Immigration vs. Poverty:
Causal Impact on Demand for Redistribution in a Survey Experiment

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Abstract

In a survey experiment conducted in Germany, we investigate how preferences over both the financing and the supply of redistributive policies are affected by poverty and immigration. We find that while information about poverty has no detectable impact on the progressivity of the respondents' demanded income tax schedule, information about immigration has a sizeable and significant negative impact for middle income respondents. Opposite effects can be observed for low income earners, such that effects cancel out at the aggregate level. On the supply side, middle income respondents seem to envisage public education as a viable response to the challenges of both poverty and immigration, while low income respondents want to spend less on education due to immigration. These strong heterogeneous effects with respect to the respondent's income levels suggest that understanding the relationship between immigration and demand for redistribution and addressing its pitfalls requires in-depth investigations by population segment.

1

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1 Introduction

Immigration has played a central role in the political debate and in nearly every electoral competition taking place in Europe and North America over the past decade. Many political races have culminated in the rise of extremist and populist parties heavily focusing their campaigns around the immigration question (Jenkins, 2018). Conversely, those political actors campaigning for strengthening redistribution and social welfare expenditures were somewhat pushed to the margins, often by those segments of the population whom they would benefit most (see, for instance, Lamble (2018) and Ember (2019) for the United Kingdom and United States respectively).[1] On the one hand, such outcomes might be explained by the salience, importance and emotional significance of immigration in comparison to the political agendas proposed by traditional parties (Coester, 2018). On the other, they might be a result of the erosion of popular support for the welfare state as a consequence of the salient increase in social diversity driven by the recent migration inflows (Gilens, 1995; Lee and Roemer, 2006; Roemer et al., 2007; Eger, 2010; Larsen, 2011; Cappelen and Midtbø, 2016; Schmidt-Catran and Spies, 2016; Auspurg et al., 2019).

Some political commentators have argued that, in order to win (back) electoral support, left-wing parties (which are traditionally in favour of redistribution and the welfare state) should not run their campaigns around the issue of immigration, because they are likely to lose against populist rightwing parties on that front (Arzheimer, 2013). Instead, it has been argued that emphasizing the extent of inequality, poverty and the need for redistribution can 'beat' immigration at the polls and can counteract (potentially) lower demand for redistribution due to immigration (Hillebrand, 2014).[2] Conversely, polls show that immigration is an important issue for voters[3] and hence critics of the above approach point out that not addressing it properly in electoral campaigns and focussing on other, less salient, agendas such as

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[1]See also: The Economist, "The state of the opposition: Democrats have plenty of anger, but few good ideas." 17/05/2018.

[2]See also Niki Kowall, "Auf welche Themen die Sozialdemokratie setzen muss", https://kontrast.at/krise-der-spd-auf-welche-themen-die-sozialdemokratie-setzen-muss

[3]See for instance https://www.ipsos.com/en-us/news-polls/reuters-ipsos-data-core-political-2018-07-03

inequality will cost votes.[4]

This debate leads us to the main question we want to investigate in our study: How is demand for redistribution in society affected by immigration *and* poverty separately, and in a balanced social discourse or electoral campaign? Investigating the impact of immigration on the native population's support for the welfare state and redistribution has been the focus of a new and expanding literature in economics, sociology and political science (Hansen, 2003; Hainmueller and Hiscox, 2010; Hainmueller and Hopkins, 2015; Halla et al., 2017; Alesina et al., 2018a,b; Naumann and Stoetzer, 2018). An assessment of the relative strength of the two topics, poverty and immigration, in a joint empirical investigation of their power to steer the electorate's preferences is however currently missing.[5]

We tackle this question by conducting a survey experiment in Germany. We examine how respondents' demand for redistribution is affected by information about the extent of immigration and/or poverty. Concretely, we randomise whether survey participants receive no information (our baseline), information on the extent of poverty (Poverty condition), on the extent of immigration (Immigration condition), or on the extent of both (Both condition) prior to stating their preferences for redistribution. Moreover, in order to gain a better insight into how poverty and immigration interact, we design a further intervention adding information about the extent to which the poor and the immigrant populations overlap (Overlap condition).

By adopting this approach we follow a burgeoning stream of literature using survey experiments to investigate the causal link between socio-economic phenomena of interest on self-reported preferences for redistributive interventions (Kuziemko et al., 2015; Karadja et al., 2017; Barrera Rodriguez et al., 2017; Alesina et al., 2018a). Different from traditional survey-based investigations (Senik et al., 2009; Alesina et al., 2018b), this approach allows us to rely on systematic differences in the responses to targeted survey questions induced by exogenous and experimentally induced variation in the emphasis placed on specific elements of interest across the sample. That is, by experimentally providing information about poverty and immigration our survey experiment can be taken to randomise the salience given by electoral and media debates to poverty and immigration. Systematic relationships observed between the experimental conditions and the answers to target survey questions can therefore be interpreted as causal effects of the information provided on preferences for redistri-

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[4]See for instance: The Economist, "The search for a winning centre-left strategy: Denmark's social democrats beat the migrant bashers at their game." 09/07/2019

[5]To the best of our knowledge, the only previous investigation of poverty (in isolation) as a determinant of support for redistribution is that of Kuziemko et al. (2015).

bution.[6]

Concerning immigration, two opposing hypotheses have been investigated in previous literature. According to the so-called *conflict hypothesis*, reduced social cohesion due to ethnically diverse immigration would cause natives to withdraw their support for redistribution and income support programmes benefiting groups perceived as socially distant (Luttmer, 2001; Alesina et al., 2004). The *protection hypothesis* instead posits that, as (low-skilled) immigration depresses wages and threatens job security in high-immigration sectors, unskilled low income earners are expected to increase their demand for redistribution in response to migration inflows perceived as threatening their job security. High-skilled individuals with high incomes - net contributors to the welfare system - are expected instead to withdraw their support, as they expect their share of the welfare burden to increase (e.g. Naumann and Stoetzer (2018)). So far, the scant evidence accumulated fails to offer unequivocal support in favour of either of the two hypotheses.

A reading of these hypotheses themselves reveals how poverty is indeed an important (and largely neglected) component of the mechanisms under investigation. Two main arguments can be made. First, precisely because the object of these investigations is the native population's support for redistribution and social welfare programmes aimed at poverty relief, we believe that a correct assessment of how it is impacted by immigration should account for the simultaneous and potentially countervailing effect of the debate on poverty relief and income support. Such programmes are in fact widely recognised as essential as ever in light of the current socio-economic and demographic challenges faced by contemporary Western societies (e.g. Saez and Zucman (2016); Stiglitz (2019)). Second, mounting empirical evidence shows that the native population's general perception of immigrants is systematically biased in terms of lower educational attainment and earnings potential, and higher reliance on the welfare state (Alesina et al., 2018a). From this perspective, while increasing redistribution translates into more public expenditure benefiting economically weak natives, it implies at the same time financial support for an immigrant population viewed as directly competing with low income natives despite not having contributed to the welfare system.

We thus investigate the effect of exposure to information about poverty *and* about immigration on individuals' demand for redistribution: In a political debate in which both immigration and poverty play a role, what happens to people's support for redistribution?

In our analysis, we focus on two measures of 'demand for redistribution', which are in fact the two sides of a same coin. The first relates to the question of how to

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[6]Section 3 offers a more detailed discussion of the methods.

collect tax revenue to finance redistributive policies in terms of progressivity of the desired tax schedule: how much should different quantiles of the income distribution be taxed in order to collect a given amount of budget? The second relates to preferred public spending allocations: How should a public budget of a given size of be used? Should the government spend more on education and poverty relief, or rather on infrastructure and defense?

We find that, at the aggregate level, both immigration and poverty have no detectable impact on desired tax progressivity. Disaggregating with respect to income brackets, we find that immigration has a sizeable effect on desired tax progressivity, but it goes in opposite directions for middle income and low income individuals. In particular, middle income earners desire less tax progressivity due to immigration, but this is offset by poor individuals wanting more progressive taxation.

Concerning public spending, we detect a positive impact on support for public education expenditure in the Poverty condition. Again disaggregating by income, middle income individuals want increased spending on public education in all our conditions. This increase is however counteracted by poor individuals wanting less education spending whenever information about immigration is presented. We again observe no reaction in high income respondents.

We can conclude that the salience of immigration seems to outweigh that of poverty as far as tax progressivity is concerned, but it affects poor and middle income earners differently, and in opposite directions. In addition, middle income individuals want to employ education spending in response to both immigration and poverty.

The paper is organised as follows: Section 2 describes the survey, followed by an account of the survey experimental method and of the experimental design in Section 3. Section 4 formulates our hypotheses, Section 5 presents the results and Section 6 concludes.

