Your Place in the World

The Demand for National and Global Redistribution

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Abstract

Some of today's most heated policy debates about Brexit, trade wars, climate change abatement, and migration involve redistribution of resources within a given country (national redistribution) and between countries (global redistribution). Yet, theories and evidence on preferences for redistribution have focused almost exclusively on national redistribution. In this paper, we study preferences for global redistribution. The workhorse model in political economy predicts that individuals who are higher up in the national income distribution are less supportive of national redistribution than those who are lower. Applied to the global arena, the model predicts that individuals who are richer in the global income distribution will be less supportive of global redistribution. We test this hypothesis using a two-year, face-to-face survey of a representative sample of German households. We show that respondents are misinformed about their positions in the national and global income distributions, and we provide novel evidence that those misperceptions are meaningful. Consistent with previous studies, we find support for the political economy model in the national arena: the correlational and experimental estimates indicate that the demand for national redistribution decreases with national relative income. However, the political economy model does not hold in the global arena: support for global redistribution does not depend on global relative income.

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1 Introduction

Discussions about how economic resources should be distributed have intensified in the last years as inequality in many Western democracies has become more pronounced (Piketty, 2014; OECD, 2015; Alvaredo et al., 2018). What constitutes "too much" inequality differs widely between individuals and countries, however, which leads to different interpretations about (and implementations of) the appropriate role and size of the public sector and the welfare state (see e.g. Alesina and Glaeser, 2004).[1]

The debate about redistribution has focused on how to allocate resources between individuals from a given country. This emphasis may not be surprising, as there are multiple institutions and policy levers to redistribute resources domestically, whereas comparable institutions and policies are scarce at the global level.[2] Nonetheless, the differences between the world's poorest and most affluent citizens are staggering, and awareness about these differences is increasing as information flows more freely across the globe (OECD, 2015; Milanovic, 2015, 2016). At the same time, many of the most pressing policy issues, such as Brexit, trade wars, climate change abatement, and migration, involve redistribution of resources across countries. However, despite abundant research about the demand for national redistribution, little is known about preferences for global redistribution and support for institutions mandated to implement such redistribution.

In this paper, we take a first step to understand the drivers of preferences for global redistribution using evidence from a survey experiment. There is a large research agenda aimed at understanding how preferences for national redistribution are shaped at the individual level. Seminal theoretical papers, such as Romer, 1975 and Meltzer and Richard, 1981, predict that preferences for redistribution will be a decreasing function of one's relative income. In these models, richer individuals are less excited about redistribution for selfish reasons, as they expect to contribute more than what they receive. Consistent with this basic prediction, other studies have documented a negative correlation between survey measures of preferences for redistribution and individual relative income (see e.g., Fong, 2001; Alesina and La Ferrara, 2005; Alesina and Giuliano, 2011; Mollerstrom and Seim, 2014). However, individual perceptions about relative income often differ from the actual distribution. Thus, preferences for redistribution tend to be determined not so much by whether individuals are rich or poor but whether they perceive themselves to be rich or poor (Cruces et al., 2013; Karadja et al., 2017).[3] Applying the logic of a relative income model to

[1] Experimental and observational research document that people, in general, do not approve of situations where there is "too much" inequality, but they also do not prefer resources to be completely equally distributed (e.g., Fehr and Schmidt, 1999; Bolton and Ockenfels, 2000; Charness and Rabin, 2002; Norton and Ariely, 2011).

[2] There are exceptions though. For example, in a recent referendum in 2019 in Zurich, Switzerland, about 70 percent of voters supported the initiative to increase funds for alleviating global poverty up to 1 percent of the city's tax revenue in a given year (ea-foundation.org/media/).

[3] The empirical work also highlights how other factors beyond one's (perceived) relative position in society affect how much redistribution one desires. In particular, an individual's perception about the respective role of controllable and uncontrollable factors (e.g., effort and luck) in determining individual economic success is an important determinant of that individual's redistributive preferences. Those who believe in the importance of effort

global income redistribution predicts that individuals who believe their households are relatively richer in the global income distribution will be less supportive of global redistribution.

We designed and conducted a survey experiment to test this prediction using the German Socio-Economic Panel (SOEP), a longitudinal study of German households that started in 1984. This panel contains an innovation sample (SOEP-IS) that is representative of the German population and offers opportunities to implement tailor-made survey modules as well as incentivized measures and experiments. The SOEP-IS is administered face-to-face by trained interviewers who visit respondents in their homes each year. Our research design exploits some unique advantages that the SOEP-IS has over other survey modes such as phone and online surveys. For example, due to its infrastructure, the SOEP can survey the same respondents again a year later with little attrition. The SOEP also can survey all household members and guarantee that each completes the survey independently without communicating with other household members. Moreover, the face-to-face interviews minimize the risk of non-response to specific survey items and misunderstandings arising about our experimental tasks and prevent respondents from using the Internet to look up information while they are completing in the survey.

In the baseline survey, we elicited respondents' perceptions about their household's position in the national and global income distributions. To encourage participant attention, we rewarded respondents for accurate responses. Comparing their prior perceptions to our own best estimates, we quantified the degree of their misperceptions. We then introduced an information-provision experiment to create exogenous variations in perceptions and thus measure the causal effect of these perceptions on demand for redistribution. Individuals were randomly assigned to a control group that received no information or to a treatment group that received easy-to-digest information about their true positions in both the national and global income distributions. If individuals learn that they are richer on a global scale than they thought, then they may infer from that information that they are also richer on the national scale than they thought, and vice-versa. By measuring and providing information about both national and global relative incomes, we can disentangle the effect of national-versus-global relative income. Later, we elicited two main outcomes of interest: preferences for national redistribution and preferences for global redistribution.

The information-provision experiment allows us to measure the causal effect of perceptions about relative income on these outcomes. For example, take a pair of individuals who underestimated their global relative incomes by 10 percentage points. The individual who was not assigned to information should remain biased, but the individual who was assigned to the information should reduce or perhaps even eliminate her or his bias. The information-provision thus creates a positive shock to the individual's perceived global relative income. We use a simple econometric model that allows us to aggregate across pairs of individuals who start out with different biases to disentangle the effects of global-versus-national relative income. The main hypothesis is straightforward:

generally have low demand for redistribution (e.g., Alesina and Giuliano, 2011; Mollerstrom and Seim, 2014; Alesina et al., 2018b; Gärtner et al., 2019).

individuals who learn that they are higher (lower) in the global income distribution than they originally thought should become less (more) supportive of global income redistribution. On the other hand, individuals who learn that they are higher (lower) in the national income distribution should become less (more) supportive of national redistribution.

We also collected data on secondary outcomes: support for the formation of a global organization in charge of redistributing income across countries, support for generous immigration policies, and support for globalization. We predict that these outcomes may be perceived as forms of global redistribution and thus may be affected by perceptions about relative global income. Moreover, we included two incentivized measures to validate the questions on preferences for redistribution: a decision to share money with a household at the bottom of the national income distribution and a decision to share money with a household at the bottom of the global income distribution. One year after the baseline survey, we conducted a follow-up survey. Among other things, we re-elicited respondents' perceptions about their relative incomes, again incentivized for accuracy. This approach allowed us to measure the long-term effect of information on perceptions. The follow-up survey also provided additional measurements, such as respondents' willingness to pay for information about their global and relative incomes, using standard incentive-compatible methods (Becker, DeGroot, and Marschak, 1964).

The first set of findings covers respondents' significant misperceptions about their relative positions in the national and global income distributions. In our representative sample of Germans, the absolute size of misperceptions about national and global relative positions are similar, with a mean absolute error of 23 percentage points for both. Nevertheless, there are some notable differences in the distribution of global and national misperceptions. Respondents are on average correct about their national relative positions, with approximately an equal number of respondents over- and under-estimating their positions. However, they significantly underestimate their positions in the global income distribution.

Using various unique features of our research design, we provide evidence that the above misperceptions are robust and meaningful, as opposed to merely reflecting measurement error, inattention, and uninterest. We show that these misperceptions persist despite significant rewards for guessing correctly. The misperceptions are consistent across time and across different members of the same household. Providing information to individuals has effects on their perceptions a year later, implying that individuals truly incorporate the information. Moreover, giving information to one household member affects that same household member a year later, as well as all other household members. This evidence suggests that individuals care enough about the information to share it voluntarily with family members. Finally, using an information-acquisition assessment, we find that individuals are willing to pay non-trivial amounts for information about their global and national income ranks.

The second set of results cover preferences for redistribution at the global and national levels. We find similar variation in preferences for global redistribution as in the preferences for national

redistribution. These two preferences are significantly correlated to each other. Moreover, many of the usual correlates of national redistribution preferences (e.g., political orientation, luck beliefs, effort beliefs) have similar associations with global redistribution preferences. We also validate these unincentivized survey measures with behavior in simple distributional tasks with real stakes: an individual who reports a preference for national redistribution that is one standard deviation higher tends to share two percentage points more with a recipient who is poor by national standards, and an individual who reports a preference for global redistribution that is one standard deviation higher tends to share four percentage points more with a recipient who is poor by global standards.

Our next results relate to the relationship between relative income and redistribution preferences. The raw data show that the perceived national relative income is negatively correlated to demand for national and global redistribution. Consistent with prior work, we find strong heterogeneity by ideological orientation (Cruces et al., 2013; Kuziemko et al., 2015; Karadja et al., 2017; Fernandez-Albertos and Kuo, 2018; Alesina et al., 2018b). Specifically, these correlations are driven almost entirely by left-of-center individuals, who comprise approximately one-third of the sample. On the contrary, the global relative income is not correlated to preferences for global nor national redistribution.

Using the information-provision experiment to investigate these relationships further corroborates the correlational findings, both qualitatively and quantitatively. Information about national relative income affects demand for national and global redistribution in the predicted direction, but only for left-of-center respondents. Information about global relative income seems to be irrelevant for both national and global redistribution preferences, however. Thus, we find support for the political economy model in the national arena but no support for the political economy model in the global arena.

Our study relates to various strands of literature. First, it is related to the literature on the role of misperceptions in preferences for redistribution. Evidence indicates that individuals tend to misperceive their relative incomes and that correcting those misperceptions tends to influence preferences for redistribution (Cruces et al., 2013; Karadja et al., 2017). Other research documents misperceptions about other features relevant for income redistribution, such as wealth inequality (Norton and Ariely, 2011; Kuziemko et al., 2015), income mobility (Alesina et al., 2018b; Fehr et al., 2019; Gärtner et al., 2019), and immigration (Alesina et al., 2018a; Haaland and Roth, 2019) and show that correcting those misperceptions can change redistributive preferences.

We contribute to this literature in two ways. Our first contribution relies on expanding the literature on national redistribution to include global income redistribution. Our second contribution relates to the nature of misperceptions about relative income. Misperceptions about national relative income have been documented in several studies and contexts (Cruces et al., 2013; Karadja et al., 2017; Poppitz, 2016; Bublitz, 2017; Fernandez-Albertos and Kuo, 2018); misperceptions have also been documented about other factors relevant for redistributive preferences such as income

inequality and income mobility. Still, questions remain about the interpretation of these misperceptions. For example, a significant fraction of survey respondents' misperceptions may be due to their lack of attention to the survey, confusion about what the survey question is trying to elicit, or reactions to information due to anchoring or experimenter-demand effects. Our survey experiment can address those questions in several ways. We show that individuals have substantial misperceptions even when facing significant monetary incentives to guess correctly, that individuals who receive information retain it twelve months later, that information is endogenously shared with other household members, that individuals are willing to pay non-trivial amounts to acquire information about relative income, and that misperceptions are consistent across time and across members of the same household.

Second, this paper relates to international aid and migration research in political science, as well as in sociology and economics. Some literature on international aid argues that it is driven primarily by strategic considerations of the giving nation rather than need in the recipient country (see e.g., Alesina and Dollar, 2000; Kuziemko and Werker, 2006; Dreher et al., 2009). However, there is growing interest in questions regarding public opinion about foreign aid (Kinder and Kam, 2010; Bauhr et al., 2013; Milner and Tingley, 2013; Eichenauer et al., 2018; Nair, 2018). The work of Nair (2018) is probably most related to our paper, as it explores the link between global relative income and support for foreign aid. Immigration seems to be another powerful force for redistribution of income across countries (see e.g., Lucas, 2005; Weyl, 2018). The importance of migration as a redistributive tool is on the rise, and migration streams are expected to continue to increase (OECD, 2014, 2017). Voters and policy makers in most Western democracies and throughout the world struggle with questions about how many migrants to welcome and how to facilitate their integration. This paper contributes to this literature by measuring how preferences for both national and global redistribution relate to attitudes and opinions on immigration.

The paper continues as follows. Section 2 outlines our research design and describes our data. Section 3 documents our results on misperception of national and global income, and Section 4 discusses our results on the demand for both national global redistribution. Section 5 concludes.

2 Survey Design and Implementation

We collected data in cooperation with the German Socio-Economic Panel (SOEP) and made use of their Innovation Sample (SOEP-IS). The SOEP-IS is a longitudinal study that surveys a representative sample of the German population on a wide range of topics once a year.[4] All household members above the age of 16 are assessed in computer-assisted face-to-face interviews performed by trained professionals (for more detailed information on the SOEP-IS, see Richter

[4]Note that the SOEP-IS consists of several independent samples that are each representative of the German population. The SOEP-IS draws on the same pool of questions as the SOEP and makes use of the same professional survey company (see Goebel et al., 2018, for more details).

and Schupp, 2015).

We designed two tailor-made survey modules including a randomized information treatment, and incentivized belief- and outcome measures. The modules were implemented in two consecutive waves of the SOEP-IS: a baseline survey in 2017 and a follow-up survey in 2018 (see the Online Appendix for our survey modules). Interviews were conducted in private with each member of a household, i.e., there was no communication possible between household member during and between the interviews. An interview with a household member lasted for about 45-60 minutes, whereby our modules took on average 8-10 minutes.

2.1 Survey Design: Baseline

The baseline survey has the following structure: i) pre-treatment questions, ii) assessment of perceived position in the income distribution, iii) randomized treatment providing truthful and accurate information about location in the income distribution, iv) primary outcome measures on preferences for redistribution, and v) secondary outcome measures on globalization and immigration. The outcome measures on preferences for redistribution (in part iv) were assessed both in the national (i.e. German) and the global context and consequently, we asked respondents in (ii) to state their perceived location in both the national and the global income distribution. We randomized whether respondents saw the national or the global question first, and to ease presentation and comprehension, the randomization was across respondents in the sense that a person who saw the national level question first in (ii) would see information about the national level first in (iii) (if randomly selected to the treatment group) and would be asked the question about national redistribution first in part (iv).

The pre-treatment part (i) included two questions about how respondents perceive the role of luck and effort for economic success in the national and global context (luck/effort beliefs). These beliefs are typically strong predictors of individual demand for redistribution at the national level (see e.g. Piketty, 1995; Alesina and Angeletos, 2005; Benabou and Tirole, 2006 for seminal theoretical work, and Fong, 2001; Mollerstrom and Seim, 2014; Karadja et al., 2017; Gärtner et al., 2019 for empirical evidence). We also use these two questions as a falsification test, as we should not find treatment effects on a variable that was measured before the information treatment.

We placed our module after the questions about political attitudes that are routinely included in the SOEP-IS, as prior research has found that individual views about redistribution are subject to strong heterogeneity in political orientation. Karadja et al. (2017), for instance, document that individuals to the left and to the right of center on the political spectrum react differently to information about relative income. Even though they do not directly report left-right heterogeneity, the findings by Cruces et al. (2013) and Fernandez-Albertos and Kuo (2018) indicate that informing people of their true economic placement affects their support for redistribution only for those who learn they are poor (who tend to be left-wing). This substantial heterogeneity by

left-right spectrum goes beyond information-provision experiments on relative income. For example, Kuziemko et al. (2015) find that providing information about inequality has effects only on individuals with sufficiently large trust in the government (and these respondents tend to overwhelmingly place themselves to the left of the political spectrum), while Alesina et al. (2018b) find that only left-wing respondents increase support for redistribution in reaction to pessimistic information on social mobility. Further, Alesina et al. (2018a) document that people on the right of center react significantly stronger and change their opinions on immigration more when information about number of immigrations, their education level, etc is provided. Consequently, we use the information on political orientation for analyzing heterogeneity in response to our treatment.

Estimates of the global income distribution predominantly rely on per-capita pre-tax household income (see e.g., Milanovic, 2015, 2016), so before asking respondents their perceptions of their relative national and global income in part (ii) of the survey module, we highlighted their absolute, per-capita pre-tax household income. We then asked them to state their position in the national (German) as well as in the global income distribution. Both relative income questions were incentivized for accuracy, and respondents were informed that they would receive 20 Euro for each assessment that was correct to the closest percentile (ensuring that it is optimal for them to answer in a way that elicits the true mode of their beliefs).

After stating the perceived location in the national and global income distribution, respondents answered several questions unrelated to our research (these questions were, among other things, related to the respondents' civil status, their siblings and their children and did not vary by treatment). Subsequently, our module continued and in part (iii) we randomized half of the respondents into a treatment which provided them with information about their true location in the national and in the global income distribution. The information revealed how many people are poorer at national and global level based on their stated pre-tax per-capita household income, and additionally visualized this information using customized graphs to make it easy to understand and digest. See Figure 1 for a sample of the information treatment (this one corresponds to the national relative income, but the structure of the information about global relative income was identical). The other half of respondents received no information. We then, in part (iv), asked both groups for their views on national and global redistribution, respectively. The answers to these questions were given on 1-10 scales with 1 indicating no demand for redistribution and 10 indicating a desire of complete redistribution that equalizes post-redistribution income between citizens.

