

# In-group bias in preferences for redistribution: a survey experiment in Italy

Riccardo Bruni<sup>1</sup> | Alessandro Gioffré<sup>1</sup> | Maria Marino<sup>2</sup>

<sup>1</sup>University of Florence

<sup>2</sup>University of Barcelona

## Correspondence

Maria Marino, Department of Econometrics, Statistics and Applied Economics (Public Policies), School of Economics, University of Barcelona, Avenida Diagonal 690–696, 08034 Barcelona, Spain

Email: [maria.marino@ub.edu](mailto:maria.marino@ub.edu)

## Abstract

Using a new survey and experimental data, we investigate how information on inequality and immigration affects preferences for redistribution in Italy. Our analysis addresses both the economic and cultural dimensions of immigration, showing that, in general, preferences for redistribution are inelastic to new information. However, we find that providing information about the native–immigrant composition of poverty reduces exclusionary redistributive preferences. Specifically, when respondents learn that poverty among natives is lower than they had previously believed, they are less likely to prioritize natives and exclude immigrants from receiving welfare benefits. This provides evidence of an economic in-group bias in redistribution preferences. Heterogeneous treatment effects also reveal the presence of a cultural in-group bias among certain sociodemographic groups.

## KEYWORDS

inequality, immigration, redistribution, perception, survey experiment

## JEL CLASSIFICATION

D91; D72; H23; H24; C83

## 1 | INTRODUCTION

Although theoretical models suggest that preferences for redistribution should increase with rising inequality (Meltzer and Richard 1981), empirical findings indicate that such preferences remain stagnant in an era of inequality growth (Ashok *et al.* 2015; Kenworthy and McCall 2008; Roth and Wohlfart 2018). A common explanation suggests that immigration negatively affects preferences for redistribution because of in-group bias—the so-called in-group bias hypothesis—which has been proposed as either an economic or cultural bias (Alesina and Giuliano 2011; Alesina and Glaeser 2004).<sup>1</sup>

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2025 The Author(s). *Economica* published by John Wiley & Sons Ltd on behalf of London School of Economics and Political Science.

The economic in-group bias hypothesis suggests that native taxpayers are less likely to support redistributive policies as the immigration rate increases because they perceive immigrants as competitors for limited resources such as welfare benefits. The cultural in-group bias hypothesis suggests that natives may be less inclined to share public resources with individuals perceived as culturally distant (Luttmer 2001; Alesina *et al.* 1999).<sup>2</sup> Empirical studies on these two biases have produced mixed results, pushing scholars to question the standard assumption that individuals hold correct information about inequality and immigration when forming their preferences for redistribution. Recent works have shown, in fact, that individuals systematically misperceive facts about inequality and immigration, and such misperceptions might influence their policy preferences.<sup>3</sup>

Building on this recent strand of the literature on perceptions and policy preferences, we conducted a survey experiment in Italy to investigate how preferences for redistributive policies—broadly defined—are affected when information about inequality interacts with information about immigration, with the latter possibly disclosing the presence of the economic and cultural in-group biases explained above. We examine the impact of four informational treatments on the updating of perceptions and the formation of policy preferences. Three reasons make Italy an interesting case study. First, recent data show a strong rise in wealth inequality since the mid-1990s (Acciari *et al.* 2024).<sup>4</sup> Second, the recent increase in the migration rate has coincided with a significant rise in anti-immigration parties that highlight economic and cultural grievances, focusing on the perceived conflicts between natives and immigrants in their political agendas (Guriev and Papaioannou 2022; D’Alimonte 2019). Third, due to the success of the Five Star Movement, one of the most electorally successful populist parties in Europe,<sup>5</sup> the Italian government, led by this party, introduced a comprehensive redistributive programme in 2019, which has sparked ongoing debates about whether immigrants should be able to benefit from this programme.<sup>6</sup>

To investigate the impact of information on the formation of policy preferences, our survey experiment consists of two parts: a treatment section and a post-treatment section. The treatment section comprises four random informational treatments, and aims to untangle the interactions between inequality and the two types of in-group biases related to immigration (economic bias and cultural bias). In the first treatment (*Inequality Tr.*), we provide information on wealth inequality. In the second treatment (*Poverty Tr.*), we present the same information as in *Inequality Tr.*, but also include three statistics on the native–immigrant composition of poverty in Italy. The third treatment (*Diversity Tr.*) consists of the information provided in *Inequality Tr.* along with information about how cultural diversity in Italian society increases with the number of immigrants from different religions and cultures. Finally, the last treatment (*All Tr.*) incorporates all the information from the three previous treatments. The post-treatment section of the survey aims to capture the multi-dimensional structure of policy preferences. Our set of questions differentiates between general preferences for redistribution, tax preferences on income and wealth, preferences for allocating the public budget over different policies, and support for cash benefits for the poor. Additionally, we include two questions designed to assess what we will refer to as *exclusionary redistributive preferences*, that is, support for a welfare state accessible to Italian citizens and not to immigrants (non-citizens).<sup>7</sup> Specifically, we elicit support for a cash benefit restricted to Italians, and explore conditions for immigrants’ access to the welfare state. Finally, we include questions to elicit perceptions of inequality and immigration in the specific dimensions targeted by the informational treatments, along with other beliefs regarding inequality and immigration.

Our study shows that while respondents generally hold inaccurate perceptions about many of the facts presented, their most significant misconceptions are related to the composition of poverty among natives and immigrants. Respondents often believe that immigrants make up a larger share of the poor population, and tend to view Italians as much poorer than they are, compared to immigrants. These misperceptions are also correlated with policy preferences and

in particular with support for exclusionary policies. The presence of these misperceptions and their correlation with exclusionary preferences are likely to explain why exposure to information regarding the native–immigrant composition of poverty (*Poverty Tr.*) is the most effective in changing these policy preferences. More specifically, individuals who are assigned to *Poverty Tr.* significantly reduce support for exclusionary welfare policies that restrict access based on nationality, compared to the control group that receives no information. We show that this change in preferences occurs because respondents who receive this information correct their misperceptions. To investigate this further, we conducted a mediation analysis to determine if a specific perception within *Poverty Tr.* is responsible for the observed effect. Our findings from the mediation analysis reveal that the correction of the misperception about the incidence of poverty among Italians entirely accounts for the treatment effect. This suggests that respondents reduce their exclusionary policy preferences when they find out that Italians are not as impoverished as they previously believed. This observation may indicate the presence of an economic in-group bias among Italian respondents. However, the analysis of heterogeneous treatment effects suggests that cultural in-group bias may also influence policy preferences related to redistribution. Specifically, wealthy individuals and people endorsing meritocratic ideals are more likely to change their support for redistributive policy preferences when they receive information about diversity (*Diversity Tr.*).

Our findings allow us to engage with existing studies on how information about inequality and immigration influences preferences for redistribution. To start with, our study might explain the lack of treatment effects in redistribution preferences in Martinangeli and Windsteiger (2023), which provides information on immigration and poverty in Germany. One potential reason is that the authors do not collect questions on exclusionary redistribution preferences among the outcome variables when these specific preferences have proved to play a central role in understanding the current shape of redistributive policy preferences.<sup>8</sup> Second, our study closely aligns with the recent work of Daniele *et al.* (2024), who find that negative information about the economic outlook reinforces opposition to immigration and increases the desire to exclude immigrants from healthcare access. In contrast, our results reveal that positive information—specifically, information revealing that Italians are not as impoverished as commonly believed—reduces anti-immigrant attitudes as reflected in a reduced desire to exclude immigrants from the welfare state. Moving to other studies, while Alesina *et al.* (2023) find that priming on immigration affects preferences for redistribution but information on the share of immigrants and their origins does not have any effect, our study shows that certain types of information, specifically on the native–immigrant composition of poverty, can shape policy preferences. Finally, compared to Magni (2021), who finds that information on inequality can increase support for policies that discriminate in access to welfare services based on native citizenship, we observe that information on the native–immigrant composition of poverty might reduce support for these policies. Additionally, our study differs from Magni (2021) in its mechanisms to explain the role of information on exclusionary policy preferences. While Magni (2021) emphasizes that what matters is the perceived lack of economic opportunity and welfare deservingness, our findings suggest that it is the update of perceptions on specific facts that determines the formation of these preferences. In particular, we find that reducing misperceptions about the incidence of poverty among Italians plays a critical role.<sup>9</sup> To conclude, we provide experimental evidence of the existence of an economic in-group bias, which aligns with the findings in Luttmer (2001).

The rest of the paper is organized as follows. Subsection 1.1 presents a non-exhaustive review of the literature. In Section 2, we provide a detailed explanation of our data collection, survey construction and experimental design. Section 3 includes a correlation analysis based on the respondents in the control group, which serves as a baseline analysis in terms of perceptions and policy preferences. In Section 4, we discuss the main findings of the experimental treatments, while Section 5 analyses the presence of heterogeneous treatment effects. Section 6

provides some additional analyses such as robustness tests and exploration of the presence of experimenter demand effects, while we present some final remarks and policy implications in Section 7.