2 Our survey

2.1 Questionnaire

We closely followed and adapted the questionnaire designed by Alesina et al. (2018a) in redacting our own. The survey was conducted online and administered by the survey company Respondi to a representative sample of the German population.[7] It consisted of 32 questions in total.[8] These included (in order): 5 questions on the

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[7]https://www.respondi.com/EN/

[8]The online questionnaire began with a paragraph summarising the funding sources, the general purpose of the survey, the affiliation of the researchers (who were kept anonymous) with the Max

respondent's demographics (gender, age, marital status, household composition and income bracket), 2 target questions eliciting the respondents' preferred tax schedule and allocation of public expenditures, 9 questions eliciting attitudes towards redistribution, government intervention and poverty (preferred tax rate on income quantiles, preferred allocation of the public budget, attitude towards inequality, power of the government to tackle inequality, preferred degree of government intervention against inequality, attitudes towards increasing the public budget for i) schools in poor districts, ii) social housing, iii) social security benefits for the poor, trust in the government, luck versus effort as determinant of economic success, attitudes towards poverty in Germany), 10 further background questions (educational attainment, employment status, high immigration professional sector, country of birth, parents born in Germany, German state and region of residence, preferred media, positioning on the political spectrum, voting behaviour, political party preference), and 6 subjective beliefs questions (size of the immigrant population, its origins within or outside of the European Union, size of the poor population, size of te overlap between the poor and the immigrant population, its origins within or outside of the European Union, and perceived job security).[9]

The first set of 5 demographic questions were elicited early as they formed the basis upon which representativeness of the final sample was ensured. Immediately after these questions, the questionnaire randomised and displayed short infographic videos containing our treatment information (more detail to follow in Section 3.1). Next, the respondents answered our target questions. Our hypotheses rest on the assumption that immediate previous exposure to different information conditions will cause different responses to our target questions. We then elicited the respondents' attitudes, and further background questions allowing us to split the analysis across relevant socio-demographic groups and thus further delve into eventual treatment heterogeneities. Finally, the beliefs we elicited at the end of the questionnaire serve two main purposes. First, we gain an insight into how such beliefs are distributed in the general population by analysing those collected from the untreated subsample. Second, we are able to gauge the effectiveness of our information treatments by comparing the distribution collected from the untreated with those collected from the treated respondents. The latter is a priori expected to be more concentrated

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Planck Society, and the respondents' rights in terms of data protection regulations. At the end of the paragraph, the respondent had to approve a declaration of consent in order to participate in the study. See Appendix D for the full questionnaire (translated to English).

[9]The choice of eliciting perceived job security at the very end of the survey is consequent to our belief that an early elicitation would have strongly interacted with our information conditions and biased our results.

around the true value than the former.

2.2 Measuring outcomes

To investigate the effect of our conditions on support for redistribution, we target both the financing and the supply of redistribution policies. We elicit respondents' preferences over how to finance the collection of a public budget of a given size as in Alesina et al. (2018a). We ask the respondents to allocate the tax burden (average tax rates) to key quantiles of the income distribution: the bottom 50%, the next 40%, the following 9% and the top 1% via a series of sliders (see Figure D2 in Appendix D). A background programme multiplied the chosen tax rates by the total income earned by each quantile and returned the public revenue raised by the respondent in real-time. The goal for each respondent was to raise a public budget of a fixed size, roughly corresponding to the revenue collected by the German government via income taxes in 2017. The stated preferred tax rates were then used to construct an index of desired tax progressivity. This variable consists of the unweighted sum of the desired tax rates on the top 1% and top 10%, minus the desired tax rates on the next 40% and the bottom 50%.

Next, we elicit the respondents' preferred allocation of a public budget of a fixed size to different public policies and public goods, again as in Alesina et al. (2018a). We asked each individual to state what proportion of the budget they wished to allocate to *public infrastructure development*, *domestic security*, *public education*, *public healthcare*, *public social insurance*, *public unemployment insurance* and *public housing*. We constrained the sum of all stated shares to sum up to 100 (see Figure D3 in Appendix D).

2.3 Sample

We surveyed 4000 individuals from a representative sample of the German adult population. Random assignment with equal probability to the five information conditions yields a target sample size per experimental condition of 800 individuals.[10] Effective sample sizes per condition and sample balance tests are reported in Table A1 in Appendix A.

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[10]With such sample size we are able to detect differences of size d=0.15 at alpha=0.05 with a power p>0.8 in pairwise experimental condition comparisons of the means of summary indices of desired tax progressivity using the Neutral condition as a baseline, scaled to unit standard deviations.

3   Experimental method and design

Experimental survey studies (e.g. Alesina et al. (2018a); Naumann and Stoetzer (2018); Kuziemko et al. (2015)) have emerged as an important investigation strategy to overcome the endogeneities inherent in responses to traditional surveys (Cappelen and Midtbø, 2016). Survey experiments allow for the identification of causal relationships between information provision conditions and subjects' responses to target questions within the survey. Specifically, our respondents are first randomly assigned to one of five groups of roughly equal size. Each group is then provided (if at all) with information about the extent of immigration, poverty, or both, in Germany. In other words, each group is randomly assigned to one of what we refer to as our *information conditions*. After having received the information, all respondents are asked about their preferences for specific redistributive policy interventions the state could enact, their attitudes towards government intervention and towards poverty. Because the information conditions were randomly administered over the whole sample, any systematic relationship uncovered between our information conditions and the respondents' preferences for specific policy measures can thus be interpreted as the causal effect of the information provided on the respondents' policy preferences.

3.1   The information conditions

Respondents were shown a short infographic video presenting the information prescribed by the information condition they were randomly assigned to.[11] Specifically, the information respondents received in each condition was as follows.

Neutral condition   Respondents in the Neutral condition were not provided any information about neither poverty nor immigration. Instead, the video only reminded them of the total size of the resident population in Germany (82 Millions).

Poverty condition   Respondents in the Poverty Condition were reminded of the total size of the resident population in Germany (82 Millions), and in addition were informed about the size of the resident population *living on an income falling below the poverty line* (13.7 Millions). The poverty line was transparently defined as an income equalling 60% of median income.

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[11]Screenshots of the information provided and links to the information videos can be found in Appendix C. Each respondent viewed only one of the videos.

Immigration condition   Respondents in the Immigration Condition were reminded of the total size of the resident population in Germany (82 Millions), and in addition were informed about the size of the resident population that was *born abroad* (13.2 Millions).[12]

Both condition   Respondents in the Both condition were reminded of the total size of the resident population in Germany (82 Millions). In addition, they were informed about both the size of the resident population living on an income falling below the poverty line (13.7 Millions), *and* about the size of the resident population that was born abroad (13.2 Millions). We control for order of presentation effects by randomising the placement (left or right on screen) in which the information about poverty and about immigration was presented.

Overlap condition   Finally, respondents in the Overlap condition were reminded of the total size of the resident population in Germany (82 Millions), they were informed about both the size of the resident population living on an income falling below the poverty line (13.7 Millions), *and* about the size of the resident population that was born abroad (13.2 Millions). In addition, they received information about the size of the resident population which was both *born abroad and lives on an income below the poverty line* (3.2 Millions). We control for order of presentation effects by randomising the placement in which the information about poverty and about immigration was presented. Information about the overlap was presented at the centre of the screen.

4   Hypotheses

Our interventions operate via two channels: First, by mentioning poverty and/or immigration, we (temporarily) increase the salience/awareness of those issues and this might suffice to affect the way people think about redistribution later on, irrespective of the actual information (in terms of numbers) that is delivered via our intervention. Put simply, if poverty and immigration matter for people's demand for redistribution, then by making those issues salient right before asking our questions of interest, we emphasize the effect that these issues have on people's support for

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[12]Notice that a strength of our information conditions is that we are able to provide virtually identical numbers for the Poverty and for the Immigration conditions, increasing their comparability and allowing us to rule out that any effects observed might be due to differences in the sizes of the poor and immigrant populations.

redistribution (compared to the neutral condition). Second, our interventions also deliver factual information about poverty and immigration, respectively. The effect of this information on people's demand for redistribution will depend on their prior beliefs. In theory, increasing awareness and providing factual information could have opposite effects.[13] Recent studies, such as Alesina et al. (2018a) and Naumann and Stoetzer (2018), have demonstrated that awareness and not information (resp. correcting biased beliefs) matters in driving individuals' responses. In formulating our hypotheses about how our treatments will affect support for redistributive policies, we take stock of these previous results and assume that awareness/salience outweighs the information effect.

4.1 Poverty condition

Our first pair of hypotheses corresponds to our first condition, where we inform subjects about the number of people living below the poverty line. Depending on which factors enter people's utility, there are different effects that information about poverty is expected to have on people's utility:

Hypothesis 1 (The effect of poverty)**.**

a. *Support for redistribution is higher in the Poverty condition compared to the Neutral condition.*

b. *Support for redistribution is the same in the Poverty condition compared to the Neutral condition for people with low incomes, while it is lower in the Poverty condition compared to the Neutral condition for people with high incomes.*

According to Hypothesis 1a, in addition to their own income, people also care about poverty (e.g. if they have a Rawlsian social welfare function). Reminding them or making them aware of poverty makes them desire more redistribution to ameliorate poverty, even if this implies that they have to sacrifice a little bit of their

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[13]For instance, somebody who is concerned about immigration and thus wants less redistribution might learn in our treatment that the extent of immigration is far less than what she believed. Then the treatment would have two opposing effects on her support for redistribution. On the one hand, our treatment increases the salience of the immigration issue in her considerations, which would lower her demand for redistribution. On the other hand, the information part of our treatment would correct her biased beliefs about the extent of immigration and thus lower her concerns and make her more in favour of redistribution. The observed reaction and resulting support for redistribution would then be a combination of those two effects and its direction would depend on the relative strenght of those two effects.

own income in case they are net contributors to the welfare system. Hypothesis 1b corresponds to the case where people care mainly about their own income. In that case, reminding poor people about poverty wouldn't have an effect: Irrespective of the overall extent of poverty, they are in favour of redistribution, because they are net recipients of the welfare system. Note that our treatment doesn't inform them about the extent of inequality, which would mean they would also get information about how much they could gain from redistribution from rich to poor. Just informing them about poverty without telling them 'how rich the rich are' shouldn't change the poor's support for redistribution much if they only care about their own income. Conversely, rich people should desire less redistribution as the poverty condition makes them aware of the fact that they are net contributors to the welfare system.