In part (iv) we complemented these outcome measures with two incentivized assessments of altruism. To this end, we used two simple distribution tasks with real stakes in a national and a global context, respectively. More precisely, respondents were asked to a) distribute 50 Euro between themselves and a poor German household and to b) distribute another 50 Euro between themselves and a poor global household. German households were drawn from the bottom-10 percent of the income distribution of SOEP-IS households that are not in our sample. To fa-

cilitate transfers to a poor global household, we used GiveDirectly, a well-established non-profit charity that provides cash transfers to poor households in Kenya and Uganda, and which eligibility criteria ensures that recipient households belong to the bottom-10 percent of the global income distribution (Haushofer and Shapiro, 2016). We randomly selected one in seven respondents and implemented their distribution decision in one randomly selected task (i.e. either the national or the global distribution decision). The money that a respondent allocated to themselves were given to them immediately after completing the survey, while national recipient households received their transfers (the exact amount given by the respondent) along with a cover letter explaining the transfer after the data collection for this SOEP-IS wave was finished. Finally, part (v) contained questions about whether the respondent supports globalization, and if she would appreciate Germany implementing a generous immigration policy that would allow more people from poor countries to live and work in Germany. We also asked whether the respondent would support an international institution with mandate to implement global redistribution. The answers to these questions were given on a 1-10 scale with 1 (10) indicating no (full) support for globalization, a generous immigration policy, and an international, redistributive institution.

2.2 Survey Design: Follow-Up

We designed a follow-up survey that we implemented in the same sample of respondents a year later. The purpose of this survey is to test whether the information provided to the survey participants persisted a year later and to measure how much they value the information on income ranks.

We started with highlighting information about the respondents' absolute per-capita pre-tax household income, and again asked them to state their rank in the national and global income distribution. We rewarded each accurate prediction with 10 Euro. Additionally, we asked respondents about how certain they were about each of their answers, on a 0-10 point-scale (emulating steps of 10 percent: being completely uncertain, 10 percent certain, 20 percent certain, ..., 100 percent certain). This time, however, we did not provide information on the true rank in either context. Instead, after answering several SOEP-IS questions unrelated to our research (again among other things about the respondents' civil status, siblings and children), all participants answered the same questions about demand for redistribution, globalization, and immigration as in the baseline survey.

In a next step we elicited respondents' willingness to pay (WTP) for information about their true rank in the national and the global income distribution using a list-price version of the Becker-DeGroot-Marschak method (see e.g., Andersen et al., 2006). The list presents, for each income distribution separately, five scenarios in which respondents have to choose between receiving information about their true rank in the corresponding income distribution, or receiving a monetary compensation. The amount of money was predetermined ranging from 0.1 Euro in Scenario 1 to 10 Euro in Scenario 10 in increasing increments (0.1, 1, 2.5, 5, and 10 Euro). We informed

respondents that one of the overall ten scenarios would be randomly selected and implemented.[5] To avoid respondents paying for this information out of strategical concerns, we took care to ensure respondents that we would not ask any more incentivized questions later in the survey, or in later waves of the survey, about their relative income rank.

2.3 Survey Implementation

We implemented our two survey modules in the 2017 and 2018 wave of the SOEP-IS, which were running from September through December in each case. A total of 1,392 respondents took part in the baseline survey, while 1,167 participated in follow-up survey (84 percent of the 1,392 respondents in the baseline survey).

In Table 1 we show that the treatment and control groups are balanced on observable characteristics. Since we will consider heterogeneity by left-of-center and center/right individuals, the table also shows the balance within each of those groups. In general, we see in Table 1 that the observable characteristics are balanced over our samples. For one pre-treatment characteristic, age, we see a small and marginally significant difference. Yet, this is well below what we would expect when running a total of 36 tests. Nevertheless, to be conservative, this characteristic is included in the set of control variables in the regression analysis (in addition to age and sex of the respondent, the vector of control variables also include a set of indicator variables for education and the respondent's political affiliation, an indicator for whether the respondent is disabled, retired, and unemployed as well as an indicator for East Germany).

One potential concern with using data from the follow-up survey as outcome measures is that the treatment may have affected the decision to participate in the follow-up survey. This is not a significant concern for two reasons. First, attrition is not large as about 84 percent of the participants in the baseline survey participated in the follow-up survey one year later.[6]

Second, and most importantly, there is no significant difference in the attrition rates between individuals that were in the control group (15 percent attrition), and individuals who were in the treatment group in the baseline survey (17 percent attrition, p=0.247 for t-test of proportions). In Appendix C.5, we provide further evidence that attrition was random.

3 Results: Misperceptions

In this section, we describe the respondents' misperceptions about their relative income position in the national and global context, and provide novel evidence that those misperceptions are

[5] The instructions for the elicitation procedure, which we adapted from he elicitation task employed in Fuster et al. (2019), were tested for understanding with cognitive interviews.

[6] Attrition in our follow-up survey is lower than in other studies, which typically also consider shorter time spans between surveys: for example, 80% of first-time respondents participate in the second survey of Karadja et al. (2017) three months later, while 78% of participants completed the first survey and only 14% responded to a follow-up one month later in Kuziemko et al. (2015).

meaningful.

3.1 Global vs. National Misperceptions

Figure 2 outlines the distribution of perceptions vs. reality in our sample and shows substantial discrepancies, both for national (panel a) and global relative income (panel b). Figure 3.a shows the histograms of misperceptions: i.e., the difference between prior beliefs and reality.[7] Here, a positive (negative) number indicates that the individual respondent over-estimates (under-estimates) her own rank. For example, 0.3 means that the respondent believes that she is 30 percentage points higher on the relative income scale than she actually is, and a -0.1 would indicate that the respondent's relative income position is in fact 10 percentage points lower than she believes.[8]

A visual inspection of Figure 3.a indicates a much smaller average bias for national than for global rank, and it is indeed the case that the average bias for national rank is close to zero (M=-0.01, SD=0.29). Moreover, there is roughly the same number of people over-estimating their national rank as people under-estimating it. This is not true for global rank: respondents underestimate their relative position in the global income distribution by an average of 15 percentage points (SD=0.26, $p<0.01$ for a paired t-test of differences in means). Despite these different average errors in national and global relative income perceptions, we observe quite pronounced individual biases that are similar in magnitude at the national and the global level. We compare the accuracy of national and global relative income perceptions using the mean absolute error, which are very similar for national and global beliefs (23 percentage points in both cases). In other words, at the individual level Germans are as (in)accurate about their national income rank as they are about their global income rank.

The distribution of misperceptions about national relative income is consistent with a middle-class bias that would be expected under assortativity neglect (i.e., that the poor overestimate their position and the rich underestimate it, as in Cruces et al., 2013).[9] On the other hand, the evidence for global misperceptions suggests a lack of such assortativity-neglect when Germans think about the global income distribution (see also Figure 4). Figure 3.b shows the relationship between the national and the global biases. They are significantly (albeit not perfectly) correlated with a correlation coefficient of 0.61 ($p<0.01$), implying that if a respondent over-estimates her position relative to other Germans chances are that she will also over-estimate how relatively rich she is globally. This, in turn, may imply that respondents are, to some extent, extrapolating their

[7] In Appendix C.1, we also show the distribution of the gap between the information provided to the individuals and the prior beliefs.

[8] One potential concern is that part of the misperceptions may be because individuals do not know their absolute, rather than relative, income. However, Appendix C.2 shows this is not a significant source of concern. Indeed, we provide suggestive evidence that respondents know their absolute income well, which is consistent with the results reported in Karadja et al. (2017) that self-reported income is highly correlated with administrative data.

[9] Frick et al. (2019) formalize how this assortativity neglect may arise more generally. Theoretically, a middle-class bias may also lead to more inequality, in particular, if the middle class can redistribute resources to themselves and is richer than the poor (Acemoglu et al., 2015).

beliefs about their national relative position to the global arena.

We also test to what extent the misperceptions of national and global relative income differ by subgroups. As discussed above, misperceptions about national income rank are highly correlated with misperceptions about global income rank. Moreover, two types of biases have similar correlates (results presented in Appendix C.3).

3.2 The Misperceptions are Meaningful

Self-reported data on misperceptions come with certain challenges. One is that findings may simply reflect measurement error. For instance, some respondents may not be paying attention to the question, or they may have difficulty translating unconscious knowledge about their rank to a number. Another challenge is that respondents may be uninformed simply because they do not care about the general topic that is under investigation. These concerns are not specific to relative income, but may be applicable to many types of misperceptions that have been reported, for example misperceptions about the inflation rate (Cavallo et al., 2017), housing prices (Fuster et al., 2019), cost of living (Bottan and Perez-Truglia, 2017), and income mobility (Alesina et al., 2018b; Fehr et al., 2019; Gärtner et al., 2019). In other words, the reason why survey data does not match well with reality may lie in the survey nature of the data.

In this section, we take advantage of our unique data and SOEP-specific features to address concerns of measurement error and lack of interest. We start by noting that misperceptions exist even though we provide significant rewards for the respondents to state their national and global position in the relative income distribution correctly. The incentives reduce, at least to some extent, the concerns about measurement error as we are giving people incentive to pay attention, and to think harder than they would under non-incentivized conditions. In the remainder of this section, we provide additional evidence that the misperceptions are indeed meaningful.

3.2.1 Consistency Across Time and Household Members

The data from the follow-up survey help us to assess the consistency (or lack thereof) of misperceptions. If biases are pure measurement error, there should be no correlation between the bias in one wave of the survey and the next. On the other hand, if individuals are truly biased, their misperceptions should be correlated over time. Figure 5 shows that the persistence is significant: for national ranks, each 1 percentage-point bias in the first wave, a respondent is biased in the same direction by 0.4 percentage points in the follow-up survey ($p<0.01$). Results are similar in magnitude for global rank (correlation is 0.28, $p<0.01$). The existence of such a persistence is even more remarkable given that there are some factors working against it – in particular, individuals are changing their absolute income over time, which often cause their true position to change as well (for details, see Appendix C.4).

We further document that misperceptions are quite consistent within households. If misperceptions are pure measurement errors, then they should be independent across household members. If they, on the other hand, reflect real, meaningful biases we should expect them to be correlated across household members. We find that within-household variance in national rank is 41.8 percent and for global rank 58.2 percent. To put this number into perspective, we use the standard SOEP-IS question about the number of household members as a natural benchmark. In principle, we household members should have a high degree of agreement on this factual question. We observe that for the reported number of household members, 10.8 percent of variation is within-household. Despite this not being zero (which we would expect if all households were perfectly consistent) it is quite low.[10] While this implies that household members are less consistent in their assessments of the household's income rank than about how many members the household has, the variance is far from 100 percent, which is what we would expect if misperceptions were only measurement errors generated at the individual level. Thus, there is little reason to believe that misperceptions are measurement errors.

3.2.2 Persistence of Learning

Another way of testing whether the misperceptions are spurious or not, is by measuring the persistence of the information provided in the experiment (see e.g., Cavallo et al., 2017). If misperceptions are due to measurement error, anchoring, experimenter demand or lack of attention/interest, we would not expect the effects of providing information to be long-lasting. We explore this in a regression framework, using a specification from Karadja et al. (2017). Let T_i be an indicator variable indicating whether the individual was randomly selected into the treatment group and received relative-income information. Let $r_{i,nat}^{prior}$ denote the perceived national rank in the baseline survey (i.e., the prior belief, before receiving information), $r_{i,nat}^{signal}$ denotes the signal that could have been given (or not given, depending on whether the individual was in the treatment group or not) as feedback, and $r_{i,nat}^{t+1}$ denotes the perceived national rank in the follow-up survey.

$$r_{i,nat}^{t+1} += \alpha_{nat} \cdot \left(r_{i,nat}^{signal} - r_{i,nat}^{prior}\right) \cdot T_i + \beta_1 \cdot \left(r_{i,nat}^{signal} - r_{i,nat}^{prior}\right) + \varepsilon_i, \tag{1}$$

The coefficient α_{nat} tells us the rate of pass-through between the information given, and subsequent beliefs (for example, a coefficient of 0.1 would indicate that for each percentage point shock in information given, the posterior belief a year later is higher by 0.1 percentage points). Note that we should not expect a perfect pass-through rate (i.e., a rate of 1), because Bayesian individuals would, for example, take an average between the provided signal and their prior beliefs. Empirically, even when beliefs are re-elicited immediately (which is not the case here, but has been

[10] Note that such small inconsistencies may come from misreporting, e.g., a typo, or they may come from borderline cases where for example one spouse includes a child currently at college as a member of the household whereas the other spouse does not.

done in other work), the pass-through rate tends to be closer to 0.5, and falls significantly over a few months (see e.g., Cavallo et al., 2017; Bottan and Perez-Truglia, 2017; Fuster et al., 2019). Moreover, we expect a limited pass-through in this context as a respondent's actual relative income can change from one year to the other, so what she learned about her relative income one year ago may only be of limited help when she assesses her current income rank.

The results of estimating the pass-through rate are presented in Table 2. Column (1) suggests a pass-through coefficient of 0.14, i.e., for each percentage point that the treatment corrected a respondent's misperception, a year later she reports beliefs that have moved 0.14 percentage points closer to accurate beliefs. This suggests that the respondents have at least some interest in the information – as they otherwise would probably not remember what they learned.

We provide several robustness checks. Column (5) presents the results from a falsification test where the dependent variable is the belief in the baseline survey (i.e., before they or the other household members actually received the information). We should expect no effect on this prior belief, which is also what we find: this fake rate of pass-through is close to zero (0.017), statistically insignificant and precisely estimated. Appendix C.5 provides an additional robustness checks, using attrition to the follow-up survey as dependent variable, to show that the findings are not driven by selective attrition.

As complementary evidence, we can also use data on the certainty of beliefs a year later. In the follow-up survey we ask respondents to state how confident they are in their answers about their position in the income distributions. Figure 6.a shows that, on average, individuals are aware that they do not know their position in the income distributions well (only about 4 (8) percent of respondents report to be 90 to 100 percent certain about their national (global) relative position assessment, respectively). Moreover, Figure 6.b shows the relationship between respondents' confidence in their answer and their accuracy, and we see evidence of some self-awareness in particular in the case of global rank: here biases are significantly smaller among people who felt more certain, and whereas the bias is around 32 percentiles for those who are completely uncertain or only 10 percent sure, it is around 12 percentiles for those who report to be 90 or 100 percent sure.

Finally, if an individual truly learned from the information, he or she would be expected to feel more certain about her answer when assessing her income rank a year later. The results in Table 3, for national rank (column 1) and global rank (column 3) confirm this conjecture. The evidence suggests that receiving information on one's true income rank increased belief certainty in national rank by 0.421 ($p<0.01$) and in global rank by 0.583 ($p<0.01$) in the follow-up one year later.

3.2.3 Information Diffusion within Households

As we randomized the information treatment at the individual level, sometimes an individual gets the information whereas other members of her household do not. We exploit this feature to mea-

sure intra-household information diffusion, and find that providing information to one respondent affects the beliefs of the other members of her household one year later. If individuals take the time to discuss the information they receive with other household members, they presumably find it interesting or useful. We reiterate that any sharing of information among household members had to take place after the baseline survey as each interview was conducted in private and communication between household members was not allowed.

In this analysis, we extend specification (1):

$$r_{i,nat}^{t+1} += \alpha_{nat} \cdot \left(r_{i,nat}^{signal} - r_{i,nat}^{prior}\right) \cdot T_i + \alpha_{nat}^{peer} \cdot \left(r_{i,nat}^{signal} - r_{i,nat}^{prior}\right) \cdot T_i^{peer} + \beta_1 \cdot \left(r_{i,nat}^{signal} - r_{i,nat}^{prior}\right) + \beta_2 D_i + \varepsilon_i, \quad (2)$$

Here the variable T_i^{peer} takes the value 1 if the individual did not receive the information but at least one other member of her household did. D_i represents a set of indicator variables for the number of respondents in the household. This is important to control for as a member of a larger households face a higher probability that another household member will be randomly assigned to the treatment. In other words, assignment to the peer treatment is only random after conditioning on household size. The coefficient α_{nat}^{peer} tells us the rate of pass-through between the information we gave to a respondent's household peer(s) to her own beliefs one year later. The results are presented in column (2) of Table 2, and suggest that there is significant diffusion of information within households. The coefficient of 0.145 implies that for each percentage point shock in information given to another member of a respondent's household, her posterior belief a year later is higher by 0.145 percentage points. Moreover, accounting for this spillover of information is important for getting the long-term effects on beliefs right: once we control for potential peer information, the pass-through of own information to own beliefs rises from 0.137 in column (1) to 0.179 in column (2). The comparisons between the pass-through for own information versus peer information suggests that 81 percent (= 0.145 / 0.179) of the information travels to other people in the household; a very high degree of information diffusion. We reproduce the analysis for the global rank in column (4). The rate of pass-through is a somewhat smaller (0.099), and we cannot reject the null hypothesis of no difference (p=0.12) but we also cannot reject that it is equal to the corresponding rate for national rank (p=0.51). The comparisons between the pass-through for own information versus peer information suggests that 67 percent (=0.099/0.148) of the information about global income rank makes its way to other members of the household.[11]

Columns (2) and (4) of Table 3 explores the effects of information diffusion to other members of the household on the certainty of beliefs a year later. If a respondent obtained information from

[11] We can run the same falsification test as discussed above, where the dependent variable is the belief in the baseline survey (i.e., before they or the other household members actually received the information). These results are presented in columns (6) and (8) of Table 2 and are as expected.

another household member, we would expect her to feel more certain when answering the question about income rank a year later. The results are presented for national and global rank, in columns (2) and (4), respectively. The evidence is mixed: The household peer treatment increased belief certainty in national rank by just 0.056 and this effect is statistically insignificant. However, given that this point estimate is not precisely estimated (the 95 percent confidence interval is between -0.38 and 0.49), we cannot rule out large positive effects. For global rank, the evidence is clearer: the household peer treatment increased own belief certainty by 0.513 ($p<0.05$), which is not only statistically significant but also almost as large in magnitude as the effect of own treatment.