## 1.1 | Related literature

Our paper connects to various strands of the existing literature. Specifically, it falls within the growing body of research exploring how perceptions of inequality affect public policies and attitudes towards the welfare state. Previous studies have shown that individuals often misperceive inequality, and these misperceptions correlate with their preferences for redistribution (Gimpelson and Treisman 2018; Bussolo *et al.* 2021; Hauser and Norton 2017). Our study also builds on the literature that uses survey experiments to correct these misperceptions (Cruces *et al.* 2013; Kuziemko *et al.* 2015; Alesina *et al.* 2018; Karadja *et al.* 2017; Hoy and Mager 2021; Fehr *et al.* 2022). Similarly, we contribute to the literature on perceptions of immigration, which suggests that attitudes towards immigrants and preferences for redistribution are more significantly influenced by perceptions than by actual immigration levels. Survey evidence shows that natives often overestimate the share of immigrants, believe they rely more on welfare, and perceive them as more culturally diverse than they actually are (Alesina *et al.* 2023; Grigorieff *et al.* 2020; Hopkins *et al.* 2019; Jørgensen and Osmundsen 2022). Experimental studies on perceptions of immigration yield mixed results. For example, Hopkins *et al.* (2019) find that correcting misperceptions about the size of the immigrant population does not affect support for immigration. In contrast, Grigorieff *et al.* (2020) find that providing information about both the size and characteristics of immigrant populations influences public support. Additionally, Alesina *et al.* (2023) show that merely priming individuals to think about immigration lowers their support for redistribution.

Our paper also contributes to the literature that explores factors beyond perceptions, including underlying beliefs and emotions, to explain why some individuals may resist supporting redistribution policies. Some studies suggest that beliefs in meritocracy and fairness, which rationalize inequality, significantly influence policy preferences (Fehr and Vollmann 2020; Almås *et al.* 2020), while other studies suggest that trust in political institutions tends to reduce preferences for redistribution (Kuziemko *et al.* 2015). Finally, our study also relates to the existing literature on immigration and the welfare state in economics, sociology and political science (Alesina *et al.* 1999; Alesina and Giuliano 2011; Alesina and Glaeser 2004; Luttmer 2001; Dahlberg *et al.* 2012; Alt and Iversen 2017). These studies have shown that public generosity decreases across racial, ethnic, religious and economic lines. While previous research has relied on surveys to explore these dynamics (Gilens 1995; Garand *et al.* 2017; Sniderman *et al.* 2004; Citrin *et al.* 1997; Gründler and Köllner 2020; Burgoon and Rooduijn 2021; Senik *et al.* 2009; Dahlberg *et al.* 2012; Stichnoth 2012; Alt and Iversen 2017), we add to this literature by employing a newly designed experimental survey that provides a more comprehensive perspective by integrating various perceptions and policy preferences.

Our survey experiment offers a unique approach that includes informational treatments on both inequality and immigration, providing evidence that immigration can affect preferences for redistribution due to both economic and cultural reasons. Although the work of Alesina *et al.* (2023) shares a spirit similar to our study, their framework does not take into account perceptions of inequality. Furthermore, when it comes to perceptions of immigration, their analysis focuses solely on the share of immigrants and their countries of origin. The literature instead shows that both economic and cultural dimensions of immigration matter when voters form their policy preferences (Elsner and Concannon 2020; Alesina and Tabellini 2024).

## 2 | THE SURVEY

### 2.1 | Survey data

The survey questionnaire, available in Online Appendix B and examined in detail in Subsection 2.2, was administered by YouGov, an international research, data and analytics group (GDPR compliant).<sup>10</sup> YouGov emailed the link of the survey to their panels of respondents in Italy in November 2021.<sup>11</sup> Only native (non-immigrant) respondents aged 18 and older were eligible to participate. We collected data on a sample of 3521 individuals nationally representative along gender, age and region quotas. They were randomly allocated to five groups: one control group and four treatment groups. Random assignment with equal probability to the four treatments yielded approximately a target sample size of 700 individuals per experimental condition.<sup>12</sup> Our study is pre-registered (RCT ID. AEARCTR-0008591) and has been approved by the Ethics Committee of the Autonomous University of Barcelona and the University of Florence.

In line with other studies (e.g., Alesina *et al.* 2018, 2023), we employed several methods to ensure the highest possible quality of answers. First, on the welcome page, respondents were warned that low-quality answers would be flagged. We also attempted to make them feel socially involved by emphasizing that we were non-partisan academic researchers, that we were seeking to expand scientific knowledge, and that their opinions matter to us. In this regard, we also highlighted that the success of our research depended on their degree of comprehension of the questions as much as their degree of sincerity of the answers. Second, we introduced a trap question, as suggested by Haaland *et al.* (2023), to identify respondents who were inattentive and sped through the survey. We explained to participants the purpose of using attention checks in research, and asked them to select a specific answer to a simple question that was unrelated to the survey content.<sup>13</sup> This allowed us to assess whether respondents read the questions carefully. Participants who answered the question incorrectly were dropped out without completing the questionnaire. Additionally, we asked respondents whether they paid sufficient attention to their answers. Only 1% of the sample (38 individuals) declared that they had not paid enough attention. We excluded these participants in the robustness analysis.

The characteristics of our sample are very close to those of the general population. Table 1 shows that the sample is almost perfectly representative along the targeted dimensions (age, gender and region), but it is also close to the general population with respect to other relevant non-targeted characteristics. The only exceptions are civil status, education and work status.<sup>14</sup>

The definitions of the variables are contained in Online Appendix C. The full distribution of the survey duration is provided in Online Appendix D. Finally, we check the integrity of the randomization (Online Appendix E) by testing whether our groups are balanced across a full set of observables. We show that the randomization between treated and untreated respondents worked, and our samples are well balanced with very few exceptions.

### 2.2 | Structure of the survey

All survey questions are available in Online Appendix B, in the same order as presented to participants. The questionnaire has the block structure outlined in the following subsections.

#### 2.2.1 | Welcome page

The questionnaire opens with the Information Sheet and the Informed Consent. In this part, respondents are informed of their legal rights as participants, and are asked to answer honestly and attentively to provide high-quality data.

**TABLE 1** Sample versus population: summary statistics.

	Sample statistics	Population statistics
Male	0.48	0.48
Age 18–24	0.08	0.08
Age 25–34	0.13	0.12
Age 35–44	0.16	0.15
Age 45–54	0.19	0.19
Age 55+	0.44	0.46
Married	0.51	0.46
Working	0.57	0.59
Unemployed	0.08	0.09
With a degree	0.26	0.20
Income	1791.74	1861.58
North-west	0.27	0.27
North-east	0.19	0.20
Centre	0.20	0.20
South	0.23	0.23
Islands	0.11	0.11

Notes: We used ISTAT and EUROSTAT data for the population statistics. The definitions of the variables are in Online Appendix C.

### 2.2.2 | Pre-treatment

In this block, we collect sociodemographic information on the participants (e.g. sex, age, education, job status). Moreover, we elicit respondents' political ideology (left–right), voting behaviours, fairness ideals (equality, equity and need) and income, among other variables. Some of these variables will be used to assess whether the treatments have heterogeneous effects. In particular, as specified in the pre-registration, we study whether individuals with different political ideologies (right versus left, populist versus not populist), different income levels (rich versus poor) or different social preferences (people who endorse meritocratic ideals versus people who do not) react differently to information on inequality and immigration (Alesina *et al.* 2018, 2021b; Fehr *et al.* 2022; Gärtner *et al.* 2023).<sup>15</sup>

### 2.2.3 | Informational treatments

Our four treatments are assigned randomly. The treated groups receive information through short animated videos.<sup>16</sup>

The first treatment (*Inequality Tr.*) is designed to affect perceptions of wealth inequality, and contains information on the gap between poor and rich people. The treatment first claims that the poor are getting poorer and the rich are getting richer; second, it provides information on the share of wealth going to the top 10% and the bottom 50%. We use data provided by Acciari *et al.* (2024), who rely on the Italian national accounts balance sheets. To ensure that respondents focus on the specific type of inequality discussed above, we include a clarifying introductory text before the video. This text specifies that when we refer to wealth, we mean real estate assets, deposits, savings, stocks and bonds. The video is available at <https://www.youtube.com/watch?v=yphcUpUPuGU> (accessed 1 May 2025), and the entire text is as follows:

*Inequality Tr.*: In Italy the poor are getting poorer and the rich are getting richer. Sorting individuals living in Italy based on their wealth, from the poorest to the richest, the poorest 50% of the population saw their wealth reduced from 12% to 3% of total wealth. The richest 10% of the population increased their wealth from 44% to 56% of total wealth.

The second treatment (*Poverty Tr.*) repeats the information contained in *Inequality Tr.*, but it adds information on the native–immigrant composition of poverty. In a short introductory text before the video, we clarify that we refer to regular immigrants, who legally live in the country but were born in another country.<sup>17</sup> In particular, the video highlights an important trend regarding poverty in Italy, namely the growing presence of immigrants among the poor population. We then provide three statistics sourced from the Italian National Statistical Office: the share of immigrants among the poor, and the incidence rates of poverty among the immigrant population and among the native population. The video is available at <https://www.youtube.com/watch?v=eo9hAaJR5nI> (accessed 1 May 2025), and the entire text is as follows:

*Poverty Tr.*: In Italy, within the poor, we find an increasing number of immigrants. If we consider the absolute poor, that is, those who are unable to meet basic needs, 27% of the total are immigrants. Analysing the incidence of poverty, while out of 100 Italians, 6 are poor, out of 100 immigrants, 30 are poor.