4.2   Immigration condition

Immigration is generally accompanied by an increase in diversity and ethnic heterogeneity, which tends to reduce solidarity (Alesina and Glaeser (2004), Luttmer (2001)). We might thus expect that immigration lowers support for redistribution among natives. On the other hand, it makes poor people or people working in high-immigration sectors aware of the fact that they might be in greater need of the welfare state: The influx of cheap labour exerts downward pressure on their wages and threatens their jobs, and should thus increase their support for redistribution. In contrast, rich people realize that they will be net contributors to the welfare state due to (low-skilled) immigration and should want less redistribution as a result. The above reasoning leads us to the formation of the following two opposing hypotheses:

Hypothesis 2 (The effect of immigration)**.**

a. *Conflict Hypothesis: Support for redistribution is lower in the Immigration condition compared to the Neutral condition.*

b. *Protection/Economic Voting Hypothesis: Support for redistribution is higher in the Immigration condition compared to the Neutral condition for poor people or people in high-immigration sectors, and lower for rich people.*

4.3   Both and Overlap conditions

We do not formulate any specific hypotheses concerning the effect of the Both condition and the Overlap condition. The effect of these two treatments, in which we present information on both poverty and immigration, will be a combination of the

individual effects, and will also show us which of these two individual effects dominates when the two bits of information are presented jointly. Given that the Both condition does not provide information about the intersection between poverty and immigration, the effects of conditions Both and Overlap are expected to differ if beliefs about the overlap are different in the two treatment groups.

5 Experimental evidence on poverty, immigration and demand for redistribution

As mentioned in the previous section, our interventions operate via two channels: Increasing awareness/salience and providing factual information. In formulating our hypotheses we assume that awareness/salience outweighs the information effect. Before proceeding with our main results, it is necessary to check whether we successfully managed to expose our respondents to the information conveyed by our conditions (i.e. that respondents paid attention to the information provided), or whether they were simply "noise" that was ignored. That the information was indeed acquired by the respondents is the precondition for it to have had the expected effects. The next section presents evidence that the information conditions were successful by showing that post-experimental subjective beliefs about poverty and immigration in Germany are systematically shifted towards the correct values among the treated individuals compared to the untreated.

5.1 Manipulation success

Figures 1a and 1b compare the relative distributions of beliefs about poverty and immigration in the Poverty and Immigration conditions (respectively) with those of beliefs elicited in the Neutral condition. Figures 1c and 1d perform a similar exercise by applying a Gaussian kernel density smoothing function to the belief data. From Figures 1a and 1c, we immediately see that the in the Neutral condition, individuals systematically underestimate the number of individuals living below the poverty line. A majority in the control group believes that at most five million people live below the poverty line in Germany. The distribution of beliefs of those who received the poverty information treatment is instead shifted more to the right with a peak at roughly 14 million. This matches directly with our treatment information that 13.7 million people in Germany live below the poverty line.

(a) Relative frequency of responses to question about how many people live below the poverty line in Germany (in Million)

(b) Relative frequency of responses to question about how many people living in Germany were born abroad (in Million)

(c) Gaussian kernel density of beliefs about the number of people living below the poverty line in Germany (in Million)

(d) Gaussian kernel density of beliefs about how many people living in Germany were born abroad (in Million)

Figure 1: Beliefs about the number of poor and immigrants in the Poverty and Immigration conditions compared to those in the Neutral condition

For the Immigration condition, the difference in the distribution of beliefs between treatment and control group is even starker. From Figures 1b and 1d, in the Immigration condition, an absolute majority of subjects believes that currently around 13 million immigrants (foreign-borns) are living in Germany. This directly matches the number provided in our information treatment (13.2 million). It is also worth noting that respondents in the control group do not systematically over- or underestimate the number of immigrants: the relative frequency of beliefs in the control group is higher both above and below 13 million than those in the Immigration condition. We can thus conjecture that, contrary to the Poverty condition, our immigration information treatment did not correct any systematic biases. Rather,

it served the purpose of giving respondents a more precise idea of the exact number of immigrants, and thereby correcting beliefs, upwards for some and downwards for others, resulting in the observed spike at the correct value.

Beliefs in the Both and in the Overlap conditions yield similar pictures. Respondents in these conditions updated their beliefs about both poverty and immigration. Figure 2 plots beliefs about the number of poor and the number of immigrants reported by the respondents in the Both condition in comparison with those reported in the Neutral condition. Figures 2a and 2c report respectively the relative frequencies and the kernel denisties of beliefs about poverty. Figures 2b and 2d report analogously on beliefs about immigration.

(a) Relative frequency of responses to question about how many people live below the poverty line in Germany (in Million)

(b) Relative frequency of responses to question about how many people living in Germany were born abroad (in Million)

(c) Gaussian kernel density of beliefs about the number of people living below the poverty line in Germany (in Million)

(d) Gaussian kernel density of beliefs about how many people living in Germany were born abroad (in Million)
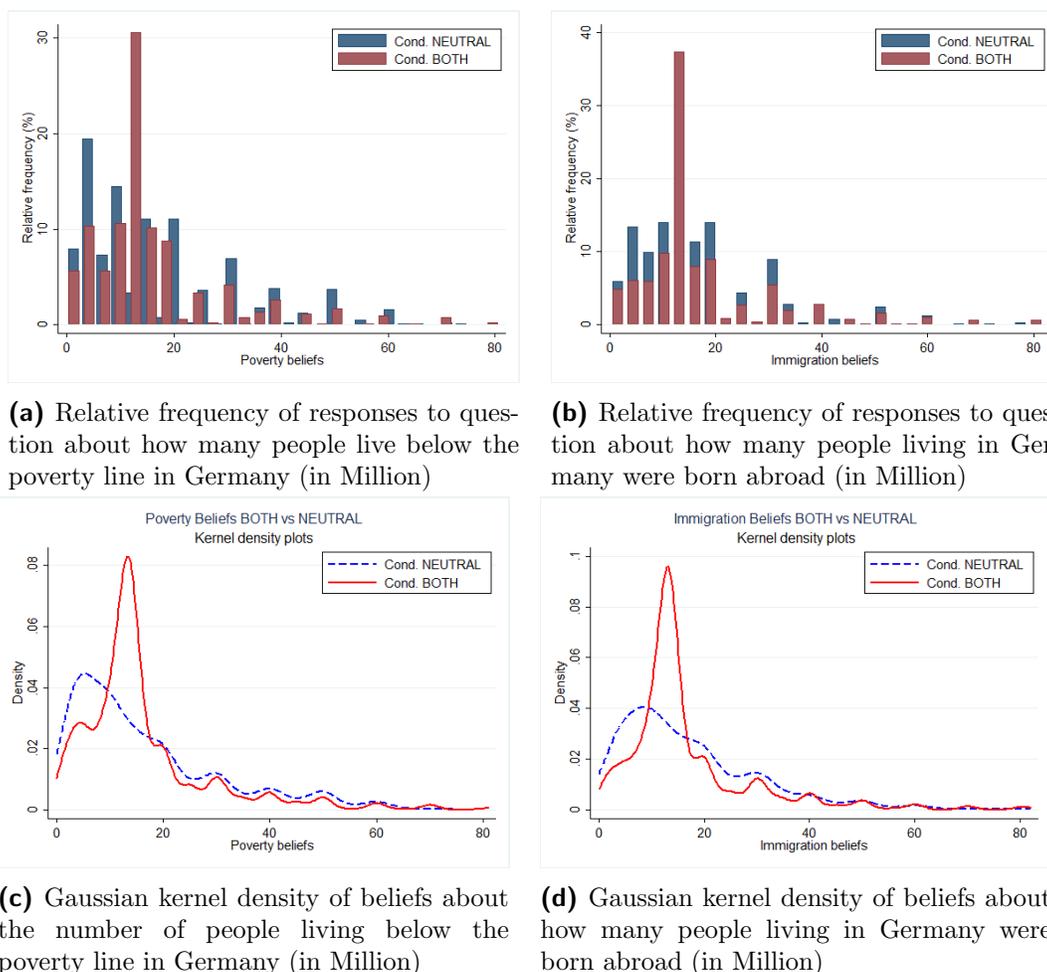
Figure 2: Beliefs about the number of poor and immigrants in the Both condition compared to those in the Neutral condition

14

As can be observed in Figure 2, a majority of the respondents updated their beliefs about both the number of poor and the number of immigrants in the expected direction.

Analogous conclusions can be drawn by observing Figure 3, which focuses on the beliefs about poverty and immigration reported in the Overlap condition.

(a) Relative frequency of responses to question about how many people live below the poverty line in Germany (in Million)

(b) Relative frequency of responses to question about how many people living in Germany were born abroad (in Million)

(c) Gaussian kernel density of beliefs about the number of people living below the poverty line in Germany (in Million)

(d) Gaussian kernel density of beliefs about how many people living in Germany were born abroad (in Million)

Figure 3: Beliefs about the number of poor and immigrants in the Overlap condition compared to those in the Neutral condition

As a placebo test, we can check whether the poverty treatment had an effect on beliefs about immigration and vice versa. As expected, the kernel densities of beliefs that were not targeted by our information treatments and the beliefs reported by the control group almost perfectly overlap in Figure 4.
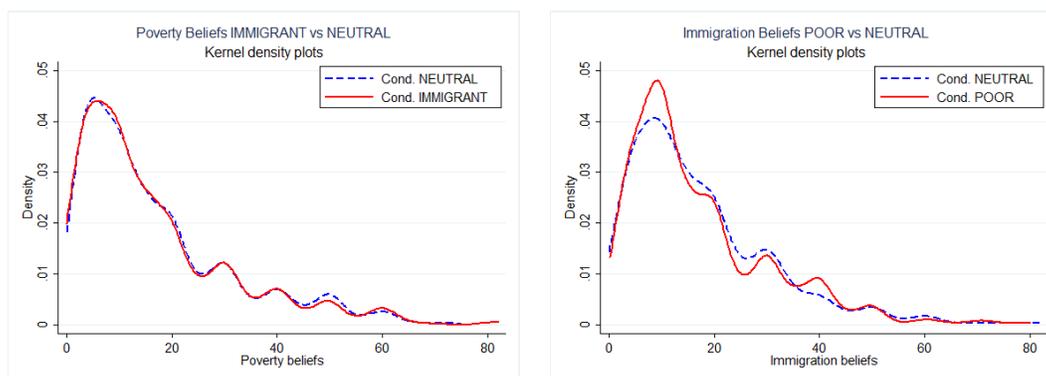
15

(a) Gaussian kernel density of beliefs about the number of people living below the poverty line (in Million) in the Immigration condition.