3.2.4 Demand for Information

A last piece of evidence that points to respondents caring about the topic and paying attention is that most of them are willing to pay to receive information about their relative income at the end of the follow-up survey. To analyze the demand for information, we can start by looking at whether the responses people gave are consistent across scenarios. Around 5 percent of respondents provided inconsistent responses in at least one of the two WTP questions.[12] This level of consistency is in the upper end of the range of other studies using similar methods to elicit the WTP for information.[13]

The distribution of WTP, for the 95 percent of the respondents who provided consistent answers, is shown in Figure 7.a, which indicates a significant WTP for information. We estimate the mean WTP using an interval regression model and find that this is €6.17 (SD=0.26) for national rank and €6.12 (SD=0.27) for global rank.[14] Figure 7.b shows the relationship between the WTP for national vs. global rank. On average, the WTP is almost identical and the two are highly correlated. But the correlation is not perfect; that is, some respondents are more interested in acquiring information about their national than their global rank, and vice versa.

Given that the maximum WTP is €10, the average WTP seems fairly high, also taking into account that the information provided is in principle something respondents could find out online by themselves. In that sense, this WTP is giving a lower bound on how much respondents care about the information, as many who are interested in acquiring the information are probably deciding whether to pay for it in the survey, or to search for it on their own later. We can also compare the median WTP in our study with the results from other papers that elicit WTP for information using similar methods. We find that individuals value information on their national and global relative income rank more than they value, for example travel information ($0.40, Khattak et al.,

[12]For example, they chose 5 Euro instead of information but then chose information instead of 10 Euro. Those who reported inconsistent responses to one piece of information, e.g. national rank, were almost always inconsistent in the other piece of information, i.e. about global rank. This suggests these individuals were not paying attention or they had trouble understanding the instructions.

[13]For instance, the share of inconsistent respondents was about 2 percent in Allcott and Kessler (2019), 5 percent in Fuster et al. (2019), and 15 percent in Cullen and Perez-Truglia (2018).

[14]This model assumes that the latent WTP is normally distributed. The constant in this model can be interpreted as the mean WTP under the implicit assumption that WTP can take negative values; if instead we were to assume that the WTP must be non-negative, then the mean would be even higher.

2003), food certification information ($0.80, Angulo et al., 2005), home energy reports ($3, Allcott and Kessler, 2019) and future national home prices ($4.16, Fuster et al., 2019).[15]

Taken together, we have documented significant misperceptions not only about national but also about global relative income and demonstrated that they are not just statistically significant, but also meaningful and persistent.

4 Results: Preferences for Redistribution

4.1 Variation in Demand for Redistribution

We now turn to preferences for redistribution at the national and the global level. The two main outcome variables, demand for national and global redistribution measured in the baseline survey are presented in Figure 8. Panel a of Figure 8 reveals significant variation as to how much redistribution individuals want at both the national and the global level. Figure 8.b shows that even though the two preferences are correlated (correlation coefficient 0.70, $p<0.01$), the correlation is not perfect: there are some respondents who want extensive national but very little global redistribution, and vice versa.

Table 4 investigates the correlates of preferences for national and global redistribution, using data from the baseline control group only (i.e., individuals who did not receive any feedback from us regarding their true relative income rank). The two left columns look at the extent to which our measure of national demand for redistribution is correlated with personal characteristics that have been previously been shown to correlate with demand for redistribution (Alesina and La Ferrara, 2005; Alesina and Giuliano, 2011; Mollerstrom and Seim, 2014; Karadja et al., 2017; Gärtner et al., 2017, 2019). In column (1) each covariate enters a bivariate regression with demand for redistribution as the dependent variable, whereas the model in column (2) has all covariates entering simultaneously. We partly confirm previous findings. For example, the demand for national redistribution is decreasing in income, and in the extent to which the respondent believes that effort (rather than luck) is the driver of economic success. Demand for national redistribution is also higher among those who define themselves as being to the left on the political spectrum. We fail to find support for some previously documented findings however. We see, for instance, no gender difference in the demand for national redistribution (in other work, women are generally found to demand more redistribution than men), nor a relation between age and the demand for redistribution. The two right columns in Table 4 display the results of the corresponding correlational analysis for demand for global redistribution. There are some differences compared to the correlates of demand for national redistribution. Most notably, there is no relation between

[15] In contrast, the information about income rank is not as valuable as the information about peer salaries, reported in Cullen and Perez-Truglia (2018). That information, however, is not available online and is also potentially profitable from the perspective of career choice and salary negotiations.

a respondent's income and her demand for global redistribution. The fact that those to the left on the political spectrum want more redistribution remains however, as does the correlation with luck/effort beliefs.

A challenge with these two outcome measures is that they are unincentivized self-reports. To test whether respondents put their money where their mouth is, we also conducted two distribution tasks where they could donate part of a real-stake endowment to a household which is poor in the national context (a German household at or below the 10th percentile of the national income distribution) or in the global context (a Kenyan household at or below the 10th percentile of the global income distribution). If we observe that respondents who, on average, report a higher demand for national redistribution also donate more to the German poor, and that respondents who have a higher demand for global redistribution donate more to the global poor, we can conclude that our main outcome measures are at least somewhat robust to incentives. Figure 9 documents that this is indeed the case - the correlation between the respective demand for redistribution measure (national and global), and the respective donation are highly statistically significant ($p<0.01$ for both). More precisely, the estimated relationship reveals that going from the lowest to the highest demand for redistribution is associated with an increase in the share of giving to a poor German household of 10 percentage points, whereas the increase in the share of giving to poor Kenyan household is 17 percentage points.[16]

We also included a number of secondary outcome variables that aimed at better understanding demand for global redistribution. The first of these is most directly related to preferences for global redistribution and assesses to what extent the respondent supports the creation of an international institutions mandated with the implementation of redistribution across countries. The other two secondary outcomes – support for globalization and for immigration of poor people to Germany – are indirectly related to global redistribution. Table 5 documents that demand for both national and global redistribution is positively correlated with support for immigration, with support for an international redistributive organization, and (to some extent) with support for globalization. As expected, people who believe that it is effort (rather than luck) that determine an individual's economic success in the global arena are less supportive of immigration, of an international redistributive organization, and of globalization. Luck/effort beliefs at the national level are, however, uncorrelated with these opinions.[17]

[16] Alternatively, a one standard deviation increase in demand for national redistribution increases given to a poor German household by 2 percentage points and to a poor Kenyan household by 4 percentage points.

[17] It is also interesting to note that respondents are in wide agreement that luck plays a more important role in generating individual global economic success than in generating individual national economic success. The average answer on the luck/effort scale is 6.41 (SD=1.68) for the national and 5.81 (SD=1.94) for the global context ($p<0.01$). For more results on the correlates of the secondary outcome variables, see Table 5 in the Online Appendix.

4.2 Relative Income Perceptions and the Demand for Redistribution

Before presenting the experimental results, we explore the raw correlations between respondents' relative income perceptions and their preferences for redistribution. The results are presented in Table 6, and again based only on individuals in the baseline control group. The first two columns display the results for the full control group, and suggest that perceived global rank is not related to demand for redistribution neither at the national nor on the global level, while perceived national rank is related to demand for national, but not global redistribution.

As previous work has shown significant polarization along political orientation with respect to providing information on relative income and income inequality, we use a SOEP-IS question on the self-assessment in political left-right spectrum to test for possible heterogeneous effects. Columns (3) through (6) of Table 6 show the results from this analysis, by splitting the sample in left (respondents who picked from 0 to 4 on the 1-10 scale) and center/right (the rest). In line with the previous literature, we do find significant heterogeneity. While demand for both national and global redistribution are significantly correlated with a respondents' perceived national (but not global) income rank for those with political opinions to the left-of-center, neither correlation is significant for center/right respondents.

Next, we use our information experiment to investigate the causal relation between relative income and demand for redistribution. We use the following specification:

$$Y_i = \alpha_{nat} \cdot \left(r_{i,nat}^{signal} - r_{i,nat}^{prior}\right) \cdot T_i + \alpha_{int} \cdot \left(r_{i,int}^{signal} - r_{i,int}^{prior}\right) \cdot T_i + \beta_1 \cdot \left(r_{i,nat}^{signal} - r_{i,nat}^{prior}\right) + \beta_2 \cdot \left(r_{i,int}^{signal} - r_{i,int}^{prior}\right) + \beta_3 X_i + \varepsilon_i, \quad (3)$$

where T_i is the treatment indicator variable, indicating whether the individual was treated with information about her actual relative income, or not. The two key parameters are α_{nat} and α_{int}, where $\frac{\alpha_{nat}}{100}$ shows the causal effect of a respondent receiving information implying that her national rank is 1 pp. higher than she previously thought. Correspondingly, $\frac{\alpha_{int}}{100}$ shows the causal effect of a respondent being told that her global rank is 1 pp. higher than she believed it to be. The variables $r_{i,nat}^{signal} - r_{i,nat}^{prior}$ and $r_{i,int}^{signal} - r_{i,int}^{prior}$ control for the non-random variation in prior misperceptions: i.e., they guarantee that α_{nat} and α_{int} are identified by random variation in information provision. Last, X_i is a set of additional controls.[18]

There are two features of this specification worth mentioning. First, we use the center/right group for the sake of brevity: in Appendix C.6 we show that the results are similar in the two subgroups ("Center" and "Right"). Second, this regression specification is quite demanding in that it simultaneously includes in the regression two variables that are significantly correlated:

[18] In Appendix C.7, we present results for the average effects of receiving information (i.e., regardless of whether the feedback was above or below the prior belief).

perceptions of national and global relative income. In Appendix C.6 we present the results under a specification which uses national rank alone. The results from this, less demanding, specification are not only robust but also more precisely estimated.

The experimental results are presented in Table 7 and line up relatively well with the raw correlations in Table 6. The first two columns of Table 7 present the average treatment effects and indicate that preferences for redistribution (national and global) decrease with national relative income, but the magnitude is small and the coefficients are imprecisely estimated and statistically insignificant. The second set of columns shows that the effects are large and significant for the left-leaning respondents: communicating information to left-of-center respondents that their national income rank is 10 percentage points higher than they previously believed decreases their support for national redistribution by around 0.08 standard deviations, while the effects of national rank on global redistribution are slightly higher in magnitude (0.09 standard deviations). In contrast. there are no significant effects of information about global rank on the demand for global (or national) redistribution; we can indeed reject the null hypothesis that the effects of information about national and global ranks are equal on the national (p=0.017) as well as the global redistribution outcome (p=0.013). The third set of columns shows a null-effect for center/right respondents: the point estimates are close to zero, precisely estimated and statistically insignificant.

Figure 10 provides a graphical representation of the effects of information on national rank using binned scatterplots. In the interest of maximizing power, and based on the results presented above, we use a specification that ignores the misperceptions about global income. Figure 10.a depicts this relation for the left-of-center respondents, and indicates that the results are not driven by outliers, and that assuming a linear relationship is reasonable. Figure 10.b shows center/right respondents, and confirms that the effects of the information intervention are robustly null across the entire distribution.

Next, we consider the effects on the secondary outcomes. These results are presented in Table 8. As before, we consider the effects on the on the full sample (panel a), for left-of-center respondents (panel b), and center/right respondents (panel c). In each panel, the first column reproduces, for comparison, the effect of information provision on the demand for global redistribution. Columns 2-4 in each panel present the results for the questions about support for an international, redistributive institution, support for immigration, and support for globalization, respectively. The outcome measure in the fifth column is a standardized index of all four measures of global redistribution, following the methodology of Kling et al. (2007).[19]

Considering first the left-of-center sample shown in panel b), we see that receiving information that one has a higher relative income in Germany, than previously believed, causally decreases support for a redistributive international institution (column 2). The coefficient for this outcome

[19]In Appendix C.8, we present the effects on the behavior in the dictator games, which took place after the information provision stage and in Appendix C.9 we present the effects on the redistributive preferences elicited in the follow-up survey.

(-1.035, p<0.05) is similar in magnitude and statistical significance as the coefficient on the main outcome on global redistribution (-0.929, p<0.05). The point estimates for the support for globalization and immigration outcomes (-0.499 and -0.521 in columns (3) and (4), respectively) are also negative although somewhat smaller in magnitude than the other coefficients and statistically insignificant. The effects on the index (column 5) is similar in magnitude to the main outcome (-0.759) and highly statistically significant (p-value<0.01). For the center/right sample (panel c), the effects are again precisely estimated nulls.

We present some additional robustness checks in Appendix C.6. First, we provide a falsification test of the information intervention: we use the two questions about the respondent's belief in the importance of effort versus luck for individual economic success both at the national the global level. Despite these variables being related to demand for redistribution, we expect no treatment effect as they were measured before the information-provision. The results confirm this expectation: the coefficients are close to zero, statistically insignificant and precisely estimated. Last, we provide a graphical analysis of the effects of information, using histograms to break down the treatments into positive, neutral, and negative news about the income ranks. This exercise confirms our results reported above.

5 Conclusions

This study presents evidence on the determinants of demand for national and global redistribution using a large-scale, longitudinal, survey experiment. We start by studying misperceptions about individual relative income, at both the national and global levels, in a representative sample of the German population. We document that misperceptions are significant in magnitude. We also provide ample evidence suggesting that the misperceptions are meaningful. For example, we show that misperceptions persist despite significant rewards for guessing correctly. We show that misperceptions are consistent across time and across different household members. We also show that providing information to individuals affects the perceptions of those same individuals a year later and affects the perceptions of other members of the individuals' household. We find that individuals are willing to pay non-trivial amounts for information about their global and national income ranks. Although the absolute size of misperceptions are similar for national and global biases, their distributions are different: whereas Germans on average are correct about their national relative income rank, they tend to underestimate their global income rank by about 13 percentage points; and there is evidence of assortativity neglect at the national level but not at the global level.

We also investigate the demand for national and global redistribution. Using both correlational and experimental estimates, we find evidence that relative national income is a significant determinant of preferences for national redistribution. This finding aligns with the predictions of seminal political economy models (e.g., Meltzer-Richard), which predict that the relatively rich

demand less redistribution than the relatively poor, as the rich receive fewer monetary benefits from redistribution. We observe significant heterogeneity in this relation, however. For the political left, the relation between relative national income rank and demand for national redistribution is pronounced and robust, but for the political center and right it is not. This suggests that they are more open to redistribution as they are also more elastic to information as to whether they are richer or poorer than they thought.

Our findings indicate that a Meltzer-Richard or similar model should not be extrapolated and used to explain the demand for global redistribution: global relative income rank is neither correlated with nor causally related to demand for global redistribution. The fact that global relative income does not affect demand for global redistribution in our sample could be due to poor Germans failing to realize that more extensive global redistribution would redistribute their income to other parts of the world where people are even poorer. Another potential interpretation relies on reference group effects. For example, Germans may care about their relative income when compared to other Germans but not when compared to others around the globe. In line with the finding that demand for global redistribution is unrelated to global rank, we also document that demand is unrelated to support for immigration and globalization. In the global income distribution, Germans are affluent, yet we still observe significant support for global redistribution. Our findings thus indicate that demand for global redistribution in Germany may be higher than it would have been if the main determinant had been global relative income.

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Figure 1: Screenshot of a Sample of the Information Treatment

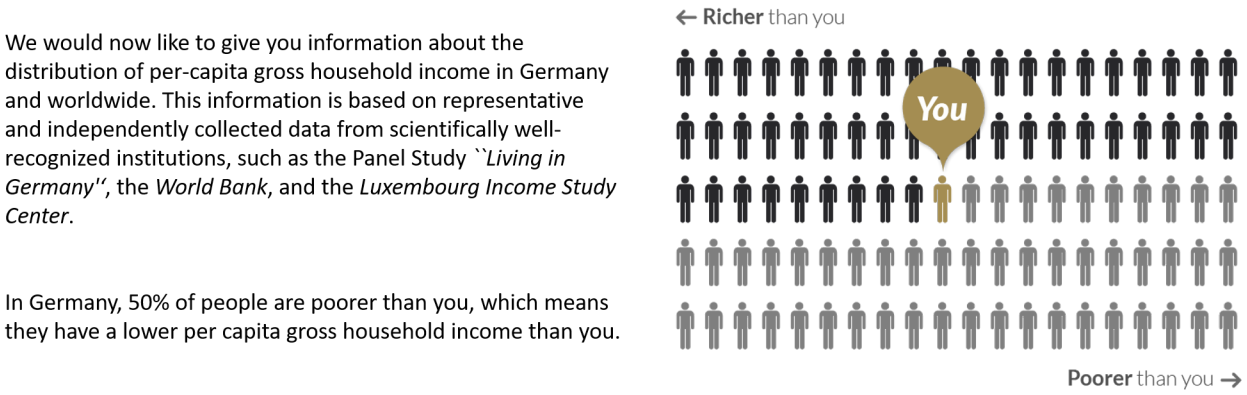
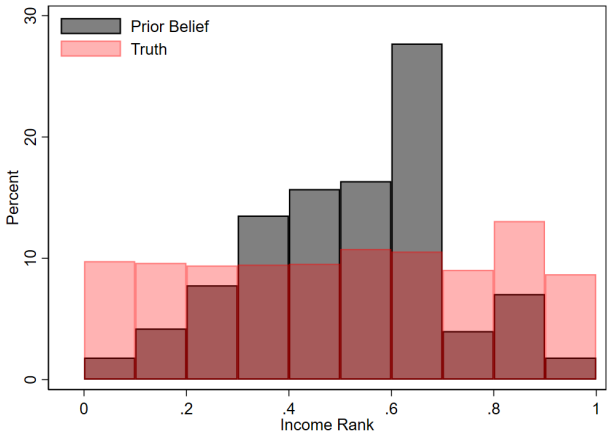
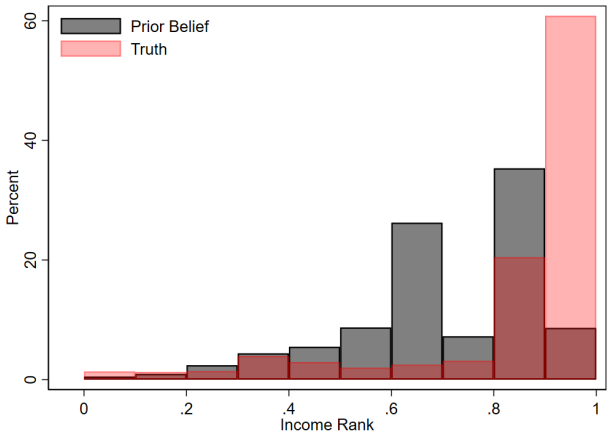


Figure 2: Prior Beliefs about Income Rank vs. True Income Rank

a. National Income Rank



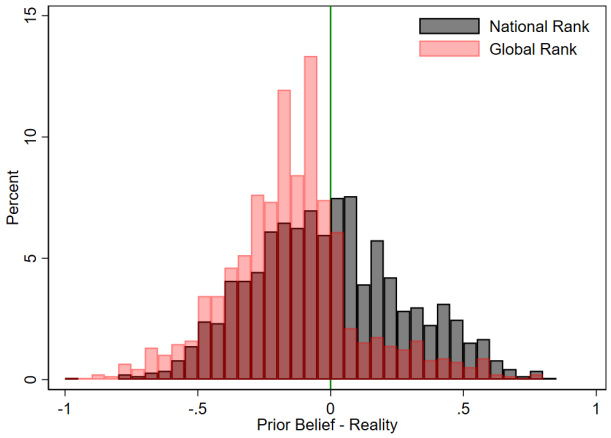
b. Global Income Rank



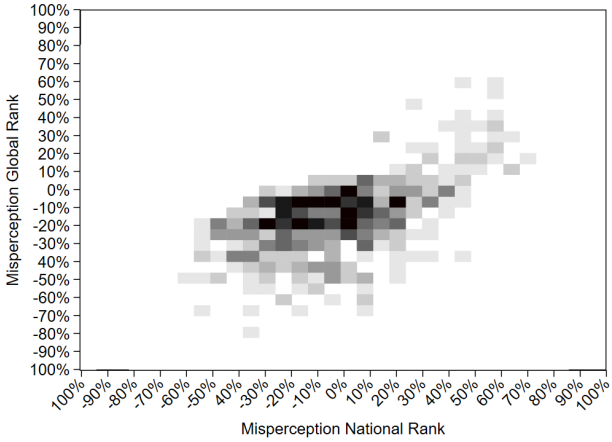
Notes: Distribution of prior beliefs about own income rank and the true income rank at the national level (panel a.) and global level (panel b.). Data from baseline survey.