The third treatment (*Diversity Tr.*) provides information on inequality as in *Inequality Tr.*, and it adds information on the cultural diversity of the immigrant population. The video claims that cultural diversity in Italy is growing, and to support this statement, we provide information on the country of origin and the religion of immigrants living in Italy. Data are taken from different sources (Italian National Statistical Office and Fondazione ISMU—Iniziativa e Studi sulla Multietnicità). The video is available at <https://www.youtube.com/watch?v=uxNz2UK1Hfo> (accessed 1 May 2025), and it contains the following text:<sup>18</sup>

*Diversity Tr.*: In Italy, cultural diversity is growing. If we consider where the immigrants come from, 50% of them come from Africa, Asia, North and South America; the rest come from Europe. If we analyse religion, 80% of immigrants are Muslims, Orthodox Christians, Buddhists or of other religions; the rest are Catholics.

Finally, the fourth treatment (*All Tr.*) integrates the information about inequality, the composition of poverty among native and immigrant populations, and the cultural diversity of immigrants, contained in all previous treatments.

## 2.2.4 | Post-treatment

To investigate the multi-dimensionality of policy preferences, we consider several outcome variables. We start by capturing general redistributive preferences with a question eliciting respondents' agreement with public policies that tax the rich and provide benefits to the poor. We then elicit more specific preferences for redistribution in the questions that follow, focusing on specific areas of redistribution. As for income tax preferences, we show respondents the income brackets and the relative tax rates in the Italian fiscal system, and ask them if they believe that these rates should decrease, remain the same, or increase. Concerning taxes on wealth, we ask them whether they agree or disagree with a set of proposals to reduce inequality by introducing or increasing taxes on high-wealth individuals (a wealth tax and an estate tax).

In addition to the aforementioned preferences, we also gather public spending preferences. We ask respondents to allocate the total government budget across various sectors, including unemployment benefits, income support programmes to poor people, defence and healthcare. The answers to this question allowed us to capture their desired distribution of public funds within these sectors.

To determine the type of support that respondents would like to see implemented for those in poverty, we ask participants if they would be in favour of a cash benefit programme similar to the Italian ‘citizenship income’ for all poor individuals or just for poor Italian citizens. This allows us to understand if people have exclusionary redistributive preferences, meaning whether they prefer a welfare state based on citizenship. We also ask about the circumstances under which immigrants should be eligible to access national welfare benefits (immediately, after one year, after obtaining citizenship, etc.).<sup>19</sup>

To conclude, we include a behavioural measure asking participants about their willingness to donate to three charities with different objectives: (i) Oxfam (an organization fighting against inequality); (ii) Caritas (an organization supporting poor people living in Italy); and (iii) ARCI (an organization supporting the cultural and social integration of immigrants in Italy). The money that individuals are asked to donate to a charity comes from a lottery with five prizes of 100 euros each.

After the treatments, we include a set of questions designed to explore the mechanisms through which information may influence policy preferences. To begin, we elicit perceptions of inequality and immigration by including seven questions corresponding to the information provided in the treatments.<sup>20</sup> The first two questions are aimed at eliciting perceptions of inequality. We ask respondents about their beliefs on the share of the wealth owned by the top 10% and the bottom 50% of the wealth distribution. Then we ask three questions related to perceptions of the native–immigrant composition of poverty. These questions address the share of poor immigrants within the total population of poor individuals living in Italy, the incidence of poverty among immigrants (the proportion of poor immigrants compared to the total number of immigrants), and the incidence of poverty among Italians (the proportion of poor Italians compared to the total number of Italians). Finally, we ask two questions to elicit perceptions on the diversity of immigrants, by asking respondents about their beliefs regarding the shares of European and Catholic immigrants living in Italy. By comparing the control with the treated groups, we can assess whether individuals update their perceptions after the provision of the information.

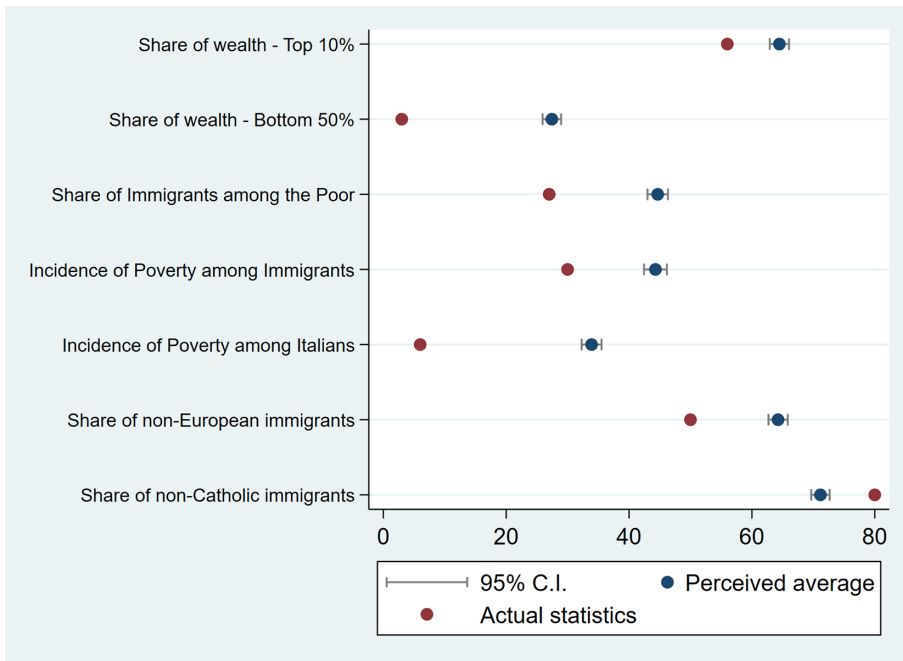
We do not restrict our analysis of mechanisms to how information impacts perceptions. We also investigate whether information affects other beliefs about immigration and inequality. This approach is motivated by evidence suggesting that information may shape individuals’ subjective experiences, emotional responses, and viewpoints on the matter (Kuziemko *et al.* 2015; Condon and Wichowsky 2020; Rhodes-Purdy *et al.* 2021; Elçi 2022). Since these mechanisms are often overlooked in the literature on survey experiments with informational treatments, we strive to be comprehensive in our approach to gather more evidence on additional potential mechanisms. Questions to capture other beliefs on inequality and immigration are also placed after the information treatments. First, we ask participants to position themselves on an economic scale ranging from 1 to 10, representing the distance between rich and poor people, to capture if they feel poorer or richer after the information. Second, we include questions to analyse whether people feel threatened by immigrants. Specifically, we ask whether they view immigrants as a burden on the country’s finances or, conversely, as contributors to those finances. Additionally, we ask respondents whether they believe that immigrants enrich or undermine the cultural life of the country in which they reside. Finally, we elicit people’s opinions on the importance of certain problems in the country. We present a list of eight issues (e.g. ‘wealth difference between rich and poor’, ‘loss of traditional values’, ‘unconditional provision of public subsidies to the poor’), and the respondents are asked to rank these issues from most important to least important.

### 3 | RESULTS: DESCRIPTIVE AND CORRELATION ANALYSIS

In this section, we present the results of a descriptive and correlation analysis based on the control group (i.e. individuals who did not receive any information). This provides a baseline analysis to understand (mis)perceptions and their correlation with policy preferences. However, the primary focus of this section is to serve the analysis of the causal effects of the informational treatments in Section 4. Therefore we will pay more attention to those findings directly related to information on the poverty composition.

#### 3.1 | Perceptions

Figure 1 shows the extent of misperceptions among the control group respondents by comparing the distance between perceptions averages and actual statistics. Generally, misperceptions are quite pronounced. Respondents tend to misperceive the share of wealth held by the top 10% and the bottom 50%, overestimating both of them. Similarly, respondents overestimate the number of immigrants among the poor in Italy, and the rate of poverty among immigrants and Italians. Finally, they also overestimate the share of non-European immigrants, and underestimate the share of non-Catholic immigrants. While the overall picture indicates widespread misperceptions across all variables, the degree of misperceptions is much higher in those statistics related to the poor populations. In particular, our respondents tend to be very optimistic (pessimistic) about the share of wealth held by the bottom 50% (the rate of poverty among Italians).<sup>21</sup> In Appendix Figures A1–A3, we illustrate the variability in the accuracy of perceptions at the individual level by calculating the deviation of the individual perceptions from the actual values. This measure ranges from  $-100$  to  $+100$ , with zero approximating no misperception, while positive (negative)



**FIGURE 1** Perceptions versus actual statistics. *Notes:* Average perception values and their confidence intervals are plotted together with the actual statistics values. Data on perceptions are based on the control group ( $N = 705$ ). Further details on the definitions of the variables can be found in Online Appendix C.

deviations correspond to overestimation (underestimation). The figures show that individuals generally tend to both overestimate and underestimate most perceptions, but tend to be mostly optimistic about the share of wealth held by the bottom 50%, and mostly pessimistic regarding the incidence of poverty among Italians. The latter result is particularly important in light of the causal findings that we will present in Section 4: we will show that update of perceptions on the incidence of poverty among Italians, following the provision of the information in *Poverty Tr.*, is key to explaining policy preferences changes.