(b) Gaussian kernel density of beliefs about the number of immigrant people living in Germany (in Million) in the Poverty condition.

Figure 4: Placebo comparison of untargeted beliefs in the Poverty and Immigration conditions with the untreated beliefs in the Neutral condition.

The graphical results so far reported are confirmed by Probit regressions of a binary variable indicating whether a respondent's belief lies within one, three or five millions (plus or minus) of the correct number. The results are reported in Table A2 in Appendix A. We can see clearly that beliefs about poverty are significantly more likely to be correct in all conditions except for the Immigration condition (which is the only one not allowing to update these beliefs), and vice versa for beliefs about immigration, which are affected (and corrected) in all conditions except for the Poverty condition. Together with the graphical results, we thus have very strong evidence that our information conditions were paid attention to and had a substantial effect on the respondents' beliefs.

5.2 Treatment effects on demand for redistribution

We will now present results from the simple OLS regression of our measures of demand for redistributive public revenue collection and redistributive public spending on the information conditions and a vector of individual and regional covariates. We will first review our main findings over the aggregate sample, and briefly discuss how they relate to the first part of the hypotheses formulated above (Hypotheses 1a and 2a). Then we will proceed to investigating income-heterogeneous treatment effects and how they relate to the second part of our hypotheses (Hypotheses 1b and 2b). In Appendix B.1 we investigate whether further heterogeneities can be

uncovered over relevant population segments, namely educational attainment and political orientation.

We estimate the following OLS regression model:

$$y_i = \alpha_i + \beta c_i + \gamma_1' X_i + \gamma_2' W_i + \gamma_3 Land_i + \varepsilon_i \quad , \tag{1}$$

where y_i denotes the (standardised) outcome variable of interest, c a categorical variable uniquely identifying each of our conditions with the Neutral condition as a baseline, X_i and W_i are vectors respectively containing respondent i's sociodemographic and the background characteristics of i's region ("Landkreis") of residence. ε_i a random error component. Individual socio-demographic background variables include: the respondent's household income, whether the respondent holds a college degree, the respondent's placement in the political spectrum with 1 indicating extreme left and 10 indicating extreme right, an indicator taking value 1 if the respondent works or has ever worked in a sector employing a high number of unskilled immigrant labour. Further, not included in the output but always controlled for are the respondent's age (6 classes: 18-25, 26-35, 36-45, 46-55, 56-65, 66+), gender, marital status (single/in couple), voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany. Regional background variables include region GDP and the share of resident immigrants. The variable *Land* captures the fixed effects of respondent i's German Bundesland of residence. Our coefficient of interest is β, capturing the fixed effects of having received each of our information conditions. Standard errors are clustered at the regional (Landkreis) level.

5.2.1 Progressivity of the desired tax schedule

Our first focus of interest is on the effect of poverty and of immigration on demand for redistribution as measured by the degree of progressivity of the tax schedule with which the respondents want to collect a pre-specified government budget. As detailed above, we elicit desired average tax rates on key quantiles of the income distribution to construct a measure of respondents' desired tax progressivity. Table 1 displays the result of an OLS regression of desired tax progressivity on condition indicators (the Neutral condition serving as a baseline) and on individual and regional controls. Because the dependent variable has been standardised into z-scores, the results can be interpreted in terms of the unit standard deviation of the control group.

17

VARIABLES	(1)	(2)	(3)	(4)
	Desired tax progressivity			
Neutral condition: baseline				
Poverty condition	-0.0211	-0.0123	-0.0115	-0.0139
	(0.0502)	(0.0488)	(0.0488)	(0.0489)
Immigration condition	-0.0570	-0.0564	-0.0573	-0.0619
	(0.0500)	(0.0487)	(0.0487)	(0.0485)
Both condition	-0.0207	-0.0151	-0.0144	-0.0196
	(0.0450)	(0.0450)	(0.0448)	(0.0451)
Overlap condition	-0.102**	-0.0929*	-0.0941*	-0.0967**
	(0.0505)	(0.0486)	(0.0485)	(0.0488)
Household income	1.13e-05	-6.20e-06	-6.62e-07	-8.08e-07
	(1.62e-05)	(1.71e-05)	(1.71e-05)	(1.72e-05)
College degree	0.0125	0.0449	0.0485	0.0537
	(0.0379)	(0.0389)	(0.0389)	(0.0393)
Political placement	-0.0558***	-0.0546***	-0.0547***	-0.0543***
	(0.0110)	(0.0109)	(0.0108)	(0.0108)
High immigration sector	-0.0486	-0.0705**	-0.0694**	-0.0740**
	(0.0317)	(0.0334)	(0.0333)	(0.0333)
Landkreis GDP			-2.21e-06**	-1.40e-06
			(9.54e-07)	(1.04e-06)
Landkreis immigrant share			-0.00779	0.0260
			(0.380)	(0.374)
Constant	0.290***	-0.0539	0.0351	0.0109
	(0.0749)	(0.146)	(0.149)	(0.164)
Individual controls 1	✓	✓	✓	✓
Individual controls 2		✓	✓	✓
Regional controls			✓	✓
Land fixed eff.				✓
Observations	3,952	3,952	3,952	3,952
R-squared	0.011	0.030	0.031	0.035

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 1: OLS regression of desired tax progressivity. The variable Political placement takes value 1 for extreme left wing and 10 for extreme right wing. Omitted individual controls include: age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany.

18

From Table 1, we can see that information about poverty does not appear to have any detectable effect on respondents desired tax progressivity. All coefficients throughout columns 1 to 4 are small in magnitude and not significant at conventional levels. This result is robust to a variety of specifications and robustness tests, and offers evidence against Hypothesis 1a:

Result 1. *Information about poverty has no detectable impact on average demand for redistributive taxation.*

Similarly, we detect no effect of information about immigration on the average respondent's desired tax progressivity at aggregate level. This finding offers evidence to discredit Hypothesis 2a as well:

Result 2. *Information about immigration does not affect respondents' average demand for redistributive taxation.*

The Both condition, in which information about poverty and about immigration is presented simultaneously, also appears to induce no change in respondents' desired tax progressivity. This observation is not surprising in the light of the absence of an effect of the two pieces of information when presented separately. More surprising is that we detect a systematic negative effect of the Overlap condition, in which we present both pieces of information simultaneously together with information about the size of the overlap between the immigrants and the poor. The estimated coefficient is large (roughly 10% of the baseline group's standard deviation) and significant at the 5% and 10% levels in columns 1 and 4, and 2 and 3 respectively. Interpreting this finding is hard in light of the absence of an impact of any of the other information conditions. It is plausible on one hand that the additional information about the overlap might help respondents resolve the confusion generated by the simultaneous but de-contextualised presentation of the two pieces of information as in the Both condition. Conversely, by allowing them to place the two pieces of information in relation to each other by informing them of their size of their overlap, respondents might be able to better use the information they receive and hence react accordingly. On the other hand, it is plausible that while respondents do not systematically react to information about poverty and about immigration, they might negatively react to information about the size of the group of immigrant poor. It is not possible to discriminate between these two arguments or to further clarify on this result at this point, and we'll postpone further discussion to a later stage following the presentation of the disaggregate analysis.

Turning to investigating how Results 1 and 2 vary across the population, we

find considerable heterogeneity with respect to income.[14] To ease the interpretation, we will present our results as split sample estimations of model (1) over income segments (three levels: the top quartile, from the poverty line up to the top quartile, and below the poverty line). An alternative and equivalent way to perform such analysis is that of estimating an alternative model over the whole sample interacting our information condition indicators with income segment indicators. The results from such alternative analyses confirm the findings reported here and are presented in Table B1 in Appendix B.

Table 2 displays the result of OLS regressions of our measure of desired tax progressivity for sample splits along the income dimension as detailed above.

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[14]We explore further heterogeneities along the education and political orientation dimensions in Tables B9, B10 and B11 in Appendix B.1. Such analyses do not add any further insights to those reported here, and are hence relegated to the appendix.

	(1)	(2)	(3)
		Desired tax progressivity	
VARIABLES	Low income	Middle income	High income
Neutral condition: baseline			
Poverty condition	0.0906	-0.0196	-0.0864
	(0.128)	(0.0620)	(0.102)
Immigration condition	0.224*	-0.137**	-0.0871
	(0.121)	(0.0638)	(0.0949)
Both condition	0.0336	-0.0531	0.0464
	(0.128)	(0.0583)	(0.106)
Overlap condition	-0.0988	-0.0726	-0.155
	(0.137)	(0.0637)	(0.121)
Constant	0.0381	-0.108	0.290
	(0.489)	(0.228)	(0.359)
Individual controls	✓	✓	✓
Regional controls	✓	✓	✓
Land fixed eff.	✓	✓	✓
Observations	787	2,456	709
R-squared	0.066	0.039	0.084

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 2: OLS regression of desired tax progressivity. Individual controls include: college education, political placement, employment in high-immigration sectors, age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany. Regional controls include GDP and the share of immigrant population.

We observe that information about poverty still fails to exert any detectable effect on each of our sample splits: the estimated coefficients remain small and insignificant. On the other hand, we uncover non-linear effects of information about immigration. First of all, middle income earners' demand a less progressive tax schedule upon receiving information about immigration compared to the baseline group: the coefficient is large (roughly 14% of the baseline group's standard deviation) and significant at the 10% level.[15] Conversely, low income individuals increase their desired tax progressivity. The coefficient is large (roughly 22% of the baseline

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[15]Notice that the significance of these result might suffer from the rather drastic reduction of the estimation sample due to the income split. The interacted model in Table B1 in Appendix B

group's standard deviation) and significant at the 5% level. High income individuals on the other hand do not exhibit any systematic reaction to information about immigration. This analysis reveals that low and middle income individuals are affected in opposite directions. In the light of these results, it is hence not surprising that we cannot detect any effect of immigration on desired tax progressivity at the aggregate level, as the two effects on middle and low income individuals cancel each other out.