Figure 3: Misperceptions

a. Distribution of Misperceptions



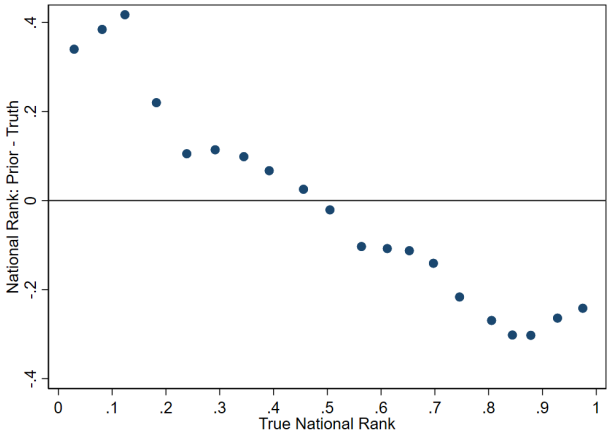
b. Correlation of Misperceptions



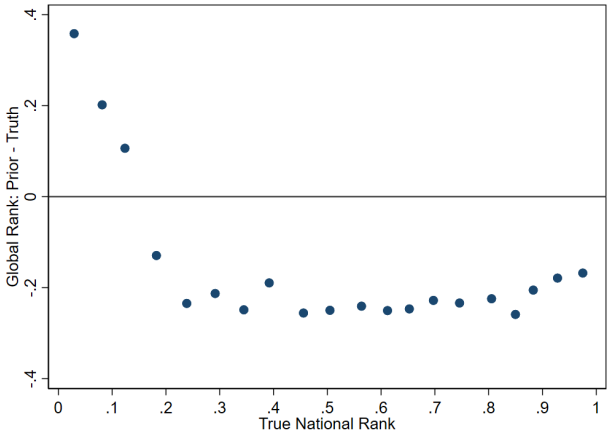
Notes: Distribution of misperceptions at the national and global level (panel a.) and their correlation (panel b.). Misperceptions are calculated as difference between prior beliefs about income rank and true income rank. Positive (negative) differences correspond to overestimation (underestimation) of own income rank. Data from baseline survey.

Figure 4: Middle-Class Bias

a. National Income Rank



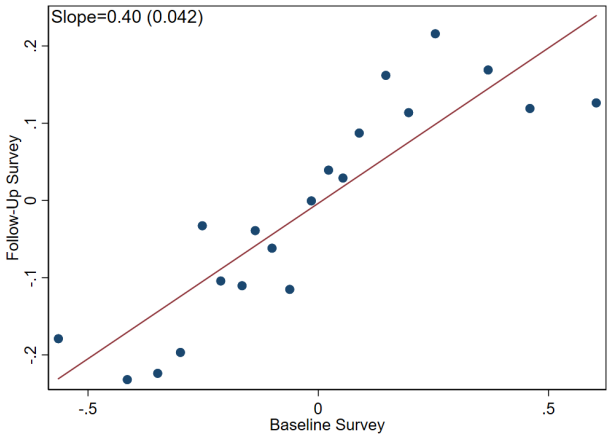
b. Global Income Rank



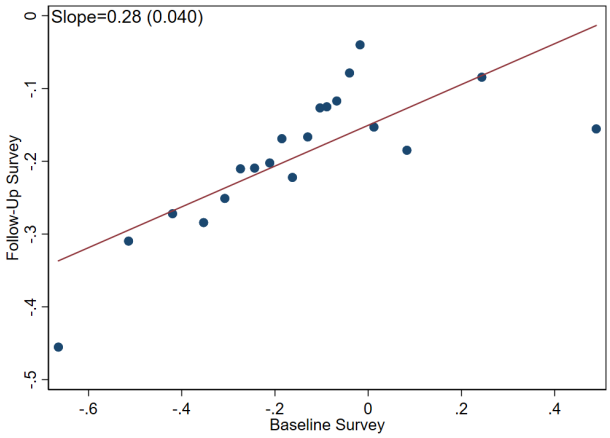
Notes: Binned scatterplots showing the relationship between true income rank and misperceptions at the national level (panel a.) and global level (panel b.). Data from baseline survey

Figure 5: Year-over-year Persistence of Misperceptions

a. National Income Rank



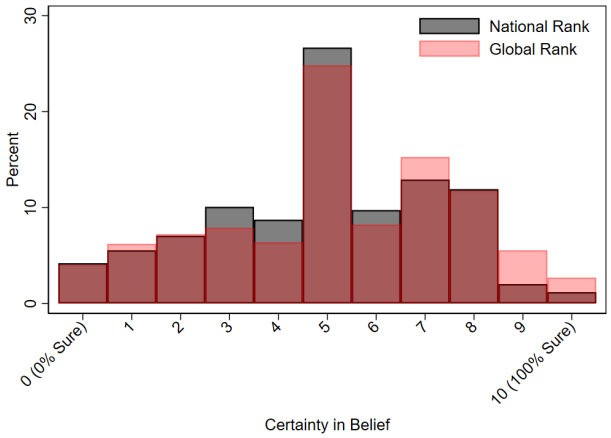
b. Global Income Rank



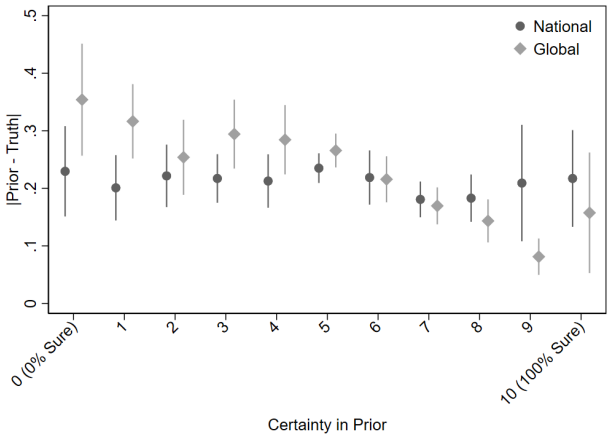
Notes: Binned scatterplots showing the persistence of misperceptions between the baseline and the follow-up survey (one year later) for national income rank (panel a.) and global income rank (panel b.). Estimates based on control groups in the baseline and follow-up survey only.

Figure 6: Confidence in Beliefs about Income Rank

a. Distribution of Confidence



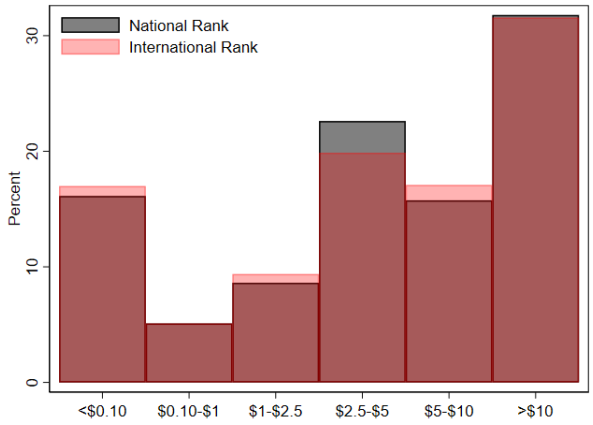
b. Confidence vs. Misperceptions



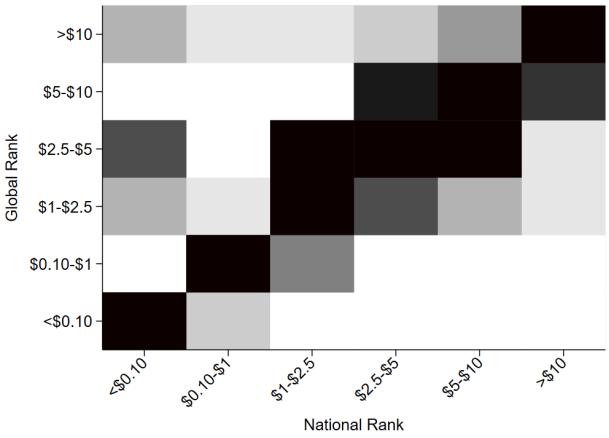
Notes: Distribution of reported confidence in beliefs about income rank in follow-up survey (panel a.) and relationship between confidence and misperceptions for both national and global income rank (panel b.). Estimates in panel b.) based on follow-up control group only.

Figure 7: WTP for Information

a. Distribution



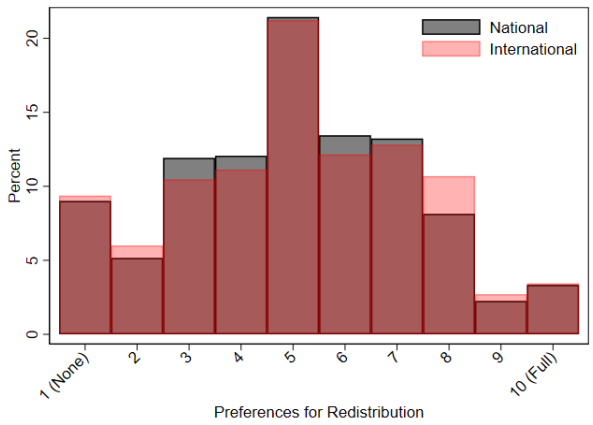
b. Correlation National vs. Global



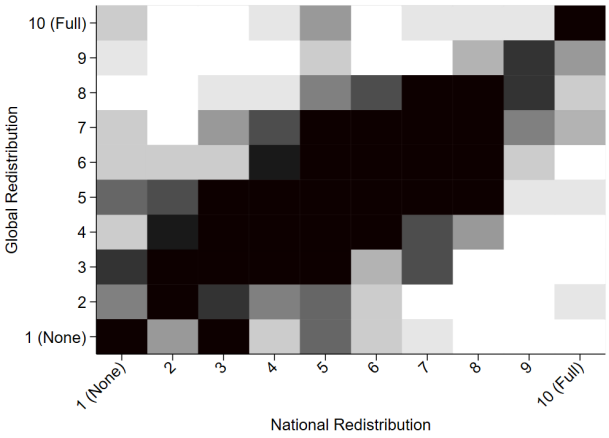
Notes: Distribution of willingness to pay (WTP) for information on national and global income rank (panel a.) and their correlation (panel b.) in the follow-up survey.

Figure 8: Preferences for Redistribution

a. Distribution



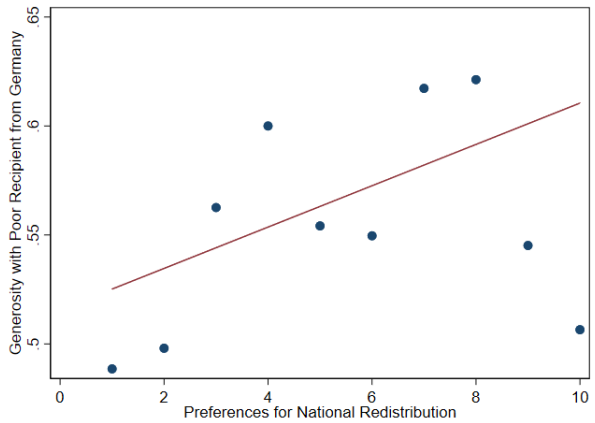
b. Correlation National Vs. Global



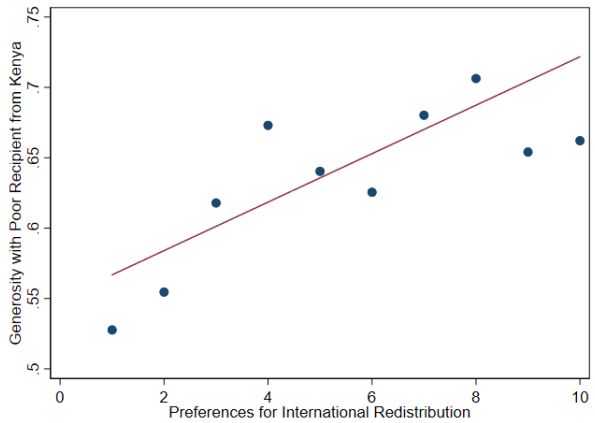
Notes: Distribution of preferences for national and global redistribution (panel a.) and their correlation (panel b.) in the baseline survey.

Figure 9: Preferences for Redistribution vs. Generosity in Distributional Tasks

a. National Redistribution



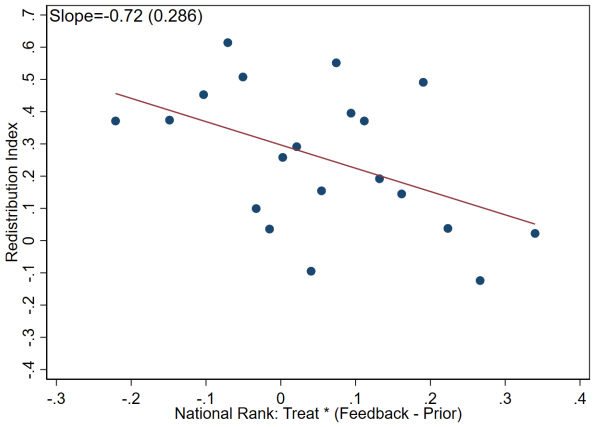
b. Global Redistribution



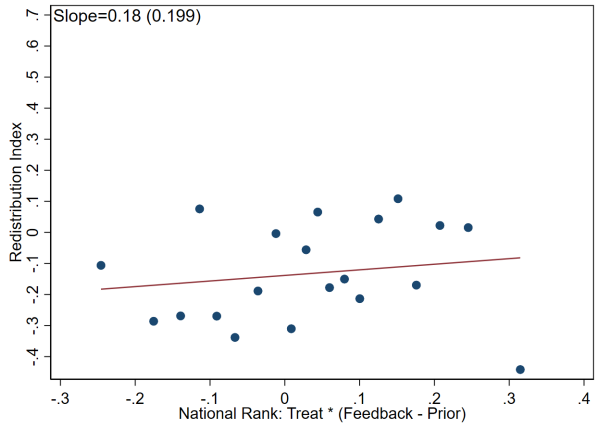
Notes: Binned scatterplots showing the relationship between preference for national redistribution and share of giving to a poor German household (panel a.) and the relationship between preference for global redistribution and share of giving to a poor global household (panel b.). Data from baseline survey.

Figure 10: Effects of Information Provision on Demand for Redistribution

a. Left-of-center Respondents



b. Center/Right Respondents



Notes: Binned scatterplots showing the effect of information on true income rank on demand for redistribution for left-of-center respondents (panel a.) and center/right respondents (panel b.) in the baseline survey. Demand for redistribution is a standardized index of national and global demand for redistribution. Analysis conditional on a set of standard controls.

Table 1: Randomization Balance

	All			Left-Of-Center			Center/Right-Wing		
	Treat (1)	Control (2)	P-value (3)	Treat (4)	Control (5)	P-value (6)	Treat (7)	Control (8)	P-value (9)
HH Income (EUR 1,000s)	43.64	43.54	0.97	52.40	45.61	0.12	39.09	42.54	0.37
	(1.91)	(2.28)		(3.45)	(2.52)		(2.26)	(3.14)	
No. of Household Members	2.34	2.28	0.35	2.37	2.35	0.90	2.32	2.24	0.31
	(0.04)	(0.05)		(0.07)	(0.09)		(0.06)	(0.06)	
Female (=1)	0.54	0.55	0.79	0.54	0.58	0.42	0.55	0.54	0.82
	(0.02)	(0.02)		(0.03)	(0.03)		(0.02)	(0.02)	
Age	54.58	56.44	0.06	52.67	55.51	0.09	55.58	56.88	0.28
	(0.71)	(0.69)		(1.20)	(1.20)		(0.87)	(0.84)	
Education: upper secondary	0.63	0.60	0.23	0.56	0.54	0.67	0.66	0.62	0.20
	(0.02)	(0.02)		(0.03)	(0.03)		(0.02)	(0.02)	
Education: college	0.22	0.23	0.61	0.33	0.31	0.70	0.16	0.19	0.24
	(0.02)	(0.02)		(0.03)	(0.03)		(0.02)	(0.02)	
Disabled (=1)	0.13	0.15	0.18	0.12	0.11	0.90	0.14	0.17	0.11
	(0.01)	(0.01)		(0.02)	(0.02)		(0.02)	(0.02)	
Unemployed (=1)	0.03	0.04	0.70	0.02	0.02	0.91	0.04	0.05	0.75
	(0.01)	(0.01)		(0.01)	(0.01)		(0.01)	(0.01)	
Retired (=1)	0.34	0.35	0.72	0.32	0.31	0.92	0.36	0.37	0.65
	(0.02)	(0.02)		(0.03)	(0.03)		(0.02)	(0.02)	
SPD Supporter (=1)	0.13	0.16	0.14	0.22	0.25	0.35	0.09	0.11	0.16
	(0.01)	(0.01)		(0.03)	(0.03)		(0.01)	(0.01)	
CDU/CSU Supporter (=1)	0.22	0.24	0.30	0.10	0.09	0.71	0.28	0.31	0.26
	(0.02)	(0.02)		(0.02)	(0.02)		(0.02)	(0.02)	
East Germany (=1)	0.23	0.23	0.99	0.25	0.27	0.76	0.22	0.22	0.86
	(0.02)	(0.02)		(0.03)	(0.03)		(0.02)	(0.02)	
Observations	705	687		241	222		464	465	

Notes: Averages for a standard set of observables, p-value is for test of difference for treatment and control.