Finally, in Appendix Figures A4–A6, we present the average perceptions for different groups of respondents (with 95% confidence intervals).<sup>22</sup> The aim of this analysis is to assess the level of polarization among social groups (Marino *et al.* 2024), namely to determine whether perceptions correlate with political ideology, income, or other observable characteristics. The figures show that social groups often share similar misperceptions, and in most cases, there is little to no polarization. However, there are consistent and systematic differences across some groups when we consider the same two perceptions identified above as displaying the greatest level of deviation from the actual statistics. For instance, perceptions of the wealth share going to the bottom 50% are polarized across different genders, education levels and political preferences, which include both the right–left ideological spectrum and the populist–non-populist voter dichotomy. A similar pattern of polarization is observable regarding perceptions of poverty incidence among Italians explaining the intense discussions among Italian politicians about the ‘citizenship income’ scheme and the criteria for accessing this benefit.<sup>23</sup>

In summary, the above analysis shows that misconceptions are widespread across different facts, but some areas raise particular concerns. Respondents are often quite inaccurate about the share of wealth owned by the bottom 50% and the incidence of poverty among Italians. These two aspects also show significant polarization across various dimensions, including gender, education and political preferences.

### 3.2 | Policy preferences

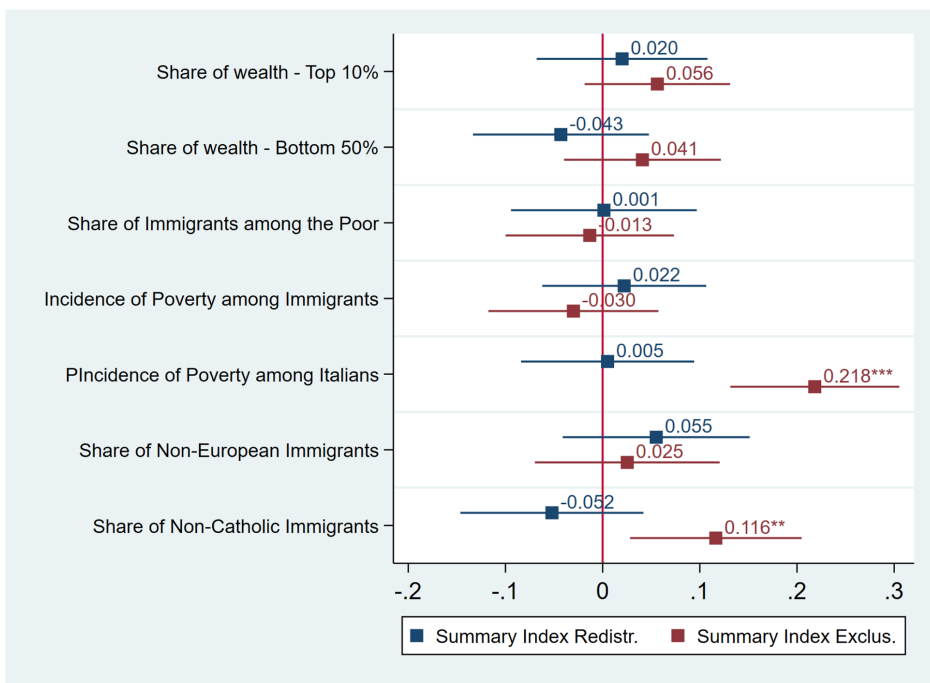
In this subsection, we investigate whether policy preferences correlate with perceptions. Specifically, we analyse nine individual policy preference outcomes that can be grouped into two summary indexes capturing *Redistributive preferences* and *Exclusionary preferences*. The first index, labelled *Summary Index Redistr.*, encompasses general support for redistribution through taxing the rich and providing benefits to the poor (*General Redistr.*), preferences for a higher income tax rate on rich individuals (*Tax Rich*), preferences for a wealth tax (*Wealth Tax*) and estate tax (*Estate Tax*), support for a cash benefit (basic income) to all poor (*Support Poor (all)*), preferences for more public spending on the poor (*Spend Poor*) or the unemployed (*Spend Unemploy.*). The second index, labelled *Summary Index Exclus.*, includes individuals’ preferences for a cash benefit exclusively for Italians (*Support Poor (It)*) and for restricting immigrants from accessing welfare benefits (*Exclusive Welfare*). All outcome variables, including these indexes, are normalized by the means and standard deviations of the control group variables, as is common in other surveys (Kling *et al.* 2007; Alesina *et al.* 2018, 2023; Grigorieff *et al.* 2020). The standardization enables the coefficients to represent effect sizes in terms of standard deviations from the mean. Definitions of all outcome variables can be found in Online Appendix C.

To illustrate the correlations between policy preferences and perceptions, Figure 2(a) presents the regression coefficient of the single nine outcomes on the seven perceptions, and Figure 2(b) presents the coefficients of the two summary indexes created by using these nine outcomes on the same seven perceptions. The figures reveal that correlations between perceptions and policy preferences are not very strong, with few exceptions: perceptions on the incidence of poverty among Italians correlate with exclusionary welfare preferences (Figure 2(b)). This finding is particularly important, as it suggests that beliefs about the distribution of poverty within the native

(a) Individual policy preferences variables



(b) Summary indexes



**FIGURE 2** Correlation of perceptions and policy preferences. *Notes:* The graphs report the regression coefficients of perceptions (on the left) on the policy preferences (at the top of each panel). All variables are described in Online Appendix C. Controls included in all regressions are: male, age brackets, married, highly educated, working, unemployed, student, living in the south, in a city, suburb, rural area. Full regression tables are reported in Appendix Table A2. \*, \*\*, \*\*\* indicate  $p < 0.1$ ,  $p < 0.05$ ,  $p < 0.01$ , respectively.

population are a significant driver of support for exclusionary welfare policies. As we move forward to analyse the treatment effects, we show how this correlation will play a crucial role in understanding how the provision of information can alter such preferences and potentially reduce exclusionary attitudes by addressing misperceptions.

Appendix Table A2 presents regression tables related to the analysis shown in Figure 2. These tables include regression coefficients of additional controls that capture sociodemographic factors as well as other individual characteristics. We also re-estimate these regressions using a smaller sample, incorporating controls for (i) being a populist and (ii) being a rich voter (see Appendix Tables A3 and A4).<sup>24</sup>

## 4 | RESULTS: CAUSAL EVIDENCE

In this section, we provide causal evidence by investigating whether the information affects policy preferences and the three mechanisms under scrutiny: perceptions and other beliefs on inequality and immigration. To achieve this, we estimate the equation

$$Y_i = \beta_0 + \sum_{j=1}^4 \beta_j T_{ij} + \gamma X_i + \varepsilon_i, \quad (1)$$

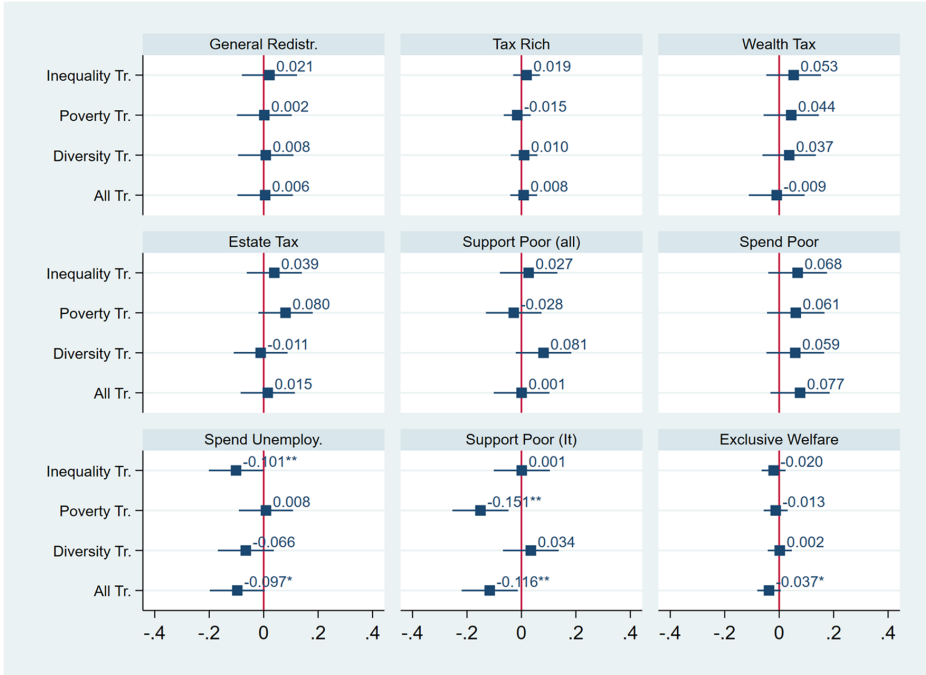
where  $Y_i$  is the outcome of interest (e.g. policy preferences and the three potential mechanisms),  $T_{ij}$  is a dummy indicator for whether subject  $i$  was exposed to the information contained in treatment  $j = 1, 2, 3, 4$ ,  $X_i$  is a vector of controls (e.g. the demographics), and  $\varepsilon_i$  is an individual-specific error term.<sup>25</sup> For all the specifications, we use robust standard errors and apply probability weights. Our focus is on the sign and magnitude of  $\beta_j$ , indicating the treatment's effect on the outcome variables.<sup>26</sup>