Result 3. *Low income (Middle income) respondents increase (decrease) their demand for redistributive taxation, while high income respondents remain unaffected in response to the Immigration information condition.*

Poor individuals react to immigration by demanding higher taxes on the rich. On the other hand, middle class respondents react by decreasing their demand for redistributive taxation after receiving information on immigration. Both these findings can be regarded as evidence in support of Hypothesis 2b. However, rich respondents do not exhibit behaviour consistent with economic voting, as their support for redistributive taxation is on average not affected by our Immigration condition. Hypothesis 2b remains thus only partially supported by our data.

Looking at income-specific effects in the Both and Overlap conditions, we confirm what we observe in the corresponding analysis over the whole sample, with an important difference. Both the Overlap and the Both condition do not have a significant effect on any of our three income quantiles. This is a somewhat surprising result in light of the strong reaction to information about immigration of the low and middle income respondents, and points towards a potential interaction of the two pieces of information (i.e. immigration might become less salient due to the simultaneous presentation of information about poverty), which appear to cancel each other out.

The split sample analysis seems not to confirm the negative impact of the Overlap condition observed in the aggregate analysis. A more careful look however reveals that though not significant at conventional levels, the point estimate for the Overlap condition for the rich is large and similar in magnitude to that observed in Table 1. Looking at Table B1 in Appendix B we see that the interacted model estimates a negative effect significant at the 10% level in the Overlap condition for the rich subsample consistent with that observed in the aggregate analysis. It therefore seems that the result reported in Table 1 is driven by the rich respondents. Due to the lack of any reaction on their behalf to any other condition, we speculate that such finding is likely due to chance rather than any systematic reaction to the information conveyed by the Overlap condition. Worth stressing out is moreover that the findings

confirms this suspicion.

for the low and middle income subsamples reported in Table 1 and discussed so far are confirmed by the interacted analysis.

5.2.2 Allocation of the public budget

Next we analyse how our information conditions affect respondents' desired allocation of the public budget: given the size of the budget, how do they want to spend the money? We asked our subjects about their preferred spending split between defence, infrastructure, education, social insurance, unemployment insurance, health care and housing support. Aggregate and split sample analyses don't reveal any systematic and robust effect of our conditions on desired spending allocations (see Table B3 in Appendix B), with one notable exception. As shown in Table 3 respondents confronted with information about poverty increase their preferred level of public expenditure on education relative to their counterparts in the Neutral condition. Such increase amounts to roughly 12% of the baseline sample's standard deviation.

Result 4. *Information about poverty increases average desired public expenditure on education at the aggregate level.*

VARIABLES	(1)	(2)	(3)	(4)
	Preferred share of budget spent on education			
Neutral condition: baseline				
Poverty condition	0.115**	0.112**	0.113**	0.120**
	(0.0483)	(0.0476)	(0.0475)	(0.0472)
Immigration condition	-0.00372	-0.00123	-0.00207	0.00297
	(0.0518)	(0.0525)	(0.0524)	(0.0518)
Both condition	0.0118	0.0152	0.0160	0.0171
	(0.0517)	(0.0521)	(0.0519)	(0.0505)
Overlap condition	0.0372	0.0346	0.0335	0.0348
	(0.0490)	(0.0485)	(0.0481)	(0.0480)
Household income	3.91e-05**	4.60e-05**	5.11e-05***	5.59e-05***
	(1.78e-05)	(1.81e-05)	(1.76e-05)	(1.72e-05)
College degree	0.188***	0.170***	0.174***	0.172***
	(0.0360)	(0.0359)	(0.0360)	(0.0351)
Political placement	-0.0415***	-0.0403***	-0.0403***	-0.0405***
	(0.00955)	(0.00973)	(0.00965)	(0.00977)
High immigration sector	-0.0929***	-0.0922***	-0.0912***	-0.0921***
	(0.0334)	(0.0348)	(0.0346)	(0.0351)
Landkreis GDP			-2.04e-06*	-3.50e-07
			(1.06e-06)	(1.15e-06)
Landkreis immigrant share			0.0119	0.00155
			(0.438)	(0.387)
Constant	0.141**	0.281**	0.361**	0.257*
	(0.0662)	(0.138)	(0.142)	(0.151)
Individual controls 1	✓	✓	✓	✓
Individual controls 2		✓	✓	✓
Regional controls			✓	✓
Land fixed eff.				✓
Observations	3,955	3,955	3,955	3,955
R-squared	0.021	0.038	0.040	0.046

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 3: OLS regression of standardised preferred share of public budget allocated to education. The variable Political placement takes value 1 for extreme left wing and 10 for extreme right wing. Omitted individual controls include: age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany.

	(1)	(2)	(3)
	Preferred education spending		
VARIABLES	Low income	Middle income	High income
Neutral condition: baseline			
Poverty condition	-0.150	0.245***	0.0128
	(0.116)	(0.0709)	(0.108)
Immigration condition	-0.315***	0.134*	-0.0749
	(0.111)	(0.0738)	(0.102)
Both condition	-0.393***	0.148**	-0.0373
	(0.113)	(0.0724)	(0.106)
Overlap condition	-0.208*	0.168**	-0.101
	(0.119)	(0.0649)	(0.101)
Constant	0.844**	-0.0850	1.363***
	(0.388)	(0.199)	(0.381)
Individual controls	✓	✓	✓
Regional controls	✓	✓	✓
Land fixed eff.	✓	✓	✓
Observations	787	2,458	710
R-squared	0.120	0.045	0.113

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4: OLS regression of standardised preferred share of public budget allocated to education. Individual controls include: college education, political placement, employment in high-immigration sectors, age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany.

Again, splitting the analysis across income quantiles is insightful. As Table 4 demonstrates, the effect of the Poverty condition on education expenditure is entirely driven by the response of middle income individuals. Neither the rich nor the poor exhibit significant reactions to the Poverty condition. Concerning all other conditions, instead we do observe significant and strong effects on both the low and middle income respondents. Importantly, these two effects again cancel each other out in the aggregate analysis. Middle income earners would like to increase spending on education in all conditions, while the low income group exhibit a strong negative response except, as said, in the Poverty condition. Noticeably, such negative response on behalf of the low income respondents is triggered in all conditions in

which they are presented with information about immigration. The combined effect of these countervailing forces hence produces the results observed in Table 3, in which only the positive effect of poverty on the middle class survives at the aggregate level. Similar to what we observed for their tax preferences, the rich do not react to any of our conditions. Table B1 again confirms all of these findings in an interacted regression.

Result 5. *Middle income respondents increase their support for education spending in all conditions. This increase is offset by a decline in preferred spending on education for low income earners in all conditions except the Poverty condition.*

6 Conclusions

We contribute new evidence on the yet ambiguous nexus between immigration, political support for redistribution and the welfare state. We collected this new evidence by placing the immigration-redistribution nexus in relation to a second dimension of the public debate which, as has been argued, cannot be ignored: the poverty-redistribution nexus. We adopted an experimental approach and randomised whether the respondents to our survey received information about poverty, about immigration, or no information at all.

Our results indicate that the immigration topic is salient and affects people's demand for progressive taxation, but the effects go in opposite directions for different income quantiles. Poor subjects react by demanding more tax progressivity, while middle income earners want less progressive taxation. High income individuals are not affected.

Poverty, on the other hand, does not affect desired tax progressivity, but appears to have a positive effect on demand for non-fiscal redistributive instruments, namely public expenditure on education. More careful and in-depth analyses reveal that this aggregate effect is driven by middle income respondents. In fact, it turns out that for all other information conditions the lack of an aggregate effect on demand for public education is the result of opposite and countervailing effects observed for low and middle income respondents. While middle income individuals increase their support for public schooling in all conditions relative to the Neutral baseline, the poor instead *reduce* their support relative to the baseline whenever they are presented with information about immigration (i.e. we observe no impact of the Poverty condition on the poor). Again we find that high income individuals are not affected.

The inclusion of an array of individual and regional background characteristics and further splits of the sample along the education and political spectrum dimen-

sions leave these results largely unchanged.

Summing up, is popular support for redistribution fostered by bringing poverty to the forefront of the political discourse? Should those political actors supporting redistribution make salient topics such as immigration their own in order to win back popular support at the polls? The answer to these questions is not a straightforward one. Our study highlights how the interaction between immigration and welfare state support is a complex phenomenon deserving further scholarly attention. Redistribution is a manifold system of policies which do not necessarily form a cohesive body of public interventions in the electorate's mind. Support for one class of interventions does not necessarily translate into support for another one, such that support for redistribution might be eroded on one dimension (e.g. fiscal instruments) and not on others (e.g. education). Crucial is hence to clearly understand which classes of public interventions are impacted by the current socio-political debate. More importantly, we show that different segments of the electorate react in different, often opposite ways. When striving to understand how current phenomena (such as immigration) impact the social and political spheres, it is hence vital to understand to which degree and in which direction each relevant segment of the electorate is impacted, in order to predict what the resulting net effect is likely to be on aggregate.