Table 2: Effects of Information Provision on Beliefs One Year Later

	Beliefs in Follow-Up Survey				Beliefs in Baseline Survey			
	(1) National	(2) National	(3) Global	(4) Global	(5) National	(6) National	(7) Global	(8) Global
National Rank: Treat*(Feedback - Prior)	0.137***	0.179***			0.017	-0.001		
	(0.039)	(0.044)			(0.025)	(0.030)		
National Rank: Peer Treatment*(Feedback - Prior)		0.144**				-0.059*		
		(0.057)				(0.036)		
Global Rank: Treat*(Feedback - Prior)			0.114***	0.148***			-0.043	-0.036
			(0.043)	(0.047)			(0.027)	(0.029)
Global Rank: Peer Treatment*(Feedback - Prior)				0.099				0.023
				(0.063)				(0.041)
Observations	1,150	1,150	1,135	1,135	1,224	1,224	1,147	1,147

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. OLS regressions estimating the effect of information provision on beliefs about income rank one year later (in the follow-up survey). Standard errors clustered at the household level in parentheses. Analysis conditional on number of household members, and household gross income.

Table 3: Effects of Information Provision on Belief Certainty One Year Later

	Certainty in Follow-Up Survey			
	(1) National	(2) National	(3) Global	(4) Global
Treatment	0.421***	0.441**	0.583***	0.770***
	(0.136)	(0.171)	(0.146)	(0.181)
Peer Treatment		0.056		0.513**
		(0.222)		(0.233)
Observations	1,152	1,152	1,138	1,138

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. OLS regressions estimating the effect of information provision on confidence of belief statements about income rank one year later (in the follow-up survey). Standard errors clustered at the household level in parentheses. Analysis conditional on number of household members, and household gross income.

Table 4: Correlates of Demand for Redistribution

	National Redistribution		Global redistribution	
	(1)	(2)	(3)	(4)
Age	-0.008*	-0.003	-0.016***	-0.010**
	(0.005)	(0.005)	(0.005)	(0.005)
Female	-0.047	0.007	-0.065	-0.081
	(0.173)	(0.174)	(0.179)	(0.182)
Education: upper secondary	-0.085	-0.142	-0.239	-0.402
	(0.177)	(0.254)	(0.185)	(0.270)
Education: college & more	-0.076	-0.287	-0.075	-0.638**
	(0.198)	(0.304)	(0.213)	(0.322)
Unemployed	0.456	0.053	0.522	0.571
	(0.453)	(0.440)	(0.423)	(0.428)
Monthly net income (log)	-0.459**	-0.658***	0.013	-0.152
	(0.197)	(0.218)	(0.199)	(0.216)
Political orientation: left-of-center	1.014***	1.016***	1.117***	1.073***
	(0.170)	(0.175)	(0.181)	(0.196)
East Germany	0.527***	0.262	-0.028	-0.155
	(0.203)	(0.217)	(0.208)	(0.232)
German citizenship	-0.697*	-0.466	-0.786**	-0.521
	(0.362)	(0.367)	(0.371)	(0.384)
Catholic	-0.063	-0.145	-0.293	-0.380
	(0.194)	(0.234)	(0.201)	(0.239)
Protesant	-0.418**	-0.421**	-0.104	-0.286
	(0.184)	(0.214)	(0.199)	(0.230)
Luck vs. Effort National	-0.174***	-0.086	-0.086	-0.014
	(0.054)	(0.063)	(0.056)	(0.071)
Luck vs. Effort Global	-0.174***	-0.114**	-0.121**	-0.071
	(0.047)	(0.058)	(0.050)	(0.065)
Risk aversion	-0.041	-0.037	-0.079*	-0.098**
	(0.038)	(0.039)	(0.041)	(0.042)
Observations		657		655

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. OLS regressions with robust standard errors in parentheses using data from the baseline control group. The dependent variable is national demand for redistribution (columns 1 and 2) and global demand for redistribution (columns 3 and 4). Uneven-numbered columns display coefficients from separate regressions for each covariate, while even-numbered columns report multivariate regressions including all covariates at once. The dependent variables are measured on a 0–10 scale with 0 indicating "no redistribution" and 10 indicating "full redistribution." All covariates are defined as binary variables (except age, monthly net income, luck vs. effort, and risk aversion).

Table 5: Correlates of Support of International Organization, Immigration, and Globalization

	Support Int. Organization		Support Immigration		Support Globalization	
	(1)	(2)	(3)	(4)	(5)	(6)
Luck vs. Effort National	-0.100	-0.010	-0.031	0.081	0.030	0.101*
	(0.065)	(0.060)	(0.053)	(0.061)	(0.048)	(0.057)
Luck vs. Effort Global	-0.128**	-0.019	-0.138***	-0.162***	-0.075*	-0.120**
	(0.055)	(0.053)	(0.044)	(0.050)	(0.040)	(0.048)
National Redistribution	0.610***	0.177***	0.121***	-0.145***	0.042	-0.093*
	(0.044)	(0.056)	(0.039)	(0.048)	(0.039)	(0.054)
Global Redistribution	0.717***	0.598***	0.281***	0.378***	0.115***	0.172***
	(0.032)	(0.049)	(0.035)	(0.044)	(0.035)	(0.050)
Observations		671		682		680

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. OLS regressions with robust standard errors in parentheses using data from the baseline control group. The dependent variable is support for an international organization to implement global redistribution (columns 1 and 2), support for immigration from poor countries (columns 3 and 4), and support for globalization (columns 5 and 6). Uneven-numbered columns display coefficients from separate regressions for each covariate, while even-numbered columns report multivariate regressions including all covariates at once. All are measured on a 0–10 scale with 0 indicating "no support" and 10 indicating "full support."

Table 6: Correlation between Prior Beliefs and Preferences for Redistribution

	All		Left-Of-Center		Center/Right	
	(1) National	(2) Global	(3) National	(4) Global	(5) National	(6) Global
National Rank$^{(i)}$	-0.557**	-0.190	-1.009***	-1.008***	-0.503	0.102
	(0.245)	(0.235)	(0.369)	(0.372)	(0.311)	(0.300)
Global Rank$^{(ii)}$	0.085	0.127	0.573	0.643	-0.137	-0.094
	(0.237)	(0.235)	(0.366)	(0.392)	(0.283)	(0.281)
P-value (i)=(ii)	0.137	0.446	0.017	0.013	0.484	0.706
Observations	683	679	235	235	448	444

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. OLS regressions with standard errors clustered at the household level in parentheses using data from the baseline control group. The dependent variables are the standardized national (National) and global demand for redistribution (Global). Columns 1–2 use data for the whole baseline control sample, columns 3–4 display results for left-of-center respondents and columns 5–6 display results for center/right respondents. Left-of-center is defined as below median on the self-assessment scale for political orientation from left to right, whereas center/right subsumes respondents at or above the median on this scale. P-value reports the result from a Wald test for equivalence of the two reported coefficients.

Table 7: Effects of Information Provision on Preferences for Redistribution

	All			Left-Of-Center			Center/Right		
	(1) National	(2) Global	(3) Index	(4) National	(5) Global	(6) Index	(7) National	(8) Global	(9) Index
National Rank: Treat*(Feedback - Prior)	-0.190	-0.230	-0.201	-0.777*	-0.929**	-0.857**	0.078	0.102	0.108
	(0.250)	(0.244)	(0.225)	(0.462)	(0.392)	(0.382)	(0.295)	(0.301)	(0.272)
Global Rank: Treat*(Feedback - Prior)	-0.001	0.114	0.038	0.190	0.150	0.171	0.002	0.174	0.061
	(0.261)	(0.245)	(0.235)	(0.500)	(0.446)	(0.433)	(0.298)	(0.285)	(0.271)
P-value (i)=(ii)	0.689	0.440	0.572	0.276	0.155	0.167	0.889	0.894	0.925
Observations	1,350	1,341	1,351	454	452	454	896	889	897

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. OLS regressions with standard errors clustered at the household level in parentheses using data from the baseline survey. The dependent variables are the standardized national (National) and global demand for redistribution (Global) and an equally-weighted index of the two. Columns 1–2 use data for the whole sample, columns 3–4 display results for left-of-center respondents and columns 5–6 display results for center/right respondents. Left-of-center is defined as below median on the self-assessment scale for political orientation from left to right, whereas center/right subsumes respondents at or above the median on this scale. Analysis conditional on standard set of control (age, indicator variables for sex, education, disabled, unemployed, retired respondents, region (East Germany), and party affiliation of the respondent). P-value reports the result from a Wald test for equivalence of the two reported coefficients.

Table 8: Effects of Information Provision on Secondary Outcomes about Global Redistribution

	All				
Panel a)	(1) Global Red.	(2) Supp. Global	(3) Immigration	(4) Globalization	(5) Index
National Rank: Treat*(Feedback - Prior)	-0.230	-0.307	-0.138	0.012	-0.194
	(0.244)	(0.245)	(0.242)	(0.266)	(0.165)
Global Rank: Treat*(Feedback - Prior)	0.114	0.172	0.102	-0.243	0.087
	(0.245)	(0.241)	(0.240)	(0.258)	(0.160)
P-value (i)=(ii)	0.440	0.280	0.585	0.599	0.344
Observations	1,341	1,325	1,358	1,345	1,364
	Left-Of-Center				
Panel b)	(1) Global Red.	(2) Supp. Global	(3) Immigration	(4) Globalization	(5) Index
National Rank: Treat*(Feedback - Prior)	-0.929**	-1.035**	-0.499	-0.521	-0.759***
	(0.392)	(0.460)	(0.410)	(0.473)	(0.273)
Global Rank: Treat*(Feedback - Prior)	0.150	0.540	0.701	-0.110	0.308
	(0.446)	(0.473)	(0.457)	(0.512)	(0.321)
P-value (i)=(ii)	0.155	0.063	0.131	0.654	0.049
Observations	452	447	454	454	458
	Center/Right				
Panel c)	(1) Global Red.	(2) Supp. Global	(3) Immigration	(4) Globalization	(5) Index
National Rank: Treat*(Feedback - Prior)	0.102	0.073	-0.006	0.269	0.087
	(0.301)	(0.288)	(0.291)	(0.315)	(0.200)
Global Rank: Treat*(Feedback - Prior)	0.174	0.068	-0.031	-0.330	0.043
	(0.285)	(0.277)	(0.267)	(0.282)	(0.176)
P-value (i)=(ii)	0.894	0.992	0.961	0.273	0.899
Observations	889	878	904	891	906

Notes: ***p $<$ 0.01, **p $<$ 0.05, *p $<$ 0.1. OLS regressions with standard errors clustered at the household level in parentheses using data from the baseline survey. The dependent variables are the standardized global demand for redistribution, support for an international organization for global redistribution, support for immigration from poor countries and support for globalization as well as an equally-weighted index of these four variables. Panel a) uses data for the whole sample, panel b) displays results for left-of-center respondents and panel c) displays results for center/right respondents. Left-of-center is defined as below median on the self-assessment scale for political orientation from left to right, whereas center/right subsumes respondents at or above the median on this scale. Analysis conditional on standard set of control (age, indicator variables for sex, education, disabled, unemployed, retired respondents, region (East Germany), and party affiliation of the respondent). P-value reports the result from a Wald test for equivalence of the two reported coefficients.

Online Appendix: For Online Publication Only

A Survey Instrument: Baseline

BASELINE SURVEY

Q132 - ISP1: Earning Money: Luck vs Effort - Intro **Text**

How well an individual succeeds economically in life can depend both on things that are within the person's control, such as personal effort, and on things that are not within the person's control, such as luck.

Q133 - ISP2A: Luck vs. Effort - Germany **Left-right matrix**

Number of rows: 1

Would you say that it is mostly luck or effort that matters for how well an individual in Germany does economically in life?

Please answer according to the following scale.
1 means only luck matters.
10 means only effort matters.
With the steps in between, you can rate your opinion.

Normal

	1 Only luck matters	2	3	4	5	6	7	8	9	10 Only effort matters
X	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q134 - ISP2B: Luck vs. Effort - World **Left-right matrix**

Number of rows: 1

Would you say that it is mostly luck or effort that matters for how well an individual in the world does economically in life?

Please answer according to the following scale.
1 means only luck matters.
10 means only effort matters.
With the steps in between, you can rate your opinion.

Normal

	1 Only luck matters	2	3	4	5	6	7	8	9	10 Only effort matters
X	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q135 - ISP3: Gross Income **Numeric**

Max = 99999999

As a basis for our next module "Income distribution", I would now like to know from you, how high the gross income, ie the income before tax deductions, of your household in 2016 was. Income includes wages or salaries, self-employment income, capital income, pension payments, and other private payments such as alimonies. If you are not sure, please estimate as accurately as possible.

Q136 - ISP4: How many household members **Numeric**

Max = 30

How many people (adults and children under 18), including you, lived in your household in 2016?

Q137 - ISP5: Income Rank - Intro **Text**

You indicated before that your gross household income in 2016 was EUR [XX] and your household had [Y] members. This means that the per-capita gross income in your household in 2016 was EUR [XXX]. We will now ask a few more questions about this per-capita gross household income.

We are interested in your assessment of the relationship between your per-capita gross household income and the incomes of other people's households. Please give the most accurate and truthful assessment. You can earn money for the accuracy of your assessment. For each of the following two questions, you will receive 20 euros at the end of the survey if you are correct in your assessment. If you are wrong in your assessment, you will not receive any money.

Q139 - ISP6A: Income Rank - Germany **Numeric**

Max = 100

What is the proportion of people in **Germany** who had a lower per-capita gross household income in 2016 than you?

--> Please enter your answer in percent. 0 percent means that you are the poorest person in Germany. 100 percent means that you are the richest person in Germany. With the values in between, you can scale your assessment.

Q140 - ISP6B: Income Rank - World **Numeric**

Max = 100

What is the proportion of people **in the World** who had a lower per-capita gross household income in 2016 than you?

--> Please enter your answer in percent. 0 percent means that you are the poorest person in Germany. 100 percent means that you are the richest person in Germany. With the values in between, you can scale your assessment.

[...QUESTIONS FROM A DIFFERENT MODULE...]

PB Q147 - PPOL6: Left-Right **Matrix**

Number of rows: 1 | Number of columns: 11

In politics, people often talk about "left" and "right" when it comes to identifying different political attitudes. When you think of your own political views, where would you classify these views?

Please answer according to the following scale.
The value 0 means: far left, the value 10 means: far right.
The values between 0 and 10 allow you to rate your opinion.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	0 Far left	1	2	3	4	5	6	7	8	9	10 Far right
	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

[...QUESTIONS FROM A DIFFERENT MODULE...]

Ask only if **Q26901 – ISP_treat_split,** 1

Q269 - ISP8: Rank Information - Intro **Text**

We would now like to give you information about the distribution of per-capita gross household income in Germany and worldwide. This information is based on representative and independently collected data from scientifically well-recognized institutions, such as the Panel Study ``*Living in Germany*'', the *World Bank*, and the *Luxembourg Income Study Center*.

Ask only if **Q26901 – ISP_treat_split,** 1

Q270 - ISP9A: Rank Information Germany **Text**

In Germany, X% of people are poorer than you, which means they have a lower per capita gross household income than you.

Graphical Illustration

Ask only if **Q26901 – ISP_treat_split,** 1

Q271 - ISP9B: Rank Information World **Text**

Worldwide, X% of people are poorer than you, which means they have a lower per capita gross household income than you.

Graphical Illustration

Q272 - ISP10: Redistribution – Intro **Text**

Now we will talk about redistribution. ***Economic redistribution*** means that the state, through taxes and subsidies, makes the income in society more equal between citizens than what would have been the case without these taxes and subsidies.

Q273 - ISP11A: Redistribution - Germany **Matrix**

Number of rows: 1 | Number of columns: 10

How much economic redistribution do you want between citizens in Germany?

No redistribution means that the state doesn't influence the income distribution at all. Full redistribution means that everyone earns the same amount after redistribution has been done.

Please answer according to the following scale.
The value 1 means: no redistribution,
the value 10 means: complete redistribution.
With the steps in between, you can scale your assessment.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 No redistribution	2	3	4	5	6	7	8	9	10 Complete redistribution
X	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q274 - ISP11B: Redistribution - World **Matrix**

Number of rows: 1 | Number of columns: 10

Now imagine that there would be a way to redistribute income in the world in a similar way to how the state can redistributive income within a country.

How much economic redistribution do you want between citizens in the world?

No redistribution means that the state doesn't influence the income distribution at all. Full redistribution means that everyone earns the same amount after redistribution has been done.

Please answer according to the following scale.
The value 1 means: no redistribution,
the value 10 means: complete redistribution.
With the steps in between, you can scale your assessment.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 No redistribution	2	3	4	5	6	7	8	9	10 Complete redistribution
X	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q275 - ISP12: International Redistribution **Matrix**

Number of rows: 1 | Number of columns: 10

Would you support the introduction of an international body (similar to the United Nations) that can redistribute income or resources between countries?