### 4.1 | Treatment effects on policy preferences

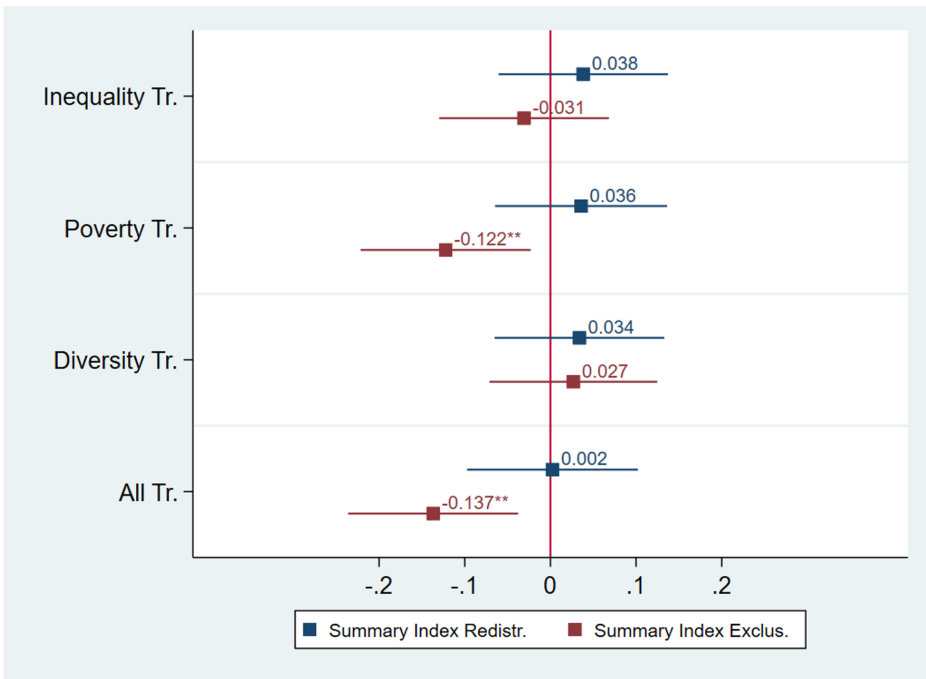
We start by analysing the role of the information on policy preferences. Figure 3 shows the regression coefficients of the effect of the informational treatments on the policy outcomes divided as above in the nine individual outcomes (Figure 3(a)) and the two indexes (Figure 3(b)). In line with most survey experiments with provision of information,<sup>27</sup> the figure shows that information frequently fails to change policy preferences. However, we find that (i) the information provided in *Inequality Tr.* reduces preferences for higher spending in unemployment benefits, and (ii) the information provided in *Poverty Tr.* and *All Tr.* reduces exclusionary redistributive preferences (*Summary Index Exclus.*) by reducing the support for cash benefits for Italians only (*Support Poor (It)*).

To strengthen our findings and, most importantly, to assess their robustness, we report the regression coefficients of Figure 3 in Table 2, with  $p$ -values, both unadjusted and adjusted for multiple test hypotheses. It is important to highlight that the creation of summary indexes over families of outcomes serves as a means to test for multiple hypotheses (Anderson 2008), and it is a common practice in many experimental studies (Settele 2022; Alesina *et al.* 2023; Grigorieff *et al.* 2020). However, we also apply the conservative method of family-wise error rate (FWER) control by using the free step-down resampling methodology (Westfall *et al.* 1993). Specifically, we correct the  $p$ -values for multiple hypotheses testing by simultaneously estimating the nine equations corresponding to the nine individual outcomes. Then we also adjust the  $p$ -values for the simultaneous estimation of two summary indexes (columns (8) and (11)) since they already encapsulate the information contained in the nine individual outcomes.

(a) Individual policy preferences variables



(b) Summary indexes



**FIGURE 3** Treatment effects on policy preferences. *Notes:* The graphs report the regression coefficients of the treatments (on the left) on the policy preferences (at the top of each panel). All variables are described in Online Appendix C. Controls included in all regressions are: male, age brackets, married, highly educated, working, unemployed, student, living in the south, in a city, suburb, rural area. Full regression tables are reported in Table 2 with FWER-adjusted  $p$ -values. \*, \*\*, \*\*\* indicate  $p < 0.1$ ,  $p < 0.05$ ,  $p < 0.01$ , respectively.

TABLE 2 Treatment effects on policy preferences.

	Redistributive preferences					Exclusionary preferences					Summary Index Exclus. Welfare (11)
	General Redistr. (1)	Tax Rich (2)	Wealth Tax (3)	Estate Tax (4)	Support Poor (all) (5)	Spend Poor (6)	Spend Unemploy. (7)	Index Redistr. (8)	Support Poor (It) (9)	Exclusive Welfare (10)	
Inequality Tr.	0.021 (0.681) [0.943]	0.019 (0.450) [0.937]	0.053 (0.300) [0.901]	0.039 (0.449) [0.937]	0.027 (0.622) [0.943]	0.068 (0.218) [0.843]	-0.101** (0.047) [0.330]	0.038 (0.448) [0.700]	0.001 (0.980) [0.977]	-0.020 (0.362) [0.932]	-0.031 (0.543) [0.700]
Poverty Tr.	0.002 (0.963) [0.987]	-0.015 (0.543) [0.978]	0.044 (0.393) [0.944]	0.080 (0.114) [0.576]	-0.028 (0.587) [0.978]	0.061 (0.258) [0.869]	0.008 (0.869) [0.987]	0.036 (0.484) [0.442]	-0.151*** (0.004) [0.041]	-0.013 (0.566) [0.978]	-0.122** (0.016) [0.027]
Diversity Tr.	0.008 (0.880) [0.994]	0.010 (0.692) [0.993]	0.037 (0.463) [0.981]	-0.011 (0.826) [0.994]	0.081 (0.119) [0.654]	0.059 (0.274) [0.880]	-0.066 (0.211) [0.838]	0.034 (0.502) [0.738]	0.034 (0.509) [0.981]	0.002 (0.924) [0.994]	0.027 (0.592) [0.738]
All Tr.	0.006 (0.915) [1.000]	0.008 (0.739) [1.000]	-0.009 (0.862) [1.000]	0.015 (0.766) [1.000]	0.001 (0.990) [1.000]	0.077 (0.167) [0.632]	-0.097* (0.060) [0.340]	0.002 (0.962) [0.963]	-0.116** (0.027) [0.213]	-0.037* (0.090) [0.428]	-0.137*** (0.007) [0.011]
Observations	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521

Notes: The table reports the effects of the treatments on the variables in the columns. Outcome variables are described in Online Appendix C and are standardized (Kling *et al.* 2007). Robust standard errors in parentheses. Controls included in all regressions are: male, age brackets, married, highly educated, working, unemployed, student, living in the south, in a city, suburb, rural area. FWER-adjusted  $p$ -values in square brackets, using the free step-down resampling methodology (Westfall *et al.* 1993).

\*, \*\*, \*\*\* indicate  $p < 0.1$ ,  $p < 0.05$ ,  $p < 0.01$ , respectively.

TABLE 3 Treatment effects on donations.

	Oxfam (1)	Caritas (2)	ARCI (3)
Inequality Tr.	0.049 (0.378) [0.764]	-0.041 (0.431) [0.764]	-0.043 (0.403) [0.764]
Poverty Tr.	0.007 (0.886) [0.908]	0.047 (0.378) [0.757]	-0.020 (0.682) [0.908]
Diversity Tr.	0.075 (0.173) [0.445]	-0.035 (0.500) [0.736]	-0.017 (0.732) [0.740]
All Tr.	0.051 (0.357) [0.610]	0.042 (0.413) [0.610]	-0.051 (0.289) [0.610]
Observations	3521	3521	3521

Notes: The table reports the effects of the treatments on the variables in the columns. Outcome variables are described in Online Appendix C and are standardized (Kling *et al.* 2007). Regressions are with probability weights. Controls included in all regressions are: male, left-wing, young, married, working, highly educated, and living in the south and islands. Uncorrected  $p$ -values in parentheses. FWER-adjusted  $p$ -values in square brackets, using the free step-down resampling methodology.

\*, \*\*, \*\*\* indicate  $p < 0.1$ ,  $p < 0.05$ ,  $p < 0.01$ , respectively.

Table 2 shows that only the treatment effects on exclusionary redistributive preferences survive to multiple hypothesis testing in *Poverty Tr.* and *All Tr.*<sup>28</sup> Therefore we can conclude that respondents who received information about the native–immigrant composition of poverty are less likely to support policies that prioritize Italians as exclusive beneficiaries of the basic income. The magnitudes are economically relevant: respondents exposed to *Poverty Tr.* and *All Tr.* are 0.12–0.15 standard deviations less likely to support these measures.<sup>29</sup>

To show that the causal results on policy preferences are not mere cheap talk but translate into some behavioural outcomes, we included a question in the survey asking individuals to donate a portion of a potential lottery prize to three charities based on their missions: (i) Oxfam (an organization fighting against inequality); (ii) Caritas (an organization supporting poor people living in Italy); (iii) ARCI (an organization promoting the cultural and social integration of immigrants in Italy). Table 3 provides evidence of treatment effects on the propensity to donate to these three charities. We find that the information provided in the four treatments does not change the actual donations.

Such results raise the question of whether donation preferences can serve as a behavioural indicator of preferences for redistribution, particularly in light of recent research suggesting that individual preferences for voluntary giving do not necessarily mirror collective preferences for redistribution (Mollerstrom *et al.* 2024). For this reason, we regress the two summary policy preferences indexes on a variable summing individual donations to the three organizations and the set of covariates of Table 3. While we find that preferences for donations correlate positively with *Summary Index Redistr.*, they do not correlate with *Summary Index Exclus.* This implies that Table 3 supports our main findings that information provided in the present study does not affect preferences for redistribution. However, we cannot provide similar evidence for exclusionary policy preferences, as they appear unrelated to donation preferences.