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Appendix

A   Tables

	Neutral	Poor	Delta	Immigrant	Delta	Both	Delta	Overlap	Delta
Household income	1,914.786	1,942.515	27.729	1,891.536	-23.249	2,007.349	92.564*	1,973.337	58.551
	(989.198)	(977.425)	(0.574)	(957.903)	(0.632)	(969.141)	(0.058)	(1,052.283)	(0.251)
Job security	0.593	0.598	0.005	0.556	-0.037	0.586	-0.007	0.591	-0.002
	(0.492)	(0.491)	(0.850)	(0.497)	(0.136)	(0.493)	(0.764)	(0.492)	(0.941)
Age	44.319	43.865	-0.454	44.776	0.457	44.238	-0.081	43.732	-0.586
	(14.024)	(14.295)	(0.523)	(14.041)	(0.514)	(14.070)	(0.908)	(14.005)	(0.402)
Female	0.495	0.490	-0.005	0.475	-0.020	0.518	0.023	0.471	-0.024
	(0.500)	(0.500)	(0.854)	(0.500)	(0.422)	(0.500)	(0.359)	(0.499)	(0.340)
Single	0.387	0.381	-0.007	0.344	-0.043*	0.360	-0.027	0.380	-0.007
	(0.487)	(0.486)	(0.790)	(0.475)	(0.071)	(0.480)	(0.261)	(0.486)	(0.770)
Rightwing	5.060	5.229	0.170**	5.006	-0.053	5.046	-0.014	5.128	0.068
	(1.742)	(1.695)	(0.050)	(1.709)	(0.536)	(1.762)	(0.874)	(1.784)	(0.438)
Voted	1.104	0.983	-0.121	0.969	-0.135	0.842	-0.262	0.983	-0.122
	(0.306)	(3.591)	(0.341)	(3.551)	(0.281)	(4.975)	(0.136)	(3.553)	(0.333)
Social Media	0.450	0.464	0.014	0.459	0.009	0.451	0.002	0.451	0.002
	(0.498)	(0.499)	(0.578)	(0.499)	(0.716)	(0.498)	(0.948)	(0.498)	(0.950)
Born in Germany	0.974	0.955	-0.019**	0.965	-0.009	0.961	-0.013	0.964	-0.010
	(0.159)	(0.207)	(0.044)	(0.184)	(0.298)	(0.195)	(0.130)	(0.187)	(0.240)
High immigr. sector	0.660	0.683	0.023	0.691	0.031	0.652	-0.008	0.649	-0.011
	(0.474)	(0.465)	(0.325)	(0.462)	(0.182)	(0.477)	(0.742)	(0.478)	(0.634)
GDP at kreis level	39,721.621	40,297.973	576.349	39,227.848	-493.776	40,400.563	678.941	39,409.145	-312.476
	(16,750.947)	(17,562.801)	(0.505)	(17,574.648)	(0.567)	(17,622.289)	(0.430)	(16,585.020)	(0.709)
German State	197.172	195.761	-1.411	192.375	-4.796	188.436	-8.736	193.130	-4.042
	(119.256)	(115.631)	(0.811)	(115.959)	(0.414)	(115.286)	(0.135)	(117.792)	(0.495)
Has a college degree	0.285	0.307	0.021	0.306	0.021	0.317	0.032	0.299	0.013
	(0.452)	(0.461)	(0.356)	(0.461)	(0.359)	(0.466)	(0.167)	(0.458)	(0.555)
Observations	806	783	1,589	800	1,606	811	1,617	800	1,606

Table A1: Balance table. Individual and geographical average characteristics in each of the conditions are compared pairwise with the average in the Neutral condition. "Delta" is, for each variable, the difference between a condition average and the average in the Neutral condition.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$

	(1)	(2)	(3)	(4)	(5)	(6)
	Immigration bias			Poverty bias		
	<= 1ml	<= 3ml	<= 5ml	<= 1ml	<= 3ml	<= 5ml
Neutral condition: baseline						
Poverty condition	0.0913	-0.0990	0.0684	1.408***	0.588***	0.469***
	(0.186)	(0.0738)	(0.0627)	(0.145)	(0.0708)	(0.0677)
Immigration condition	2.291***	1.268***	1.001***	0.153	-0.00506	0.0164
	(0.143)	(0.0671)	(0.0602)	(0.169)	(0.0786)	(0.0707)
Both condition	1.848***	0.859***	0.637***	1.759***	0.830***	0.617***
	(0.138)	(0.0696)	(0.0670)	(0.136)	(0.0680)	(0.0620)
Overlap condition	1.757***	0.662***	0.456***	1.752***	0.754***	0.481***
	(0.125)	(0.0671)	(0.0630)	(0.137)	(0.0659)	(0.0630)
Constant	-2.575***	-1.339***	-0.811***	-2.120***	-1.281***	-0.871***
	(0.255)	(0.207)	(0.191)	(0.282)	(0.187)	(0.181)
Individual controls	✓	✓	✓	✓	✓	✓
Regional controls	✓	✓	✓	✓	✓	✓
Land fixed eff.	✓	✓	✓	✓	✓	✓
Observations	3,955	3,955	3,955	3,955	3,955	3,955

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A2: Probit regression of of an indicator taking value 1 if the respondent's belief about the extent of immigration and about the extent of poverty lies within 1 million (columns 1 and 4), 3 million (columns 2 and 5) and 5 million (columns 3 and 6) individuals from the correct value. Individual controls include: age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany. Regional controls include GDP and the share of immigrant population.

32

B   Robustness and further analyses

Combination of estimated coefficients: $\beta_{1|c} + \delta_{3|c,x}$	(1) Tax progressivity	(2) Public exp. on educ.
Condition × Low income		
Poverty condition	0.085	-0.158
	(0.129)	(0.117)
Immigration condition	0.198*	-0.310***
	(0.119)	(0.111)
Both condition	0.043	-0.344***
	(0.127)	(0.114)
Overlap condition	-0.102	-0.231*
	(0.136)	(0.123)
Condition × Middle income		
Poverty condition	-0.024	0.241***
	(0.061)	(0.070)
Immigration condition	-0.136**	0.135*
	(0.061)	(0.072)
Both condition	-0.055	0.143**
	(0.058)	(0.070)
Overlap condition	-0.068	0.166**
	(0.062)	(0.065)
Condition × High income		
Poverty condition	-0.118	0.028
	(0.099)	(0.104)
Immigration condition	-0.132	-0.062
	(0.091)	(0.103)
Both condition	0.014	-0.019
	(0.106)	(0.106)
Overlap condition	-0.203*	0.084
	(0.120)	(0.098)
Observations	3,952	3,955
R-squared	0.0329	0.048

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table B1: Combination of interaction coefficient estimates from an OLS regression of our standardised progressivity measure of the respondents' preferred tax schedule (column 1) and of preferred share of public budget allocated to education (column 2), where the condition indicators c = {Neutral, Poverty, Immigration, Both, Overlap} were interacted with income class indicators x = {below the poverty line, middle income and high income}. We estimate $y_i = \alpha + \beta_1 c + \beta_2 x + \beta_3 (c \times x) + \gamma'_1 X_i + \gamma'_2 W_i + \gamma_3 Land_i + \varepsilon_i$ (see equation 1). The combined coefficient $\beta_{1|c} + \delta_{3|c,x}$ yields the effect of condition c on individuals in income group x and are reported in the table. Individual controls include: household income, college education, political preferences, employment in high-immigration sectors, age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany. Regional controls include GDP and the share of immigrant population.

| | (1) | (2) |
Combination of estimated coefficients: $\beta_c + \gamma_x$	Tax rate on top 1%	Public exp. on educ.
Condition $\times$ No College		
Poverty condition	-0.0475	0.0836
	(0.0589)	(0.0606)
Immigration condition	-0.132**	-0.00238
	(0.0614)	(0.0655)
Both condition	-0.0840	0.00257
	(0.0602)	(0.0663)
Overlap condition	-0.126**	0.0281
	(0.0602)	(0.0604)
Condition $\times$ College		
Poverty condition	-0.0295	0.2037**
	(0.088)	(0.098)
Immigration condition	0.0182	0.0152
	(0.081)	(0.079)
Both condition	0.0569	0.0463
	(0.084)	(0.087)
Overlap condition	-0.0259	0.0602
	(0.093)	(0.080)
Observations	3,952	3,955
R-squared	0.029	0.043

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table B2: Combination of interaction coefficient estimates from an OLS regression of standardised preferred tax rates on the top 1% income earners (column 1) and of preferred share of public budget allocated to education (column 2), where the condition indicators c were interacted with an indicator of college education x: $\beta_c + \delta_x$. The estimated model is of the form $y_{ir} = \alpha + \beta c + \delta(c \times x) + \gamma_1' X_i + \gamma_2' W_i + \gamma_3 Land_i + \varepsilon_i$ (see equation 1). Individual controls include: household income, college education, political preferences, employment in high-immigration sectors, age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany. Regional controls include GDP and the share of immigrant population.

VARIABLES	(1) Public infrastructure	(2) Domestic security	(3) Health insurance	(4) Social insurance	(5) Unempl. insurance	(6) Public housing
Baseline: Neutral condition						
Poverty condition	0.0207	-0.0260	-0.113**	-0.0121	0.0831	-0.0697
	(0.0526)	(0.0485)	(0.0497)	(0.0438)	(0.0544)	(0.0493)
Immigration condition	-0.00641	-0.0160	0.0173	-0.0117	0.00212	0.0202
	(0.0498)	(0.0495)	(0.0561)	(0.0498)	(0.0506)	(0.0513)
Both condition	0.0297	-0.0289	0.0528	-0.0474	0.0128	-0.00828
	(0.0485)	(0.0496)	(0.0461)	(0.0501)	(0.0437)	(0.0465)
Overlap condition	-0.0314	-0.0578	0.0700	-0.0447	0.0323	0.0251
	(0.0454)	(0.0482)	(0.0541)	(0.0541)	(0.0468)	(0.0586)
Individual controls	✓	✓	✓	✓	✓	✓
Regional controls	✓	✓	✓	✓	✓	✓
Land fixed eff.	✓	✓	✓	✓	✓	✓
Observations	3,955	3,955	3,955	3,955	3,955	3,955
R-squared	0.053	0.074	0.017	0.027	0.057	0.029

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table B3: OLS regression of standardised preferred share of public budget allocated to public infrastructure development, domestic security, education, social insurance, unemployment insurance, public housing. Omitted individual controls include: college education, political placement, employment in high-immigration sectors, age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany.