1 means: definitely not support.
10 means: definitely support.
With the values in between, you can rate your opinion.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 definitely not support	2	3	4	5	6	7	8	9	10 definitely support
.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q276 - ISP13: Experiment - Intro **Text**

We now want to set you two tasks where you can again earn money. In the two tasks you have to decide how you want to divide a certain amount of money between yourself and another household. At the end, every 7th respondent is selected and actually paid in one of the two tasks according to their decision. The determination of whether your decision will be paid will be made at the end of this module. The actual payment will be made at the end of the survey.

Q277 - ISP14A: Intro Distribution 50 Euro Germany **Text**

You are paired with another household in Germany, which also participates in the "Life in Germany Innovation Survey" (but does not participate in this survey). This household is one of the poorest 10 percent of households in Germany. You now have 50 euros available and can divide this amount in any way between you and the other household.

If this task is selected for payment, you will receive the amount you keep after the interview. The amount that you allocated to the other household will be transferred in full (without transaction costs) by Kantar Public at the end of the field time. In full means that your allocated amount arrives 1:1 at the other household.

Please make your decision in private.

Please hand over the laptop to the respondent.

Q278 - ISP14AX: Decision 50 Euro Germany **Numeric**

Max = 50

How much of the 50 euros do you keep for yourself and how much do you give the other household?

I keep __€ ISP14A1 -1	I give __€ ISP14A2 -1

Q279 - ISP14A3: Message **Text**

Thank you for your decision. Please click on "Next" and hand over the laptop again to the interviewer.

Q280 - ISP14B: Intro Distribution World **Text**

You are paired with another household in Kenya or Uganda. This is one of the poorest 10 percent households worldwide. You now have 50 euros available and can divide this amount in any way between you and the other household.

If this task is selected for payment, you will receive the amount you keep at the end of the survey. The amount that you allocate to the other household will be forwarded to the selected household directly and completely (without transaction costs) by the University of Heidelberg at the end of field time via a non-profit organization. In full means that your allocated amount arrives 1:1 at the other household.

Please make your decision in private.

Please hand over the laptop to the respondent.
On Demand: Please hand over the information sheet for GiveDirectly.

Q281 - ISP14BX: Decision 50 Euro World **Numeric**

Max = 50

How much of the 50 euros do you keep for yourself and how much do you give the other household?

I keep __€ ISP14B1 -1	I give __€ - ISP14B2 -1

Q282 - ISP14B3: Message **Text**

Thank you for your decision. Please click on "Next" and hand over the laptop again to the interviewer.

Q283 - ISP15: Globalization **Matrix**

Number of rows: 1 | Number of columns: 10

Now, I want to talk with you about "globalization." Globalization means that local, regional and national economies are growing together more globally. This happens, among other things, through technological progress, but also through the removal of trade barriers.

What level of globalization do you advocate?

No globalization means that countries are completely isolated and no trade with other countries takes place. Complete globalization means that there are no barriers to trade and barriers to the movement of persons, goods and capital.

Please answer according to the following scale.
A 1 means no globalization,
a 10 means complete globalization.
With the steps in between you can graduate your judgment.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 no globalization	2	3	4	5	6	7	8	9	10 Complete globalization
X	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q284 - ISP16: Immigration **Matrix**

Number of rows: 1 | Number of columns: 10

Should Germany, in your opinion, allow more or less people from poorer countries to come to Germany and work and live here?

Please answer according to the following scale.
A 1 means: much less people,
a 10 means: many more people.
With the steps in between, you can rate your opinion.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 Much less people	2	3	4	5	6	7	8	9	10 Much more people
X	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

B Survey Instrument: Follow-Up

FOLLOW-UP SURVEY

Q253 - ISP3: Gross Income — **Numeric**

Max = 99999999

As a basis for our next module "Income distribution", I would now like to know from you, how high the gross income, ie the income before tax deductions, of your household in 2017 was. Income includes wages or salaries, self-employment income, capital income, pension payments, and other private payments such as alimonies. If you are not sure, please estimate as accurately as possible.

Q254 - ISP4: How many household members — **Numeric**

Max = 30

How many people (adults and children under 18), including you, lived in your household in 2017?

Q255 - ISP5: Income Rank - Intro — **Text**

You indicated before that your gross household income in 2017 was EUR [XX] and your household had [Y] members. This means that the per-capita gross income in your household in 2017 was EUR [XXX]. We will now ask a few more questions about this per-capita gross household income.

We are interested in your assessment of the relationship between your per-capita gross household income and the incomes of other people's households. Please give the most accurate and truthful assessment. You can earn money for the accuracy of your assessment. For each of the following two questions, you will receive 20 euros at the end of the survey if you are correct in your assessment. If you are wrong in your assessment, you will not receive any money.

Q257 - ISP6A: Income Rank - Germany — **Numeric**

Max = 100

What is the proportion of people in **Germany** who had a lower per-capita gross household income in 2017 than you?

--> Please enter your answer in percent.
0 percent means that you are the poorest person in Germany.
100 percent means that you are the richest person in Germany.
With the values in between, you can scale your assessment.

Q258 - ISP6A_1: Income Rank – Germany Certainty — **Left-right matrix**

Answer not required | Not back | Number of rows: 1

How sure are you with your answer?

Please answer according to the following scale, where the value 0% means "not certain" and the value 100% means "very certain". With the steps in between, you can scale your assessment.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	0% Not certain	10%	20%	30%	40%	50%	60%	70%	80%	90%	100% Very certain
X	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q259 - ISP6B: Income Rank - World **Numeric**

Max = 100

What is the proportion of people **in the World** who had a lower per-capita gross household income in 2017 than you?

--> Please enter your answer in percent. 0 percent means that you are the poorest person in Germany. 100 percent means that you are the richest person in Germany. With the values in between, you can scale your assessment.

Q260 - ISP6A_1: Income Rank – World Certainty **Left-right matrix**

Answer not required | Not back | Number of rows: 1

How sure are you with your answer?

Please answer according to the following scale, where the value 0% means "not certain" and the value 100% means "very certain". With the steps in between, you can scale your assessment.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	0% Not certain	10%	20%	30%	40%	50%	60%	70%	80%	90%	100% Very certain
X	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

[...QUESTIONS FROM A DIFFERENT MODULE...]

Q414 - ISP10: Redistribution – Intro **Text**

Now we will talk about redistribution. ***Economic redistribution*** means that the state, through taxes and subsidies, makes the income in society more equal between citizens than what would have been the case without these taxes and subsidies.

Q415 - ISP11A: Redistribution - Germany **Matrix**

Number of rows: 1 | Number of columns: 10

How much economic redistribution do you want between citizens in Germany?

No redistribution means that the state doesn't influence the income distribution at all. Full redistribution means that everyone earns the same amount after redistribution has been done.

Please answer according to the following scale.
The value 1 means: no redistribution,
the value 10 means: complete redistribution.
With the steps in between, you can scale your assessment.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 No redistribution	2	3	4	5	6	7	8	9	10 Complete redistribution
X	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q416 - ISP11B: Redistribution - World **Matrix**

Number of rows: 1 | Number of columns: 10

Now imagine that there would be a way to redistribute income in the world in a similar way to how the state can redistributive income within a country.

How much economic redistribution do you want between citizens in the world?

No redistribution means that the state doesn't influence the income distribution at all. Full redistribution means that everyone earns the same amount after redistribution has been done.

Please answer according to the following scale.
The value 1 means: no redistribution,
the value 10 means: complete redistribution.
With the steps in between, you can scale your assessment.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 No redistribution	2	3	4	5	6	7	8	9	10 Complete redistribution
X	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q417 - ISP12: International Redistribution **Matrix**

Number of rows: 1 | Number of columns: 10

Would you support the introduction of an international body (similar to the United Nations) that can redistribute income or resources between countries?

Please answer according to the following scale.
1 means: definitely not support.
10 means: definitely support.
With the values in between, you can rate your opinion.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 definitely not support	2	3	4	5	6	7	8	9	10 definitely support
.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q283 - ISP15: Globalization **Matrix**

Number of rows: 1 | Number of columns: 10

Now, I want to talk with you about "globalization." Globalization means that local, regional and national economies are growing together more globally. This happens, among other things, through technological progress, but also through the removal of trade barriers.

What level of globalization do you advocate?

No globalization means that countries are completely isolated and no trade with other countries takes place. Complete globalization means that there are no barriers to trade and barriers to the movement of persons, goods and capital.

Please answer according to the following scale.
A 1 means no globalization,
a 10 means complete globalization.
With the steps in between you can graduate your judgment.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 No globalization	2	3	4	5	6	7	8	9	10 Complete globalization
X	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q420 - ISP15a: Globalization Poor People **Matrix**

Not back | Number of rows: 1 | Number of columns: 11

Do you think that **poor people** in Germany are disadvantaged by globalization or that they benefit from it?

Please answer according to the following scale:
1 means "very disadvantaged",
10 means "benefit greatly".
With the steps in between, you can scale your assessment.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 Very disadvantaged	2	3	4	5	6	7	8	9	10 Benefit greatly
...	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q420 - ISP15b: Globalization Rich People **Matrix**

Not back | Number of rows: 1 | Number of columns: 11

Do you think that **rich people** in Germany are disadvantaged by globalization or that they benefit from it?

Please answer according to the following scale:
1 means "very disadvantaged",
10 means "benefit greatly".
With the steps in between, you can scale your assessment.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 Very disadvantaged	2	3	4	5	6	7	8	9	10 Benefit greatly
...	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q421 - ISP16: Immigration **Matrix**

Number of rows: 1 | Number of columns: 10

Should Germany, in your opinion, allow more or less people from poorer countries to come to Germany and work and live here?

Please answer according to the following scale.
A 1 means: much less people,
a 10 means: many more people.
With the steps in between, you can rate your opinion.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 Much less people	2	3	4	5	6	7	8	9	10 Much more people
X	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q422 - ISP16a: Immigration Poor People **Matrix**

Not back | Number of rows: 1 | Number of columns: 11

Do you think that **poor people** in Germany will be disadvantaged or that they will benefit from more immigration from people from poorer countries?

Please answer according to the following scale:
1 means "very disadvantaged",
10 means "benefit greatly".
With the steps in between, you can scale your assessment.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 Very disadvantaged	2	3	4	5	6	7	8	9	10 Benefit greatly
...	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q422 - ISP16a: Immigration Rich People **Matrix**

Not back | Number of rows: 1 | Number of columns: 11

Do you think that **rich people** in Germany will be disadvantaged or that they will benefit from more immigration from people from poorer countries?

Please answer according to the following scale:
1 means "very disadvantaged",
10 means "benefit greatly".
With the steps in between, you can scale your assessment.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 Very disadvantaged	2	3	4	5	6	7	8	9	10 Benefit greatly
...	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q424 - ISPEXP00: Intro WTP **Text**

Not back

Based on your per-capita gross income in the amount of [XX], you have estimated before that [X% of the German population] and [Y% of the world population] have a lower per-capita gross household income than you. We have now calculated how many Germans and how many people in the world actually have a lower per-capita gross household income than you, using the latest official data. That is, we have calculated what rank you actually occupy in the respective distribution of income. We now want to know how much this information is worth to you.

Below we present you with 10 situations. In every situation you can choose between the information about your rank in the distribution of income OR receiving extra money at the end of the survey. The amount of money that you will be offered in these scenarios is predetermined, and goes from 0.1 euro to 10 euros. For instance, in Scenario 1, you will need to choose between seeing information about your income rank or receiving 0.1 euro.

In the end, the computer will randomly pick one of the 10 situations and your decision in this situation will be implemented. In other words, if you have chosen the information in the chosen situation, you will receive information about how many Germans or how many people in the world actually have a lower per-capita gross household income than you. If you have chosen the amount of money, you will receive this amount at the end of the questionnaire.

INTERVIEWER: Please read the introductory text and then hand over the laptop to the respondent.

Q425 - ISPEXP01: WTP Germany **Matrix**

Not back | Number of rows: 5 | Number of columns: 3

In the following five situations, you will have the opportunity to buy information about your income rank in **Germany**.

Would you like to …

In the end, the computer randomly selects one situation and your decision in this situation will be implemented. If you have decided on the information, you will then receive this information afterwards and if you have decided on the amount of money, you will receive it at the end of this survey.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	Money	Information	n/a **Position fixed* **Exclusive*
receive 10 cent OR the information about your income rank?	❍	❍	❍
receive 1 euro OR the information about your income rank?	❍	❍	❍
receive 2.5 euro OR the information about your income rank?	❍	❍	❍
receive 5 euro OR the information about your income rank?	❍	❍	❍
receive 10 euro OR the information about your income rank?	❍	❍	❍

Q426 - ISPEXP02: WTP World **Matrix**

Not back | Number of rows: 5 | Number of columns: 3

In the following five situations, you will have the opportunity to buy information about your income rank in the **world**.

Would you like to …

In the end, the computer randomly selects one situation and your decision in this situation will be implemented. If you have decided on the information, you will then receive this information afterwards and if you have decided on the amount of money, you will receive it at the end of this survey.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	Money	Information	n/a **Position fixed* **Exclusive*
receive 10 cent OR the information about your income rank?	❍	❍	❍
receive 1 euro OR the information about your income rank?	❍	❍	❍
receive 2.5 euro OR the information about your income rank?	❍	❍	❍
receive 5 euro OR the information about your income rank?	❍	❍	❍
receive 10 euro OR the information about your income rank?	❍	❍	❍

Q427 - ISPEXPBefr: Message **Text**

Thank you for your decision. Please click on "Next" and hand over the laptop again to the interviewer.

[...QUESTIONS FROM A DIFFERENT MODULE...]

Q727 - ISP31_234: Trust **Matrix**

Not back | Number of rows: 4 | Number of columns: 7

We have just talked about different assessments and until when you think they are still acceptable or not. Now will talk about how you generally trust certain institutions or other things that are important to our society.

Please answer according to the following scale: 1 means "very little", 5 means "very much". With the steps in between, you can scale your assessment.

Rows: Normal | Columns: Normal

Rendered as Dynamic Grid

	1 Very little	2	3	4	5 Very much	Don't know *Position fixed *Exclusive	n/a *Position fixed *Exclusive
How much trust do you have that the government is doing the right things?	❍	❍	❍	❍	❍	❍	❍
How much trust do you have that the media (e.g., newspapers, TV, radio) will report completely, accurately and fairly on news?	❍	❍	❍	❍	❍	❍	❍
How much trust do you have in government official statistics, such as unemployment, crime, immigration, economic growth, or inflation?	❍	❍	❍	❍	❍	❍	❍
How much trust do you have that research produces knowledge that advance our society?	❍	❍	❍	❍	❍	❍	❍

C Additional Results

C.1 Feedback Provided to Subjects

After conducting the survey, it is straightforward to compute the respondent's national income rank: it is the proportion of households who reported a higher household income in that same question. At the time of providing feedback and calculating the rewards for the belief elicitation task, however, that data was not available for us (i.e., because it was being collected). For those steps, then, we used an "ex-ante" estimate of the distribution of gross household income. Ideally, we would compute the individual's feedback using the distribution of responses to our question about gross household income from a previous year. However, this question on gross household income was not collected by SOEP-IS in any year prior to our baseline survey. Instead, we used a variable on gross household income computed by SOEP for the calendar years 2014 and then extrapolated to the year 2015 with a simple adjustment for the German inflation rate and the growth in GDP per capita. This income variable is not based on the same question about the gross household income we used in our module. Instead, it was constructed by SOEP based on a battery of different questions.[20]

Figure C.1 gives a sense of how accurate our ex-ante feedback was (compared to the actual rank that we were able to compute after collecting all the survey responses about income). Given that this feedback is constructed with data from a different source, it is natural that there will be some discrepancies between our ex-ante feedback and our ex-post estimates. Additionally, we would expect our calculations to be somewhat off purely from sampling variation. Figure C.1 illustrates that our feedback was not perfect, but still quite accurate. In any case, note that for the analysis of the information-provision experiment, we do not need to assume that the feedback was perfectly accurate.

C.2 Misperceptions about Absolute Income

The "true" income rank is based on the absolute income that people report. While it is possible that people may have misperceptions about their absolute income, it is not clear how this would change our results in a particular direction (i.e., towards finding more or less misperceptions). Here, we show that this may not be a significant source for concern. Recall that we find that there is 10.8 percent variation in the reported number of household members within households. Of course, if all households were perfectly consistent, we would expect this variation to be zero percent. In

[20] This outcome represents the combined income before taxes and government transfers of all individuals in the household 16 years of age and older. This variable is the sum of total family income from labor earnings, asset flows, private retirement income and private transfers. Labor earnings include wages and salary from all employment including training, self-employment income, and bonuses, overtime, and profit-sharing. Asset flows include income from interest, dividends, and rent. Private transfers include payments from individuals outside of the household including alimony and child support payments.

comparison, for gross household income, 11.4 percent of the variation is within-households. In other words, household members are as consistent reporting their gross household income as they are reporting the number of household members. This is suggestive that all household members know their absolute income well. It is also consistent with the findings in Karadja et al. (2017), who can match self-reported absolute income to the administrative data, and report that these two sources of information are highly correlated.

C.3 Correlates of Misperceptions

In Table C.1 we present correlates of misperceptions, using data from the baseline control group only (i.e., individuals who did not receive any feedback from us regarding their true relative income rank). In uneven-numbered columns each covariate enters a bivariate regression with national (absolute) bias or global (absolute) bias as the dependent variable, whereas in even-numbered columns all covariates enter simultaneously.

In the follow-up survey, we also added some control questions at the end. Specifically, we asked respondents to what extent they trust the government, media, science, and official statistics, and whether they actively looked for information on the income distribution (and if so, where they looked). If a respondent was in the treatment group in the previous wave, we also asked them whether they shared information about their income rank within their household. Figure C.2 shows the correlates of misperceptions related to respondents' trust in government, media, science, and official statistics. The evidence indicates that misperceptions are lower for people who trust statistics and research more. Table C.2 presents the correlates of the additional outcomes (i.e., support for globalization, immigration, and international organization for redistribution) used in the analysis.