In the next subsection, we analyse the potential mechanisms that could explain how information about the native–immigrant composition of poverty affects exclusionary preferences.

## 4.2 | Mechanisms

To explore how information affects policy preferences, we analyse changes in perceptions and beliefs regarding inequality and immigration after providing the information.

### 4.2.1 | Perceptions updating

Several outcomes may occur when individuals are presented with new information. First, individuals may update their perceptions in accordance with the new information provided (updating type 1). Second, individuals may deliberately ignore the provided information and not revise their perceptions (updating type 2). Third, exposure to information may lead to an unintended, counterproductive effect, causing individuals' perceptions to move in the opposite direction to the information presented (updating type 3). Finally, individuals might update their perceptions about facts unrelated to the specific information presented (updating type 4).

Although each treatment, except for *All Tr.*, provides information on only a subset of the seven facts analysed in this study, perceptions were elicited from participants over all seven facts after the informational treatments. This design allows us to investigate the presence of the four aforementioned types of perception updates by comparing average differences between the control and treatment groups. Figure 4 illustrates the impact of the four treatments on all seven perceptions. It is important to note that all four treatments include information related to the two perceptions of inequality—the share of wealth going to the top 10% and to the bottom 50% (Figure 4(a)). *Poverty Tr.* and *All Tr.* address the subsequent three perceptions concerning the native–immigrant composition of poverty—the share of poor immigrants among the poor, and the incidence of poverty among Italians and immigrants (Figure 4(b)). Finally, *Diversity Tr.* and *All Tr.* provide information on the last two perceptions—the share of non-European and non-Catholic immigrants (Figure 4(c)). The graphs reveal various patterns and conditions under which the groups revise their perceptions. To start with, notice that in most cases, the treated groups update their perceptions according to the information provided (updating type 1). For instance, respondents overall reduce their misperceptions across various treatments: the share of wealth going to the top 10% in *All Tr.*, the share of wealth going to the bottom 50% in *All Tr.*, the native–immigrant composition of poverty in *Poverty Tr.* and *All Tr.*, the religious beliefs of immigrants in *Diversity Tr.* and *All Tr.*, and the share of non-European immigrants in *All Tr.*

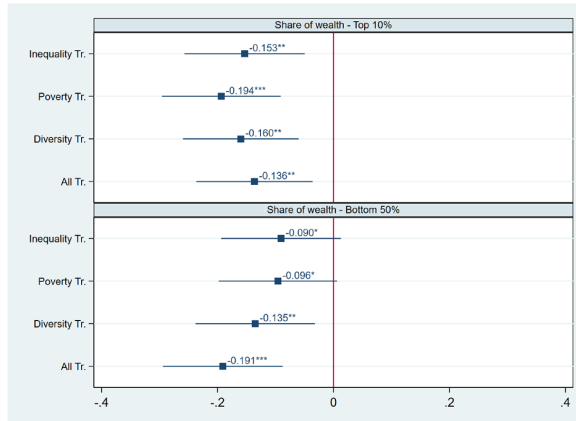
Our analysis also presents instances where respondents are unwilling to update their perceptions, even when presented with new information (updating type 2). Specifically, participants in *Inequality Tr.*, *Poverty Tr.* and *Diversity Tr.* show only minimal changes in their views about the share of wealth going to the bottom 50%. However, there is a significant shift in this perception in the final treatment (*All Tr.*), as previously noted. Additionally, while participants do not alter their views on the origins of immigrants in *Diversity Tr.*, they do adjust their perceptions in *All Tr.*

Occasionally, although infrequently, respondents may alter their beliefs independently of the information presented to them (this is referred to as updating type 4). This phenomenon is evident in the second treatment (*Poverty Tr.*), where participants adjusted their perception of the proportion of non-European immigrants, even though this information was provided only in *Diversity Tr.* and *All Tr.*

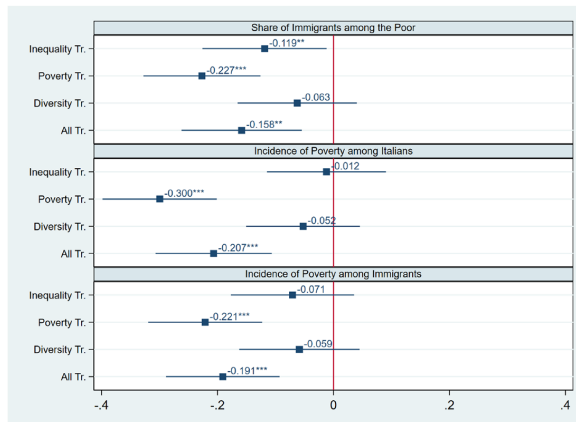
Finally, our analysis does not reveal any evidence of respondents exhibiting a backfiring effect (updating type 3), wherein individuals update their perceptions in the direction opposite to the provided information. This finding supports the notion that backfire effects are more of a myth than a reality (Nyhan 2020).

Table 4 reports the regression coefficients with the unadjusted and adjusted  $p$ -values. The latter are corrected for the simultaneous estimation of the seven equations related to the perceptions outcomes. Connecting the main result of Table 2—the impact of information relative to the

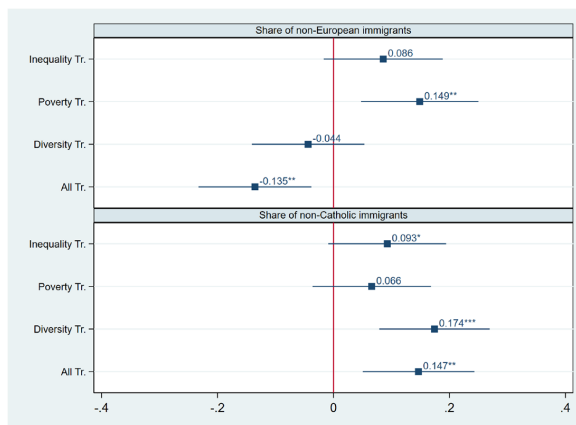
(a) Perceptions affected by all treatments



(b) Perceptions affected by *Poverty Tr.* and *All Tr.*



(c) Perceptions affected by *Diversity Tr.* and *All Tr.*



**FIGURE 4** Treatment effects on perceptions. *Notes:* The graphs report regression coefficients of treatments (on the left) on perceptions outcomes (at the top of each panel). All variables are described in Online Appendix C. Controls included in all regressions are: male, age brackets, married, highly educated, working, unemployed, student, living in the south, in a city, suburb, rural area. Full regression tables are reported in Table 4 with FWER-adjusted  $p$ -values. \*, \*\*, \*\*\* indicate  $p < 0.1$ ,  $p < 0.05$ ,  $p < 0.01$ , respectively.

TABLE 4 Treatment effects on perceptions.

	Perceptions of inequality		Perceptions of poverty		Perceptions of diversity		
	Share of wealth Top 10% (1)	Share of wealth Bottom 50% (2)	Share of immigrants among the poor (3)	Incidence of poverty among immigrants (4)	Incidence of poverty among Italians (5)	Share of non-European immigrants (6)	Share of non-Catholic immigrants (7)
Inequality Tr.	-0.153*** (0.004) [0.027]	-0.090* (0.086) [0.291]	-0.119** (0.030) [0.150]	-0.071 (0.193) [0.347]	-0.012 (0.818) [0.811]	0.086 (0.100) [0.291]	0.093* (0.074) [0.291]
Poverty Tr.	-0.194*** (0.000) [0.000]	-0.096* (0.065) [0.135]	-0.227*** (0.000) [0.000]	-0.221*** (0.000) [0.000]	-0.300*** (0.000) [0.000]	0.149*** (0.004) [0.012]	0.066 (0.206) [0.199]
Diversity Tr.	-0.160*** (0.002) [0.008]	-0.135** (0.010) [0.049]	-0.063 (0.233) [0.624]	-0.059 (0.266) [0.624]	-0.052 (0.294) [0.624]	-0.044 (0.378) [0.624]	0.174*** (0.000) [0.003]
All Tr.	-0.136*** (0.008) [0.011]	-0.191*** (0.000) [0.001]	-0.158*** (0.003) [0.009]	-0.191*** (0.000) [0.001]	-0.207*** (0.000) [0.001]	-0.135*** (0.006) [0.011]	0.147*** (0.003) [0.009]
Observations	3521	3521	3521	3521	3521	3521	3521

Notes: See Table 3.

native–immigrant composition of poverty (included in *Poverty Tr.* and *All Tr.*) on exclusionary policy preferences—with the treatment effects on perceptions in Table 4, the analysis suggests that reducing certain misperceptions may affect policy preferences. Specifically, as people reduce their misperceptions regarding the native–immigrant composition of poverty—in particular, recognizing that immigrants make up a smaller percentage of the impoverished population in Italy, and learning the actual poverty rates among both Italians and immigrants—they tend to reduce their exclusionary preferences. This suggests that in some instances, informed individuals can adjust their policy preferences based on a more accurate understanding of reality.

In Subsubsection 4.2.3, we further investigate the mechanisms driving our results by analysing which perception, among the three affected by the information on the native–immigrant composition of poverty, is primarily responsible for the observed treatment effect on policy preferences. Before that, in the next subsection, we explore whether the information also affects beliefs on inequality and immigration.