	(1)	(2)	(3)
		Domestic security	
VARIABLES	Low income	Middle income	High income
Baseline: Neutral condition			
Poverty condition	0.213	-0.0979	-0.0750
	(0.142)	(0.0659)	(0.0851)
Immigration condition	0.0794	-0.0936	0.0837
	(0.111)	(0.0657)	(0.101)
Both condition	0.0913	-0.0602	-0.0596
	(0.110)	(0.0675)	(0.0886)
Overlapondition	0.0619	-0.0865	-0.125
	(0.0991)	(0.0645)	(0.0996)
Constant	0.194	0.0851	-0.673**
	(0.482)	(0.230)	(0.300)
Individual controls	✓	✓	✓
Regional controls	✓	✓	✓
Land fixed eff.	✓	✓	✓
Observations	787	2,458	710
R-squared	0.075	0.078	0.249

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table B4: OLS regression of standardised preferred share of public budget allocated to domestic security. Omitted individual controls include: college education, political placement, employment in high-immigration sectors, age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany.

	(1)	(2)	(3)
		Public infrastructure development	
VARIABLES	Low income	Middle income	High income
Baseline: Neutral condition			
Poverty condition	-0.0100	0.0158	0.0675
	(0.119)	(0.0653)	(0.126)
Immigration condition	-0.158	0.0161	0.101
	(0.110)	(0.0655)	(0.142)
Both condition	0.0154	0.0553	-0.0443
	(0.133)	(0.0631)	(0.137)
Overlap condition	-0.0655	0.0127	-0.115
	(0.109)	(0.0653)	(0.0977)
Constant	0.149	0.0690	0.193
	(0.439)	(0.235)	(0.374)
Individual controls	✓	✓	✓
Regional controls	✓	✓	✓
Land fixed eff.	✓	✓	✓
Observations	787	2,458	710
R-squared	0.081	0.052	0.054

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table B5: OLS regression of standardised preferred share of public budget allocated to public infrastructure development. Omitted individual controls include: college education, political placement, employment in high-immigration sectors, age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany.

VARIABLES	(1) Low income	(2) Middle income	(3) High income
		Public health insurance	
Baseline: Neutral condition			
Poverty condition	-0.132	-0.128*	0.0283
	(0.105)	(0.0676)	(0.0971)
Immigration condition	0.124	0.0232	-0.0630
	(0.114)	(0.0742)	(0.111)
Both condition	0.131	-0.00274	0.143
	(0.107)	(0.0636)	(0.108)
Overlap condition	0.113	-0.0142	0.308**
	(0.115)	(0.0651)	(0.146)
Constant	0.291	0.194	0.217
	(0.435)	(0.221)	(0.316)
Individual controls	✓	✓	✓
Regional controls	✓	✓	✓
Land fixed eff.	✓	✓	✓
Observations	787	2,458	710
R-squared	0.060	0.017	0.120

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table B6: OLS regression of standardised preferred share of public budget allocated to public health insurance. Omitted individual controls include: college education, political placement, employment in high-immigration sectors, age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany.

	(1)	(2)	(3)
		Social insurance	
VARIABLES	Low income	Middle income	High income
Baseline: Neutral condition			
Poverty condition	0.0243	-0.0374	0.0399
	(0.106)	(0.0542)	(0.114)
Immigration condition	0.0517	-0.0495	0.0661
	(0.0910)	(0.0646)	(0.124)
Both condition	0.0695	-0.111*	0.0120
	(0.106)	(0.0616)	(0.110)
Overlap condition	0.0344	-0.0795	-0.0178
	(0.0989)	(0.0703)	(0.127)
Constant	-0.556	-0.00175	-0.392
	(0.342)	(0.184)	(0.306)
Individual controls	✓	✓	✓
Regional controls	✓	✓	✓
Land fixed eff.	✓	✓	✓
Observations	787	2,458	710
R-squared	0.074	0.034	0.077

Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table B7: OLS regression of standardised preferred share of public budget allocated to public social insurance. Omitted individual controls include: college education, political placement, employment in high-immigration sectors, age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany.

	(1)	(2)	(3)
		Unemployment insurance	
VARIABLES	Low income	Middle income	High income
Baseline: Neutral condition			
Poverty condition	0.207	0.0502	0.123
	(0.161)	(0.0567)	(0.0980)
Immigration condition	0.168	-0.0716	0.0829
	(0.141)	(0.0639)	(0.0825)
Both condition	0.205	-0.0424	0.108
	(0.131)	(0.0609)	(0.0883)
Overlap condition	0.0567	-0.0148	0.161*
	(0.144)	(0.0578)	(0.0952)
Constant	-0.215	0.00897	0.242
	(0.480)	(0.237)	(0.379)
Individual controls	✓	✓	✓
Regional controls	✓	✓	✓
Land fixed eff.	✓	✓	✓
Observations	787	2,458	710
R-squared	0.075	0.054	0.112

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table B8: OLS regression of standardised preferred share of public budget allocated to public unemployment insurance. Omitted individual controls include: college education, political placement, employment in high-immigration sectors, age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany.

B.1 Further heterogeneities

VARIABLES	(1)	(2)	(3)	(4)
	Desired tax progressivity		Public exp. on educ.	
	No college	College	No college	College
Neutral condition: baseline				
Poverty condition	-0.0246	0.00429	0.0774	0.203**
	(0.0582)	(0.0883)	(0.0608)	(0.0983)
Immigration condition	-0.0831	-0.0112	-0.00240	0.0274
	(0.0638)	(0.0721)	(0.0654)	(0.0794)
Both condition	-0.0591	0.0774	-0.00293	0.0346
	(0.0603)	(0.0758)	(0.0669)	(0.0886)
Overlap condition	-0.104*	-0.0938	0.0229	0.0612
	(0.0625)	(0.101)	(0.0609)	(0.0811)
Constant	-0.189	-0.189	0.410**	0.212
	(0.215)	(0.213)	(0.188)	(0.253)
Individual controls	✓	✓	✓	✓
Regional controls	✓	✓	✓	✓
Land fixed eff.	✓	✓	✓	✓
Observations	2,757	1,195	2,760	1,195
R-squared	0.023	0.097	0.031	0.060

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table B9: OLS regression of standardised desired tax prograssivity and public spending on education, for people with no college degree resp. college degree. Individual controls include: household income, political placement, employment in high-immigration sectors, age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany. Regional controls include GDP and the share of immigrant population.

	(1)	(2)	(3)
	Desired tax progressivity		
VARIABLES	Left	Centre	Right
Baseline: Neutral			
Poverty condition	0.255**	-0.0802	-0.00850
	(0.120)	(0.0592)	(0.162)
Immigration condition	0.172	-0.137**	0.102
	(0.119)	(0.0572)	(0.163)
Both condition	0.132	-0.0584	-0.119
	(0.126)	(0.0549)	(0.123)
Overlap condition	0.139	-0.150**	-0.264
	(0.123)	(0.0580)	(0.161)
Constant	0.555	-0.477**	-0.209
	(0.420)	(0.213)	(0.819)
Individual controls	✓	✓	✓
Regional controls	✓	✓	✓
Land fixed eff.	✓	✓	✓
Observations	726	2,846	380
R-squared	0.096	0.024	0.158

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table B10: OLS regression of standardised desired tax progressivity along the political orientation split. Individual controls include: household income, college education, employment in high-immigration sectors, age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany. Regional controls include GDP and the share of immigrant population.

VARIABLES	(1) Public exp. on educ. Left	(2) Centre	(3) Right
Baseline: Neutral			
Poverty condition	0.101	0.123**	0.123
	(0.102)	(0.0526)	(0.182)
Immigration condition	0.0365	-0.0139	0.00665
	(0.119)	(0.0593)	(0.172)
Both condition	-0.0186	0.0264	-0.0285
	(0.103)	(0.0554)	(0.180)
Overlap condition	0.0759	0.0124	0.164
	(0.108)	(0.0590)	(0.175)
Constant	0.722	0.430**	2.017**
	(0.439)	(0.206)	(0.778)
Individual controls	✓	✓	✓
Regional controls	✓	✓	✓
Land fixed eff.	✓	✓	✓
Observations	726	2,849	380
R-squared	0.098	0.042	0.114

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table B11: OLS regression of standardised desired allocation of the public budget to public education along the political orientation split. Individual controls include: household income, college education, employment in high-immigration sectors, age, gender, marital status, voting behaviour in previous election, social media consumption, and whether the respondent was born in Germany. Regional controls include GDP and the share of immigrant population.

C   Information conditions

Neutral condition (Baseline)

Derzeit leben in Deutschland 82 Millionen Menschen

"82 Million people are currently living in Germany".
Full information video available at: $https://youtu.be/STa_5RKJGmU$

Poverty condition

Derzeit leben in Deutschland 82 Millionen Menschen

13,7 Millionen
Menschen leben
unterhalb der Armutsgrenze*
*60% des Medianeinkommens

"82 Million people are currently living in Germany.
13.7 Million people live below the poverty line*.
*60% of the median income."
  Full information video available at: https://youtu.be/gvyGc5nOKFw

Immigration condition

Derzeit leben in Deutschland 82 Millionen Menschen

13,2 Millionen
Menschen sind
im Ausland geboren

"82 Million people are currently living in Germany.
13.2 Million people were born abroad."
  Full information video available at: https://youtu.be/nOqNYNKPsMw

Both condition

Derzeit leben in Deutschland 82 Millionen Menschen

13,7 Millionen
Menschen leben
unterhalb der Armutsgrenze*
*60% des Medianeinkommens

13,2 Millionen
Menschen sind
im Ausland geboren

"82 Million people are currently living in Germany.
13.7 Million people live below the poverty line*.
*60% of the median income.
13.2 Million people were born abroad."