C.4 Income Ranks Over Time

In Figure C.3 we show that individuals' actual relative income often changes from one year to the other, which implies that whatever one learned about their relative income one year ago may not be directly relevant to assess ones current income rank. This pattern is more pronounced for national than global income ranks.

C.5 Test for Selective Attrition

In part of the analysis, we measure the effects of treatment on the outcomes from the follow-up survey. One potential concern is that the treatment may have affected the decision to participate in the follow-up survey. Tables C.3 and C.4 provide further assurances that the attrition was random. In Table C.3, we examine whether treatment status predicts participation in the follow-up survey. Column 1 shows that this is not the case. As it is possible that some household members are

treated, while others are not, we also control for "peer" treatment. The results are displayed in columns (1) and (2) and indicate that neither affects participation in the follow-up survey. In columns (3) and (4) we present a similar analysis investigating how direct treatment effects or peer treatment effects influence the follow-up survey response rate. Again, the coefficient estimates are close to zero and all insignificant. In Table C.4 we repeat this exercise for treatment effects, but also look at left-of-center and center/right respondents. The results are very similar to what we have seen before.

C.6 Robustness of Effects of Information on Preferences for Redistribution

Our main specification from equation (3) of Section 4.2 is demanding because it includes simultaneously two regressors, perceptions of national and global income rank, that are highly correlated. Table C.5 presents results from an alternative specification that uses either perceptions of national rank as independent variable or perceptions of global rank. The results from this new specification are robust, statistically significant, and more precisely estimated.

We can also look at how our treatment affects demand for redistribution dependent on respondents' misperceptions. For some respondents learning their true income position is positive news (i.e., they learn they are richer than they previously thought), neutral news, or negative news (i.e., they learn they are poorer than they thought). Figure C.4 presents this exercise. In the top panel we focus on left-leaning respondents. Figure C.4.a shows that for those who under-estimated their relative income, the "news" that their income is higher than previously thought decreased their preferences for redistribution (i.e., the whole distribution shifts to the left, non-parametric p-value=0.023). Figure C.4.b shows that for those who had a roughly accurate prior belief (i.e., +/- 10 pp of the truth) the information provision was "no news" and, as expected, the preferences for redistribution does not change (i.e., the whole distribution looks the same in treatment and control, non-parametric p-value=0.12). Figure C.4.c shows that for those who over-estimated their relative income, the "news" that their income is lower than previously thought increased their preferences for redistribution (i.e., the whole distribution shifts to the right, non-parametric p-value=0.17). The bottom panel of Figure C.4. shows the results for center/right individuals. It is clear that there are no significant effects for center/right individuals.

Next, we provide a falsification test of our information intervention. Specifically, we test whether the treatment had an effect on a variable that is related to demand for redistribution and that we elicit before the treatment. For this purpose, we use the two questions about the respondent's belief in the importance of effort versus luck for individual economic success both at the national the global level. Despite that these variables are related to demand for redistribution (see Table 4), we expect no treatment effect as they were measured before the information-provision. The results in Table C.6 confirm this expectation: none of the key coefficients are statistically sig-

nificant, and furthermore the point estimates tend to be close to zero, and the statistical precision is comparable to that from Table 7.

Finally, we show that our results are unaffected when we break down political orientation into left-of-center (defined as before), center (defined as the median response to the self-assessment on the political left-right spectrum), and right-of-center (above median response). The results are displayed in Table C.7 and largely confirm the results in Table 7.

C.7 Average Treatment Effects of Information

Table C.8 shows the average effect of providing information on the main outcomes. This may be relevant for policy-makers if they are considering disseminating unbiased information about the national and global relative income. We find that the provision of information had average effects close to zero, statistically insignificant, and precisely estimated. This is perfectly consistent with the reported evidence: We find that only feedback about national rank matters. However, we barely changed the beliefs of the individuals on average, because there was roughly as much under-estimation as over-estimation.

C.8 Treatment Effects on the Dictator Choices

We can also look at the effects of the information experiment on behavior in the two distributional tasks. In each of these two tasks respondents could split 50 Euro between themselves and a poor household. In one task the poor household was a German household from the bottom-10 percent of the national income distribution (drawn from a different SOEP-IS sample) and in the other task it was a Kenyan household from the bottom-10 percent of the global income distribution (drawn from eligible households of the GiveDirectly cash-transfer program). While giving behavior in both cases is related to demand for redistribution, we have to keep in mind that these outcomes measure altruism, not preferences for redistribution. As a result, the Meltzer-Richard model would not predict effects on these outcomes (in that model, individuals are completely selfish). Before we present the regression results, we note that the share of giving to poor Kenyan households (0.64) is higher than for poor German household (0.56; paired t-test, $p<0.01$). Moreover, we observe that left-of-center respondents give more than center/right respondent to both a poor German household (0.60 vs 0.54; t-test, $p<0.01$) and a poor Kenyan household (0.68 vs 0.62; t-test, $p<0.01$).

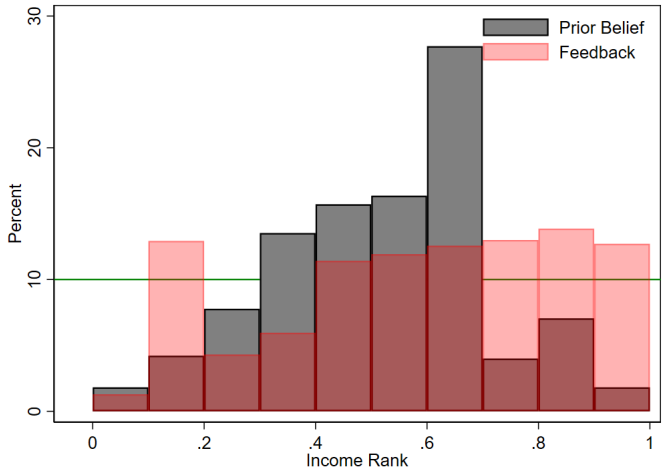
The regression results are presented in Table C.9. We find that left-of-center individuals do not change their donation behavior in response to the information. Again, this is consistent with the Meltzer-Richard model, according to which people demand more (less) redistribution because they expected to benefit more (less) from redistribution (i.e., a selfish reason). On the contrary, we find some suggestive evidence that center/right individuals become more altruistic toward poor people in both Germany and Kenya, when they receive information that they are richer: finding

out that one is 10 percentage points richer than throught increases generosity toward the German poor by 1.54 pp (p-value=0.068) and towards the Kenyan poor by 1.42 pp (p-value=0.136).

C.9 Treatment Effects on Follow-Up Outcomes

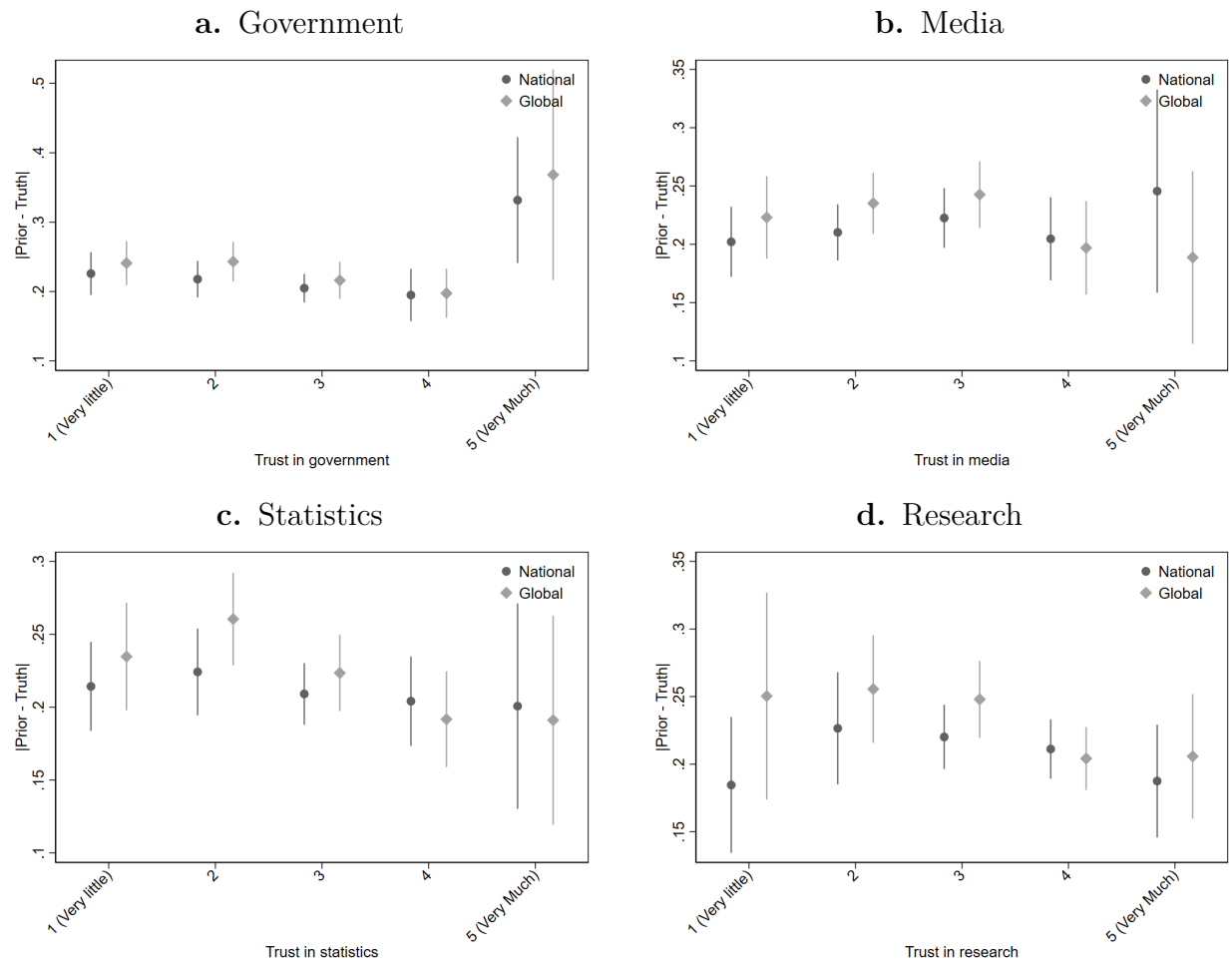
Because we reassessed all our outcome measures in the follow-up survey, we can examine the effect of the information-provision experiment on preferences for redistribution a year later. Table C.10 presents the results. We have seen quite remarkable belief persistence, but also that the pass-through one year later is far from perfect (see discussion in Section 3.2). In addition, many things have changed in the year since the individual received the feedback, including that an individual's position in the income distribution may have changed. As a result, we would expect the point estimates to be significantly smaller a year later. The results from Table C.10 indicate that the point estimates are not really stable, and imprecisely estimated. We cannot rule out that there are no effects one year later, but we cannot rule out either that the effects one year later were substantial – indeed, we cannot even rule out that the long-term effects are as large as the short-term effects.

Figure C.1: Prior Beliefs about National Income Rank vs. Feedback



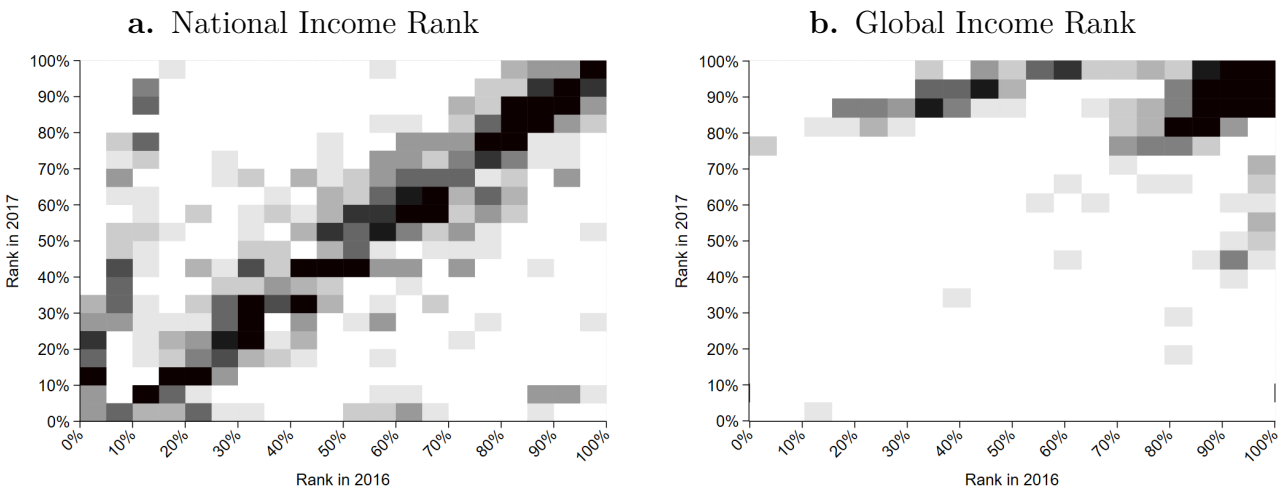
Notes: Distribution of prior beliefs about own income rank and the information provided (baseline survey). The feedback in the baseline survey was calculated prior to collecting the survey data using data for gross household income in the calendar year 2014 from the SOEP and "extrapolating" it to 2016 by adjusting for the inflation rate and the growth in GDP per capita. The green horizontal line indicates the true feedback, which should be uniform over the interval.

Figure C.2: Relationship Between Misperceptions of Income Rank and Trust



Notes: Coefficient plots from OLS regressions of misperceptions on trust in government, media, statistics, and research using data from the follow-up control group. Standard errors clustered at the household level.

Figure C.3: Persistence of Income Rank Year-Over-Year

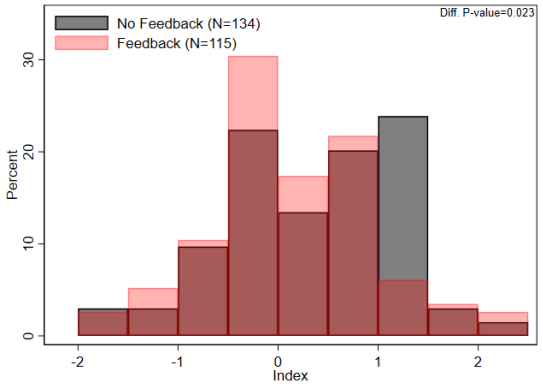


Notes: Correlation between income rank in the year of the baseline survey and the year of the followup survey for national income rank (panel a) and global income rank (panel b).

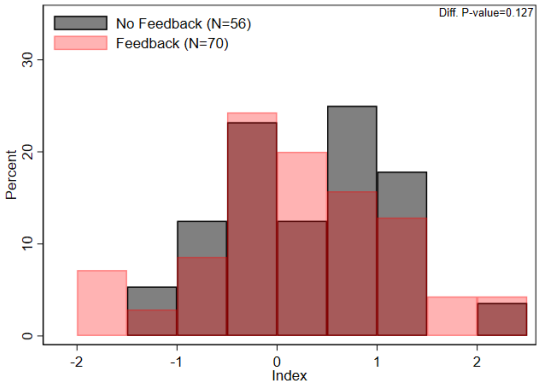
Figure C.4: Histogram-Version of the Effects of Information Provision

Left-of-center Respondents

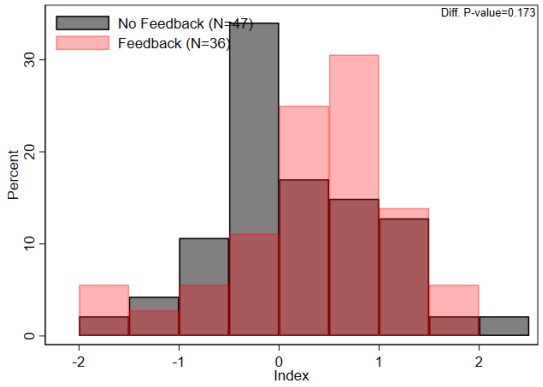
a. Feedback-Prior>0.1



b. 0.1>Feedback-Prior>-0.1

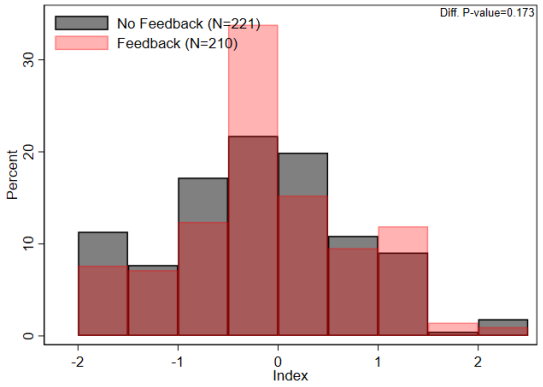


c. Feedback-Prior<-0.1

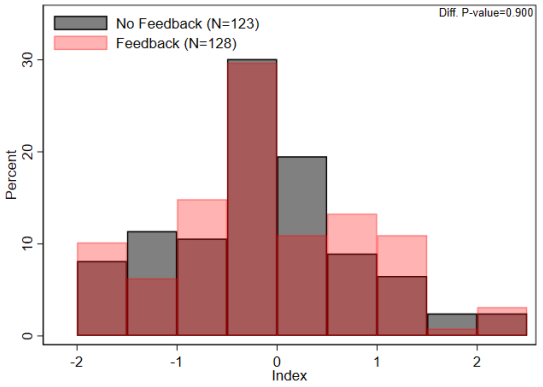


Center/Right Respondents

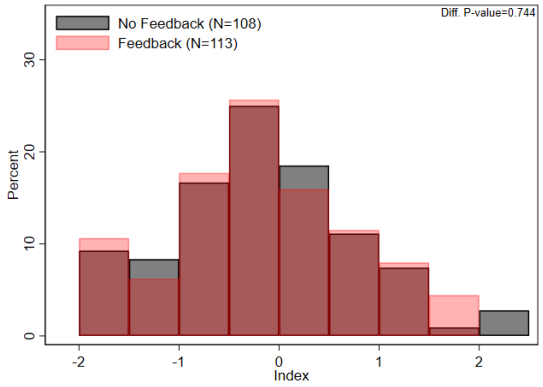
c. Feedback-Prior>0.1



d. 0.1>Feedback-Prior>-0.1



e. Feedback-Prior<-0.1



Notes: Histograms showing the effect of information on true income rank on demand for redistribution (defined as equally-weighted index of demand for national and global redistribution) broken down into positive, neutral, and negative "news." Positive (negative) news means that a respondent underestimated (overestimated) their true rank by more than 10 percentage points, while neutral means that a respondent misperceives their true rank by at most 10 percentage points. The top panel shows results for left-of-center respondents and the bottom panel for center/right respondents.