## 4.2.2 | Beliefs on inequality and immigration

As an additional feature of our work, we also investigate how information impacts individuals' beliefs on inequality and immigration. The underlying idea is that responses to new information are not always purely rational. Individuals may also change other beliefs that influence policy-making beyond mere factual knowledge.

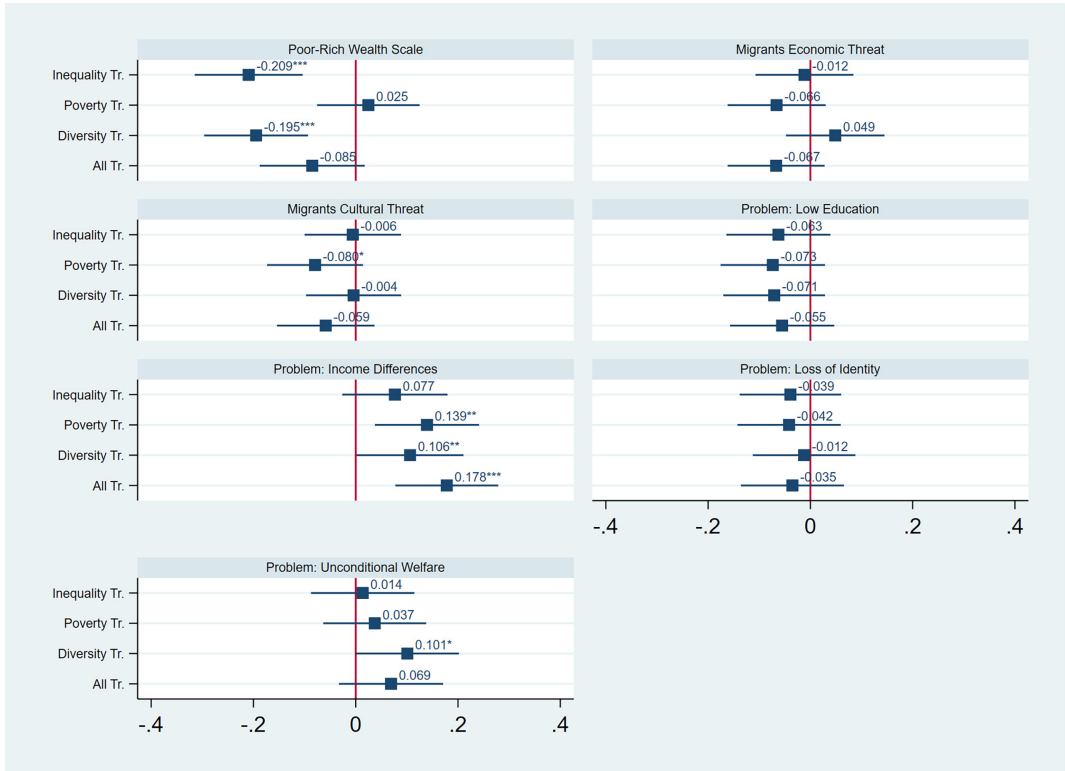
Figure 5 shows the treatment effects on several beliefs about inequality and immigration. First, we ask participants to self-position themselves on a wealth scale ranging from 1 to 10, representing the distance between rich and poor people ('Poor–Rich Wealth Scale'). This subjective measure of their economic status is crucial to understanding whether individuals react to the information by feeling poorer or richer than other economic groups. Second, we ask respondents whether immigrants are a threat to their country, either because immigrants are a burden for the country's finances ('Migrants economic threat') or because immigrants undermine the cultural life of the country in which they live ('Migrants cultural threat'). Finally, we ask them to rank the most relevant problems in Italy by listing several of them. In particular, we focus on how respondents rank problems such as limited education ('Problem: low education'), inequality ('Problem: income differences'), threat to identity ('Problem: loss of identity'), and welfarism ('Problem: unconditional welfare').

In most cases, individuals exposed to our information treatments are unlikely to change the beliefs that we have elicited. However, we find that exposure to information about inequality (*Inequality Tr.*) leads people to feel significantly poorer, with a change of 0.209 standard deviations. This finding is robust even after accounting for multiple testing (see Table 5).<sup>30</sup> Additionally, we observe that *Poverty Tr.*, *Diversity Tr.* and *All Tr.* make inequality salient; however, the treatment effect survives only in the last treatment (0.178 standard deviations). We believe that this can be explained by the fact that only respondents in the last combined treatment update their perceptions on the share of wealth going to the bottom 50%, which implies that they realized here the extent of the income differences between poor and rich.

To summarize, the (lack of) treatment effects on beliefs about inequality and immigration indicate that the treatment effect on exclusionary policy preferences after information on the native–immigrant composition of poverty is provided may be driven only by the updating of perceptions. In the next subsection, we explore this aspect in more detail.

## 4.2.3 | Mediation analysis

Combining insights from the previous subsections, it seems that the treatment effect found in *Poverty Tr.* and *All Tr.* on exclusionary redistributive preferences is more related to the updating



**FIGURE 5** Treatment effects on beliefs on inequality and immigration. *Notes:* The graphs report regression coefficients of treatments (on the left) on beliefs outcomes (at the top of each panel). All variables are described in Online Appendix C. Controls included in all regressions are: male, age brackets, married, highly educated, working, unemployed, student, living in the south, in a city, suburb, rural area. Full regression tables are reported in Table 5 with FWER-adjusted  $p$ -values. \*, \*\*, \*\*\* indicate  $p < 0.1$ ,  $p < 0.05$ ,  $p < 0.01$ , respectively.

of perceptions than to other mechanisms, such as beliefs about inequality and immigration. However, our design based on multiple perceptions updating might leave the reader unsure whether it is a single piece of information or a combination of information that drives the treatment effect, or if other mechanisms, not addressed in this study, can explain the findings. While we do not have a clear econometric strategy to resolve these uncertainties, we provide suggestive evidence through a mediation analysis.<sup>31</sup>

For the sake of simplicity, we consider the effect of *Poverty Tr.* on exclusionary redistributive preferences. We decompose this effect into direct and indirect effects to understand how perceptions mediate the relationship between information on the native-immigrant composition of poverty and exclusionary policy preferences. We consider the five perceptions related to the information contained in *Poverty Tr.* as mediators ( $P_1$  is the share of wealth of the top 10%;  $P_2$  is the share of wealth of the bottom 50%;  $P_3$  is the share of immigrants among the poor;  $P_4$  is the incidence of poverty among immigrants;  $P_5$  is the incidence of poverty among Italians), and the summary index of exclusionary redistributive preferences as dependent variable (*Excl\_Index*). Therefore we have multiple mediators (Preacher and Hayes 2008) and a multiple system of equations:

$$P_1 = \alpha_0 + \alpha_1 \text{Poverty Tr.} + \alpha_2 X_i + u_1,$$

$$P_2 = \beta_0 + \beta_1 \text{Poverty Tr.} + \beta_2 X_i + u_2,$$

**TABLE 5** Treatment effects on other beliefs on inequality and immigration.

	Poor–rich wealth scale (1)	Migrants economic threat (2)	Migrants cultural threat (3)	Problem: low education (4)	Problem: income differences (5)	Problem: loss of identity (6)	Problem: unconditional welfare (7)
Inequality Tr.	−0.209*** (0.000) [0.000]	−0.012 (0.812) [0.989]	−0.006 (0.906) [0.989]	−0.063 (0.228) [0.698]	0.077 (0.144) [0.575]	−0.039 (0.441) [0.888]	0.014 (0.792) [0.989]
Poverty Tr.	0.025 (0.628) [0.798]	−0.066 (0.177) [0.587]	−0.080* (0.096) [0.433]	−0.073 (0.158) [0.587]	0.139*** (0.007) [0.056]	−0.042 (0.419) [0.798]	0.037 (0.469) [0.798]
Diversity Tr.	−0.195*** (0.000) [0.003]	0.049 (0.323) [0.661]	−0.004 (0.931) [0.960]	−0.071 (0.163) [0.489]	0.106** (0.046) [0.221]	−0.012 (0.811) [0.960]	0.101* (0.050) [0.221]
All Tr.	−0.085 (0.104) [0.459]	−0.067 (0.166) [0.565]	−0.059 (0.228) [0.565]	−0.055 (0.288) [0.565]	0.178*** (0.001) [0.004]	−0.035 (0.494) [0.565]	0.069 (0.184) [0.565]
Observations	3521	3521	3521	3521	3521	3521	3521

Notes: See Table 3.

$$\begin{aligned}
 P_3 &= \gamma_0 + \gamma_1 \text{Poverty Tr.} + \gamma_2 X_i + u_3, \\
 P_4 &= \theta_0 + \theta_1 \text{Poverty Tr.} + \theta_2 X_i + u_4 \\
 P_5 &= \rho_0 + \rho_1 \text{Poverty Tr.} + \rho_2 X_i + u_5, \\
 \text{Excl\_Index} &= \omega_0 + \omega_1 \text{Poverty Tr.} + \omega_2 P_1 + \omega_3 P_2 \\
 &\quad + \omega_4 P_3 + \omega_5 P_4 + \omega_6 P_5 + \omega_7 X_i + u_6.
 \end{aligned} \tag{2}$$

We also include controls ( $X$ ) as in the previous regressions' tables, and an individual-specific error ( $u$ ). We estimate the above system using seemingly unrelated regression models (Cameron and Trivedi 2010). Table 6 reports the results, indicating that the information provided in *Poverty Tr.* affects all perceptions except for the share of wealth going to the bottom 50% ( $P_2$ ) (columns (1)–(5)). This finding is consistent with our earlier findings in Table 4. Interestingly, the results in column (6) shed light on how information influences exclusionary policy preferences by examining the mediating role of the five perceptions. We find that perception's updating on the incidence of poverty among Italians ( $P_5$ ) drives our results entirely: the treatment's effect on the exclusionary policy preference index is mediated solely by this perception. Furthermore, since the effect of *Poverty Tr.* on exclusionary policy preferences is no longer significant, it suggests that no mechanisms other than perceptions of the incidence of poverty among Italians drive the effect. Consequently, we conclude that as Italians become aware of the true extent of poverty among their fellow citizens, their preference for an exclusionary welfare state decreases. This confirms that the reduction in exclusionary policy preferences observed in the second treatment (*Poverty Tr.*) can be interpreted as evidence of an economic in-group bias among respondents.

