split-sample analyses. We will present the subgroup analysis graphically by showing plots with results for different groups side by side. These subgroups will be created based on the following variables: country, income level, wealth level, level of education, occupational class, employment status, marital status, sex, age, household size/number of children, urban vs. rural, partisanship, left-right placement, union membership, political interest, trust in government, state of the economy, religiosity, preferences for redistribution, preferences for government debt, attitudes towards the role of women, attitudes towards immigration.

In a last step, we use multivariate regression analysis to identify individual-level characteristics that correlate with people's support for different forms of government spending, depending on which trade-offs they were presented with. For this purpose, we use support for the different statements as the dependent variable, which we will regress on a number of basic control variables and independent variables (e.g. age, sex, income level, education, occupational class, employment status, wealth, left-right placement, preferences for redistribution). Moreover, we will include country-fixed effects and country-clustered standard errors in the models to account for possible contextual effects.

Robustness Tests

To check the robustness of the results, we will perform a number of tests. First, we will check whether the random assignment worked and the control and treatment groups are balanced, i.e. we will check that there are no significant differences across the groups with regard to the most relevant variable. Second, we will change the operationalization of the dependent variables and test different regression models including OLS, logit, and ordered logit. Third, we will run the analysis for each country individually to account for cross-country differences.

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