Table C.1: Correlates of Misperceptions

	National bias		National absolute bias		Global bias		Global absolute bias	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age	-0.001**	-0.001***	-0.000	-0.000	-0.000	-0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.000	-0.011	-0.002	0.002	-0.042***	-0.039***	0.040***	0.033***
	(0.016)	(0.015)	(0.009)	(0.009)	(0.014)	(0.014)	(0.010)	(0.010)
Education: upper secondary	0.007	-0.039*	0.007	0.008	-0.035**	-0.005	0.045***	0.003
	(0.016)	(0.021)	(0.010)	(0.014)	(0.014)	(0.022)	(0.010)	(0.015)
Education: college & more	-0.083***	-0.048*	-0.000	-0.004	0.044***	0.060**	-0.080***	-0.061***
	(0.019)	(0.027)	(0.011)	(0.017)	(0.014)	(0.024)	(0.011)	(0.017)
Unemployed	0.159***	0.011	-0.018	0.003	0.053	0.023	0.032	-0.001
	(0.036)	(0.041)	(0.027)	(0.028)	(0.045)	(0.047)	(0.027)	(0.028)
Monthly net income (log)	-0.181***	-0.172***	0.034***	0.039***	-0.034**	-0.057***	-0.052***	-0.028**
	(0.016)	(0.019)	(0.011)	(0.012)	(0.017)	(0.018)	(0.011)	(0.013)
Political orientation: left-of-center	-0.046***	-0.027*	-0.018*	-0.021**	-0.005	-0.006	-0.028***	-0.018*
	(0.016)	(0.016)	(0.010)	(0.010)	(0.014)	(0.014)	(0.010)	(0.010)
East Germany	0.017	-0.014	-0.010	-0.015	-0.019	-0.032*	0.017	0.012
	(0.018)	(0.020)	(0.011)	(0.012)	(0.017)	(0.018)	(0.012)	(0.013)
German citizenship	-0.032	0.006	-0.001	-0.007	-0.001	0.014	0.014	0.010
	(0.033)	(0.030)	(0.018)	(0.018)	(0.029)	(0.030)	(0.021)	(0.022)
Catholic	-0.019	-0.017	-0.019*	-0.035***	-0.000	0.001	-0.018	-0.017
	(0.017)	(0.020)	(0.010)	(0.012)	(0.015)	(0.017)	(0.011)	(0.013)
Protesant	0.008	0.004	-0.005	-0.021*	0.003	0.004	0.011	0.003
	(0.017)	(0.019)	(0.010)	(0.012)	(0.015)	(0.017)	(0.010)	(0.012)
Observations		1,375		1,375		1,364		1,364

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. OLS regressions with robust standard errors in parentheses using data from baseline survey. The dependent variable is national bias (defined as the difference of prior belief and true income rank, columns 1–2), national absolute bias (columns 3–4), global bias (defined analogously, columns 5–6), and global absolute bias (columns 7–8). The dependent variables are measured on a 0–10 scale with 0 indicating "no redistribution" and 10 indicating "full redistribution." Uneven-numbered columns display coefficients from separate regressions for each covariate, while even-numbered columns report multivariate regressions including all covariates at once. All covariates are defined as binary variables (except age and monthly net income).

Table C.2: Correlates of Secondary Outcomes

	Support Immigration		Support Globalization		Support Int. Organization	
	(1)	(2)	(3)	(4)	(5)	(6)
Age	-0.018***	-0.011**	-0.013***	-0.007	-0.014**	-0.009*
	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.006)
Female	-0.036	0.027	-0.383**	-0.350**	-0.090	-0.037
	(0.165)	(0.159)	(0.151)	(0.154)	(0.207)	(0.212)
Education: upper secondary	-0.580***	-0.113	-0.125	-0.093	-0.370*	-0.020
	(0.169)	(0.248)	(0.153)	(0.221)	(0.216)	(0.293)
Education: college & more	0.704***	0.339	0.196	-0.123	0.325	0.034
	(0.194)	(0.290)	(0.169)	(0.266)	(0.262)	(0.355)
Unemployed	-0.078	0.654	-0.401	-0.261	-0.099	0.240
	(0.432)	(0.448)	(0.322)	(0.332)	(0.559)	(0.562)
Monthly net income (log)	0.824***	0.374*	0.748***	0.623***	0.409*	0.130
	(0.182)	(0.192)	(0.154)	(0.182)	(0.225)	(0.240)
Political orientation: left-of-center	1.039***	0.902***	0.295*	0.083	1.260***	1.145***
	(0.170)	(0.170)	(0.152)	(0.154)	(0.215)	(0.225)
East Germany	-1.184***	-1.050***	-0.465**	-0.377*	-0.843***	-0.859***
	(0.185)	(0.217)	(0.184)	(0.197)	(0.241)	(0.279)
German citizenship	-0.874***	-0.685**	-0.540*	-0.538*	-1.151***	-0.974**
	(0.325)	(0.320)	(0.303)	(0.314)	(0.426)	(0.404)
Catholic	0.236	0.104	0.017	-0.139	0.004	-0.299
	(0.175)	(0.210)	(0.167)	(0.194)	(0.225)	(0.267)
Protesant	0.316*	0.329	0.004	0.046	0.098	-0.186
	(0.183)	(0.202)	(0.165)	(0.185)	(0.229)	(0.266)
Luck vs. Effort National	-0.031	0.062	0.030	0.109**	-0.100	-0.055
	(0.053)	(0.061)	(0.048)	(0.055)	(0.065)	(0.076)
Luck vs. Effort Global	-0.138***	-0.093*	-0.075*	-0.094*	-0.128**	-0.035
	(0.044)	(0.052)	(0.040)	(0.048)	(0.055)	(0.064)
Risk aversion	-0.037	-0.038	0.011	-0.001	-0.050	-0.071
	(0.038)	(0.037)	(0.034)	(0.035)	(0.049)	(0.051)
Observations		661		656		645

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. OLS regressions with robust standard errors in parentheses using data from the baseline control group. The dependent variable is support for immigration from poor countries (columns 1–2), support for globalization (columns 3–4), and support for an international organization to implement global redistribution (columns 5–6). The dependent variables are measured on a 0–10 scale with 0 indicating "no support" and 10 indicating "full support." Uneven-numbered columns display coefficients from separate regressions for each covariate, while even-numbered columns report multivariate regressions including all covariates at once. All covariates are defined as binary variables (except age, monthly net income, luck vs. effort, and risk aversion).

Table C.3: Effects of Information Provision on Response Rate to the Follow-Up Survey (Selective Attrition)

	Responded to Follow-Up Survey			
	(1)	(2)	(3)	(4)
Treatment	-0.030	-0.023		
	(0.020)	(0.026)		
Peer Treatment		0.020		
		(0.031)		
National Rank: Treat*(Feedback - Prior)			-0.002	-0.040
			(0.097)	(0.113)
National Rank: Peer Treatment*(Feedback - Prior)				-0.121
				(0.143)
Global Rank: Treat*(Feedback - Prior)			-0.134	-0.116
			(0.098)	(0.118)
Global Rank: Peer Treatment*(Feedback - Prior)				0.050
				(0.128)
Observations	1,364	1,364	1,364	1,364

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. OLS regressions with standard errors clustered at the household level in parentheses using data from both surveys. The dependent variable is an indicator whether a respondent took part in the follow-up survey one year later. Analysis conditional on number of household members and household gross income.

Table C.4: Effects of Information Provision on Response Rate to the Follow-Up Survey (Treatment Effect on Attrition)

	All	Left-Of-Center	Center/Right
	(1)	(2)	(3)
National Rank: Treat*(Feedback - Prior)	0.003	-0.237	0.110
	(0.095)	(0.182)	(0.113)
Global Rank: Treat*(Feedback - Prior)	-0.123	0.024	-0.177
	(0.100)	(0.213)	(0.111)
P-value (i)=(ii)	0.490	0.485	0.161
Observations	1,364	458	906

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. OLS regressions with standard errors clustered at the household level in parentheses using data from both surveys. The dependent variable is an indicator whether a respondent took part in the follow-up survey one year later. Analysis conditional on standard set of control (age, indicator variables for sex, education, disabled, unemployed, retired respondents, region (East Germany), and party affiliation of the respondent).

Table C.5: Robustness: Effects of Information Provision on Preferences for Redistribution

	All			Left-Of-Center			Center/Right		
Panel a)	(1) National	(2) Global	(3) Index	(4) National	(5) Global	(6) Index	(7) National	(8) Global	(9) Index
National Rank: Treat*(Feedback - Prior)	-0.183	-0.149	-0.173	-0.635**	-0.790**	-0.723**	0.117	0.249	0.180
	(0.179)	(0.185)	(0.166)	(0.323)	(0.308)	(0.286)	(0.212)	(0.226)	(0.199)
Observations	1360	1350	1361	458	455	458	902	895	903
	All			Left-Of-Center			Center/Right		
Panel b)	(1) National	(2) Global	(3) Index	(4) National	(5) Global	(6) Index	(7) National	(8) Global	(9) Index
Global Rank: Treat*(Feedback - Prior)	-0.127	-0.044	-0.098	-0.374	-0.518	-0.447	0.062	0.259	0.144
	(0.186)	(0.186)	(0.172)	(0.354)	(0.345)	(0.323)	(0.212)	(0.212)	(0.196)
Observations	1350	1341	1351	454	452	454	896	889	897

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. OLS regressions with standard errors clustered at the household level in parentheses using data from the baseline survey. Panel a) displays the results from a specification that only considers national rank information and panel b) presents the results only considering global rank information. The dependent variables are the standardized national (National) and global demand for redistribution (Global) as well as an equally-weighted index of the two. Columns 1–3 use data for the whole sample, columns 4–6 display results for left-of-center respondents and columns 7–9 display results for center/right respondents. Left-of-center is defined as below median on the self-assesment scale for political orientation from left to right, whereas center/right subsumes respondents at or above the median on this scale. Analysis conditional on standard set of control (age, sex, education and indicator variables for disabled, unemployed, retired respondents, an indicator for region (East Germany) and party affiliation of the respondent).

Table C.6: Falsification Test: Effects of Information Provision on Pre-Treatment Outcomes

	All		Left-Of-Center		Center/Right	
	(1) Nat.	(2) Glob.	(3) Nat.	(4) Glob.	(5) Nat.	(6) Glob.
National Rank: Treat*(Feedback - Prior)	0.088	-0.087	0.591	0.001	-0.087	-0.131
	(0.247)	(0.244)	(0.478)	(0.458)	(0.288)	(0.290)
Global Rank: Treat*(Feedback - Prior)	-0.046	0.130	-0.587	0.141	0.143	0.089
	(0.256)	(0.259)	(0.461)	(0.456)	(0.289)	(0.300)
P-value (i)=(ii)	0.772	0.638	0.177	0.868	0.664	0.684
Observations	1,364	1,354	458	456	906	898

Notes: ***p $<$ 0.01, **p $<$ 0.05, *p $<$ 0.1. OLS regressions with standard errors clustered at the household level in parentheses using data from the baseline survey. The dependent variables are the standardized national (National) and global luck/effort beliefs (Global) measured pre-treatment in the baseline survey. Columns 1–2 use data for the whole sample, columns 3–4 display results for left-of-center respondents and columns 5–6 display results for center/right respondents. Left-of-center is defined as below median on the self-assesment scale for political orientation from left to right, whereas center/right subsumes respondents at or above the median on this scale. Analysis conditional on standard set of control (age, indicator variables for sex, education, disabled, unemployed, retired respondents, region (East Germany), and party affiliation of the respondent). P-value reports the result from a Wald test for equivalence of the two reported coefficients.

Table C.7: Robustness: Effects of Information Provision on Preferences for Redistribution by Political Orientation

	Left-Of-Center			Center			Right-Of-Center		
	(1) National	(2) Global	(3) Index	(4) National	(5) Global	(6) Index	(7) National	(8) Global	(9) Index
National Rank: Treat*(Feedback - Prior)	-0.777*	-0.929**	-0.857**	-0.309	-0.278	-0.291	0.550	0.578	0.599
	(0.462)	(0.392)	(0.382)	(0.435)	(0.404)	(0.384)	(0.421)	(0.482)	(0.416)
Global Rank: Treat*(Feedback - Prior)	0.190	0.150	0.171	0.493	0.573	0.529	-0.595	-0.295	-0.501
	(0.500)	(0.446)	(0.433)	(0.450)	(0.396)	(0.394)	(0.374)	(0.430)	(0.372)
P-value (i)=(ii)	0.276	0.155	0.167	0.336	0.249	0.259	0.104	0.288	0.118
Observations	454	452	454	539	536	540	357	353	357

Notes: Notes: ***p < 0.01, **p < 0.05, *p < 0.1. OLS regressions with standard errors clustered at the household level in parentheses using data from the baseline survey. The dependent variables are the standardized national (National) and global demand for redistribution (Global) as well as an equally-weighted index of the two. Columns 1–3 display results for left-of-center respondents, columns 4–6 display results for center respondents, and columns 7–8 display results for right-of-center respondents. Left-of-center is defined as below median on the self-assesment scale for political orientation from left to right, whereas center is defined as the median and right-of-center subsumes respondents above the median on this scale. Analysis conditional on standard set of control (age, indicator variables for sex, education, disabled, unemployed, retired respondents, region (East Germany), and party affiliation of the respondent). P-value reports the result from a Wald test for equivalence of the two reported coefficients.

Table C.8: Average Effects of Information Provision on Preferences for Redistribution

	All		Left-Of-Center		Center/Right	
	(1) National	(2) Global	(3) National	(4) Global	(5) National	(6) Global
Treatment	-0.024	0.044	-0.089	-0.033	0.032	0.105
	(0.053)	(0.054)	(0.088)	(0.087)	(0.064)	(0.066)
Observations	1,376	1,366	459	456	917	910

Notes: ***p $<$ 0.01, **p $<$ 0.05, *p $<$ 0.1. OLS regressions with standard errors clustered at the household level in parentheses using data from the baseline survey. The dependent variables are the standardized national (National) and global demand for redistribution (Global). Columns 1–2 use data for the whole sample, columns 3–4 display results for left-of-center respondents and columns 5–6 display results for center/right respondents. Left-of-center is defined as below median on the self-assesment scale for political orientation from left to right, whereas center/right subsumes respondents at or above the median on this scale. Analysis conditional on standard set of control (age, indicator variables for sex, education, disabled, unemployed, retired respondents, region (East Germany), and party affiliation of the respondent). Treatment is an indicator variable for receiving information about the true income rank.

Table C.9: Effects of Information Provision on Generosity in Distributional Tasks

	All		Left-Of-Center		Center/Right	
	(1) Share German	(2) Share Kenyan	(3) Share German	(4) Share Kenyan	(5) Share German	(6) Share Kenyan
National Rank: Treat*(Feedback - Prior)	0.098	0.066	-0.022	-0.087	0.154*	0.142
	(0.071)	(0.078)	(0.134)	(0.145)	(0.084)	(0.095)
Global Rank: Treat*(Feedback - Prior)	0.012	0.003	0.176	0.154	-0.042	-0.049
	(0.072)	(0.078)	(0.134)	(0.148)	(0.084)	(0.091)
P-value (i)=(ii)	0.507	0.663	0.420	0.379	0.199	0.265
Observations	1,357	1,357	458	457	899	900

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. OLS regressions with standard errors clustered at the household level in parentheses using data from the baseline survey. The dependent variables are the share of the amount given to a poor German household (Share German) and to a poor Kenyan household (Share Kenyan). Columns 1–2 use data for the whole sample, columns 3–4 display results for left-of-center respondents and columns 5–6 display results for center/right respondents. Left-of-center is defined as below median on the self-assesment scale for political orientation from left to right, whereas center/right subsumes respondents at or above the median on this scale. Analysis conditional on standard set of control (age, indicator variables for sex, education, disabled, unemployed, retired respondents, region (East Germany), and party affiliation of the respondent). P-value reports the result from a Wald test for equivalence of the two reported coefficients.

Table C.10: Effects of Information Provision on Preferences for Redistribution One Year Later

	All		Left-Of-Center		Center/Right	
	(1) National	(2) Global	(3) National	(4) Global	(5) National	(6) Global
National Rank: Treat*(Feedback - Prior)	-0.239	-0.309	0.011	-0.544	-0.337	-0.226
	(0.291)	(0.283)	(0.492)	(0.504)	(0.352)	(0.332)
Global Rank: Treat*(Feedback - Prior)	0.447	0.443	-0.151	0.360	0.739**	0.512
	(0.286)	(0.272)	(0.506)	(0.503)	(0.351)	(0.314)
P-value (i)=(ii)	0.196	0.138	0.859	0.330	0.097	0.212
Observations	1,167	1,148	396	390	771	758

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. OLS regressions with standard errors clustered at the household level in parentheses using data from both surveys. The dependent variables are the standardized national (National) and global demand for redistribution (Global) measured in the follow-up survey. Columns 1–2 use data for the whole sample, columns 3–4 display results for left-of-center respondents and columns 5–6 display results for center/right respondents. Left-of-center is defined as below median on the self-assesment scale for political orientation from left to right, whereas center/right subsumes respondents at or above the median on this scale. Analysis conditional on standard set of control (age, indicator variables for sex, education, disabled, unemployed, retired respondents, region (East Germany), and party affiliation of the respondent). P-value reports the result from a Wald test for equivalence of the two reported coefficients.