The order in which the two poverty and immigration components of this information condition were presented was randomised across individuals to control for order effects.

Full information video available at: https://youtu.be/C6ZAl2bSywk

Overlap condition

Derzeit leben in Deutschland 82 Millionen Menschen

13,7 Millionen
Menschen leben
unterhalb der Armutsgrenze*
*60% des Medianeinkommens

13,2 Millionen
Menschen sind
im Ausland geboren

3,2 Millionen
sind
im Ausland geboren
und
leben unterhalb der Armutsgrenze

"82 Million people are currently living in Germany.
13.7 Million people live below the poverty line*.
*60% of the median income.
13.2 Million people were born abroad.
3.2 Million were born abroad and live below the poverty line".

The order in which the two poverty and immigration components of this information condition were presented was randomised across individuals to control for order effects.

Full information video available at: https://youtu.be/6-59w5R06K0

D   Full questionnaire in English

1. See Figure D1.

2. What is your gender?
   Female; Male

3. Please indicate your age:

4. What is your marital status?
   Single (Never Married/Widowed/Separated/Divorced); Married /Civil partnership/Cohabiting

5. Please indicate how many people live in your household (including yourself):
   Adults:__ Children:__

6. What was your total monthly household income after tax in 2018? (in Euros) [Please include all your household income sources: salaries, scholarships, pension and Social Security benefits, dividends from shares, income from rental properties, child support and alimony etc. We are not interested in the type of income source, only in the total annual income earned by all the members of your household together.]
   <1000; 1000-1999; 2000-2999; 3000-3999; 4000-4999; 5000-7500; >7500

7. We will now ask your opinion on some important policy questions. Please watch the following video before continuing: *See description of our conditions in Section C.*

8. See Figure D2.

9. See Figure D3.

10. Before proceeding to the next set of questions, we want to ask for your feedback about the responses you provided so far. It is vital to our study that we only include responses from people who devoted their full attention this study. This will not affect in any way the payment you will receive for taking this survey. In your honest opinion, should we use your responses, or should we discard your responses since you did not devote your full attention to the questions so far?
    Yes, I have devoted my full attention to these questions and I think you should use my answers for your research.; No, I have not devoted my full attention to these questions and I think you should not use my answers for your research.

11. Do you think income differences between rich and poor are:
    Not a problem at all; A small problem; A serious problem; A very serious problem

12. To reduce income differences between rich and poor people, the government (at the local, state, or federal level) has the ability and the tools to do:
    Nothing at all; Not much; Some; A lot

13. Some people think that the government (at the local, state, or federal level) should not care about income differences between rich and poor people. Others think that the government should do everything in its power to reduce income inequality.

    Please rate on a scale of 1 to 7 on how you feel about this issue, with 1 being the government should not concern itself with income inequality and 7 being the government should do everything in its power to reduce income inequality.

14. Here are several things that the local, state, or federal government might do to reduce income differences between rich and poor people. Please indicate if you favour or oppose them. Keep in mind that, naturally, to finance an expansion of any of these policies, other types of spending (like spending on infrastructure and defense, for example) would have to be scaled down or taxes would have to be raised.

    (a) Would you say that you strongly favour, favour, neither favour nor oppose, oppose or strongly oppose spending more money on schools in poor neighborhoods?
    Strongly favour; Favour; Neither favour nor oppose; Oppose; Strongly oppose

    (b) Would you say that you strongly favour, favour, neither favour nor oppose, oppose or strongly oppose spending more money to provide decent housing for those who can?t afford it?
    Strongly favour; Favour; Neither favour nor oppose; Oppose; Strongly oppose

    (c) Would you say that you strongly favour, favour, neither favour nor oppose, oppose or strongly oppose increasing income support programs for the poor?
    Strongly favour; Favour; Neither favour nor oppose; Oppose; Strongly oppose

15. How much of the time do you think you can trust our government to do what is right?
Almost always; A lot of the time; Not very often; Almost never

16. Some people say that people get ahead by their own hard work, others say that lucky breaks or help from other people are more important. Which do you think is most important?
Mostly luck; Both equally; Mostly hard work

17. Do you think poverty in today's Germany is:
Not a problem at all; A small problem; A serious problem; A very serious problem

18. What is the highest level of education you have completed?
Less than high school; High school; Realschule ("Mittlere Reife"); Degree from polytechnische Oberschule; Fachhochschulreife; A-levels; Apprenticeship; Specialized school degree ("Fachschulabschluss"); degree from "Fachhochschule"; Bachelor; Master; Diploma / Magister or comparable degree; Doctoral degree

19. What is your current employment status?
Full-time employee, Part-time employee, Self-employed or small business owner, Unemployed and looking for work, Student/apprentice, Retired, Not in labour force

20. *(If respondent is working)* Do you work in one of the following sectors?
Transport, logistics, protection and security; Commodity production and manufacturing; Commercial services, trade, sales, hotels and tourism; Construction, architecture, surveying and mapping, facility technology; None of these

21. Where were you born? *(Select from list of countries.)*

22. *(If respondent was born in Germany)* Were both of your parents born in Germany? *Yes; No*

23. Please choose your state and region (Landkreis):

24. Which media do you most frequently get information on world happenings from? Check each that apply.
TV News; Social media (social networks, blogs); Radio/podcasts; Online newspaper/ Newspaper App; Print newspaper; I don't follow the news.

25. Where do you see yourself on the political spectrum, where 1 represents the left and 10 represents the right? *(Select 1-10)*

26. Did you vote in the previous *(Bundestag)* elections? *Yes; No*

27. Which party would you vote for if there were elections on Sunday?
CDU/CSU; SPD; FDP; Bündnis 90/Die Grünen; Die Linke; AfD; Andere

28. According to your best estimate, how many of the 82 Million people living in Germany at the moment were born abroad? __ *million people*

29. Of those people living in Germany and born abroad, do you think the majority were born inside or outside of the EU? *Inside the EU; Outside of the EU*

30. According to your best estimate, how many of the 82 Million people in Germany live below the poverty line? __ *million people*

31. According to your best estimate, how many of the people living below the poverty line* in Germany at the moment were born abroad? (*The poverty line is a measure of relative poverty and is computed as 60% of median income.) __ *million people*

32. Do you think the majority of the people living below the poverty line in Germany at the moment and born abroad were born inside or outside of the EU? *Inside the EU; Outside of the EU*

33. *(If respondent is working)* How secure do you think your current job is?
Very secure; Relatively secure; Not very secure; Not secure at all

We are a non-partisan group of academic researchers from the Max Planck Society. We would like to know your personal views on some policy matters.

Please note that it is very important for the success of our research that you **answer honestly**, providing your true opinion or the true answer, and **read all the questions very carefully** before answering. Any time you don't know an answer, just give your best guess. However, please be sure to spend enough time reading and understanding the question. To ensure the quality of survey data, your responses will be subject to statistical control methods, which can detect incoherent or rushed answers. **Responding without adequate effort or skipping many questions may result in your responses being flagged for low quality and you may not receive your payment.**

It is also very important for the success of our research project that you **complete the entire survey**, once you have started. This survey should take (on average) about 15 minutes to complete.

Notes: Your participation in this study is purely voluntary. Your name will never be recorded by researchers. Results may include summary data, but you will never be identified. The data will be stored on our servers and will be kept confidential. The collected anonymous data may be made available to other researchers for replication purposes.

Yes, I would like to take part in this study.

No, I would not like to participate.

Figure D1: First page of the survey (translated to English)

The government currently raises a certain amount of revenue through the income tax in order to sustain the current level of public spending. In your view, what would be a fair split of the tax burden to sustain public spending?

The average income tax rate* is the percentage of your income that you pay in income tax. For example, if your monthly gross income is €3000 and you pay €300 in income taxes, your average income tax rate is 10%.

Please use the sliders below to tell us how much you think each of the following groups should pay as a percentage of their total income.

While you adjust the four sliders for each group, you will see below the sliders how much of the current revenue you have been able to raise so far. You will receive a warning message as long as you have not raised enough revenue, or if you have raised more money than necessary.
You will only be able to move to the next question when you meet the revenue target exactly.

*If you receive a regular paycheck, the income tax is part of the amount that is automatically taken out. It is different from other amounts that are also automatically taken out, such as the health insurance contribution.

	0	7	14	21	28	35	42	49	56	63	70	
The top 1% (richest)	●											0
The next 9% (1% of households earn more than them, but 90% earn less)	●											0
The next 40% (10% earn more than them, but 50% earn less)	●											0
The bottom 50% (poorest)	●											0

Percent of total collected 0
You haven't raised enough revenue yet.

Figure D2: Question on preferred tax rates (translated to English)

We now ask you how you would like to spend the total government budget, which comprises the local, state and federal government budgets. Suppose that you are the person deciding on the German budget for the next year. You can choose how you want to divide the budget (in percent) between the following 7 categories:

1) **Defense and Internal Security,** which refers to the costs of the Defense department and the costs of supporting security operations in Germany and in foreign countries, and also includes the costs of the police.

2) **Public Infrastructure,** which includes, among others, transport infrastructure like roads, bridges and airports, and water infrastructure.

3) **Spending on Schooling, Higher Education and research,** including help for children from low income families to attend school and university (e.g. via BAfÖG).

4) **Social Security, Disability Insurance and pensions.**

5) **Arbeitslosengeld II and social benefits (Hartz IV).** This covers help to the unemployed (through unemployment insurance) and help for low income families.

6) **Public Spending on Health,** including health insurance and research funding.

7) **Affordable Housing.** This includes subsidies to make housing more affordable for low income families and funds to build and manage public housing.

Defense and National Security	0
Public Infrastructure	0
Schooling	0
Social security	0
Arbeitslosengeld II and social benefits (Hartz IV)	0
Health	0
Affordable Housing	0
Total	0

Figure D3: Question on preferred government spending (translated to English)