## 5 | HETEROGENEOUS TREATMENT EFFECTS

This section investigates the presence of heterogeneous treatment effects. For purposes of comparison with the literature, we explore whether political ideology (left versus right, and voting

TABLE 6 Mediation analysis.

	$P_1$	$P_2$	$P_3$	$P_4$	$P_5$	$Excl\_Index$
	(1)	(2)	(3)	(4)	(5)	(6)
Poverty Tr.	-0.191*** (0.0520)	-0.0927 (0.0522)	-0.219*** (0.0514)	-0.218*** (0.0501)	-0.289*** (0.0508)	-0.0591 (0.0518)
$P_1$						0.0156 (0.0272)
$P_2$						0.0358 (0.0293)
$P_3$						-0.00435 (0.0323)
$P_4$						-0.0463 (0.0332)
$P_5$						0.196*** (0.0311)
Constant	0.0832 (0.0786)	-0.0546 (0.0789)	0.0948 (0.0777)	-0.0385 (0.0758)	0.0168 (0.0768)	0.265*** (0.0771)

Notes: Here,  $N = 1408$ . The table reports the coefficients of equations (2) except for the control variables, which are included in the regressions but not reported. The outcome variables are standardized (Kling *et al.* 2007). The variables are coded as follows:  $P_1$  is the share of wealth of the top 10%,  $P_2$  is the share of wealth of the bottom 50%,  $P_3$  is the share of immigrants among the poor,  $P_4$  is the incidence of poverty among immigrants,  $P_5$  is the incidence of poverty among Italians,  $Excl\_Index$  is a summary index of exclusionary redistributive preferences. Controls included in all regressions are: male, age brackets, married, working, highly educated, and living in the south and islands.

\*, \*\*, \*\*\* indicate  $p < 0.1$ ,  $p < 0.05$ ,  $p < 0.01$ , respectively.

for a populist party or not), income (rich versus poor) and social preferences (meritocrats versus non meritocrats) explain differences in the way people react to information and form their preferences. To do so, we report heterogeneous treatment effects by focusing on the two summary indexes—*General redistributive preferences* and *Exclusionary preferences*—since they provide more robust results of the treatment effects. We also report, in Appendix A, heterogeneous treatment effects on perceptions and other beliefs on inequality and immigration. In all tables, we report the coefficient of the treatment that measures the reaction of the omitted group (e.g. left-wing respondents) to the information, and the interaction between the treatment and the group of interest (e.g. right-wing respondents). However, we also report the  $p$ -value of the  $F$ -test of the sum of the coefficient of the treatment and the interaction term, which gives the reaction of the group of interest (e.g. right-wing respondents) to the information treatment.

## 5.1 | Political ideology

The literature has often observed heterogeneous treatment effects driven by political ideology (Karadja *et al.* 2017; Settele 2022; Alesina *et al.* 2018, 2023). However, some studies find no effects (Haaland and Roth 2020; Fehr *et al.* 2020; Douenne and Fabre 2022). Table 7 presents our treatment effects on policy preferences for respondents classified as right-wing and centrist, with left-wing respondents serving as the reference category. Our findings indicate that overall, there is limited evidence that right-wing and left-wing individuals respond differently to the various treatments. Similarly, Appendix Tables A6 and A7 reveal no significant heterogeneous effects in perceptions and beliefs about inequality and immigration. Since the left–right political spectrum may not adequately capture political ideology in Italy, we also explore heterogeneous effects

TABLE 7 Heterogeneous treatment effects on policy preferences—political ideology.

	Summary Index Redistr. (1)	Summary Index Exclus. (2)
Inequality Tr. (T1)	-0.007 (0.069)	0.010 (0.076)
Poverty Tr. (T2)	-0.006 (0.071)	-0.107 (0.079)
Diversity Tr. (T3)	0.002 (0.071)	0.063 (0.076)
All Tr. (T4)	-0.040 (0.070)	-0.179** (0.077)
Inequality Tr. (T1) * Right	0.059 (0.119)	-0.129 (0.119)
Poverty Tr. (T2) * Right	0.034 (0.122)	-0.065 (0.119)
Diversity Tr. (T3) * Right	0.026 (0.120)	-0.117 (0.117)
All Tr. (T4) * Right	0.005 (0.121)	0.063 (0.119)
Right	-0.737*** (0.083)	0.588*** (0.083)
Inequality Tr. (T1) * Centre	0.111 (0.128)	-0.002 (0.126)
Poverty Tr. (T2) * Centre	0.125 (0.125)	0.026 (0.126)
Diversity Tr. (T3) * Centre	0.098 (0.126)	0.011 (0.126)
All Tr. (T4) * Centre	0.172 (0.128)	0.096 (0.127)
Centre	-0.450*** (0.091)	0.261*** (0.088)
<i>p</i> -value [T1 + T1 × Right]	0.598	0.190
<i>p</i> -value [T2 + T2 × Right]	0.779	0.054
<i>p</i> -value [T3 + T3 × Right]	0.775	0.535
<i>p</i> -value [T4 + T4 × Right]	0.727	0.198
<i>p</i> -value [T1 + T1 × Centre]	0.334	0.934
<i>p</i> -value [T2 + T2 × Centre]	0.248	0.410
<i>p</i> -value [T3 + T3 × Centre]	0.340	0.458
<i>p</i> -value [T4 + T4 × Centre]	0.217	0.409
<i>N</i>	3521	3521

Notes: The table reports the effects of the treatments on the variables in the columns. Outcome variables are described in Online Appendix C and are standardized (Kling *et al.* 2007). Regressions are with probability weights and robust standard errors in parentheses. Controls included in all regressions are: male, age brackets, married, working, highly educated, and living in the south and islands.

\*, \*\*, \*\*\* indicate  $p < 0.1$ ,  $p < 0.05$ ,  $p < 0.01$ , respectively.

between populist and non-populist voters. The findings in Appendix Tables A8, A9 and A10 generally show limited heterogeneous effects between these two groups in terms of policy preferences, perceptions and beliefs.

Overall, our analysis shows that treatment effects do not differ significantly between politically distinct groups in Italy.

## 5.2 | Income

Heterogeneous effects have been also observed across income groups (e.g. Cruces *et al.* (2013), Karadja *et al.* (2017)). Table 8 presents an analysis of the heterogeneous treatment effects on policy preferences among respondents categorized as rich and middle-income respondents, with poor respondents as the base category. We observe that poor and rich individuals respond differently to information on the native–immigrant composition of poverty (both *Poverty Tr.* and *All Tr.*), with poor respondents reducing their exclusionary policy preferences. This indicates that poor individuals play a key role in driving the main treatment effect found in Subsection 4.1.

Table 8 also highlights heterogeneity in responses to *Diversity Tr.*, where rich and poor respondents differ in their support for exclusionary welfare policies after exposure to cultural diversity information. While perceptions do not appear to explain this result (see Appendix Table A11), Appendix Table A12 shows that rich individuals, after receiving information on diversity, increasingly view welfarism as an important issue, potentially reflecting a cultural in-group bias (see *F*-test, column (7)).

In summary, we find heterogeneous treatment effects along the income dimension in the context of Italian policy preferences formation. Exposure to information on the native–immigrant composition of poverty affects differences in exclusionary preferences between rich and poor voters. Also, we find evidence of cultural in-group bias among rich respondents exposed to information on immigrants' diversity.

## 5.3 | Social preferences

We also examine heterogeneous treatment effects based on social preferences related to beliefs in meritocracy (Mijs 2021; Almås *et al.* 2020). Specifically, we investigate whether individuals who believe in meritocracy respond differently to information compared to those who do not hold this belief. Table 9 reports the heterogeneous treatment effects on policy preferences. Our study shows that meritocrats and non-meritocrats differ in their preferences for redistribution after being exposed to the information in *Inequality Tr.* (albeit to a lesser extent) and *Diversity Tr.* While we observe no differences in the treatment effects on perceptions (see Appendix Table A13), some differences emerge between the two groups in the feeling of threat. Meritocrats report a higher economic threat in *Inequality Tr.* and both economic and cultural threats in *Diversity Tr.*, compared to non-meritocrats (see Appendix Table A14). These findings suggest that meritocrats may exhibit economic and cultural in-group bias, driven by perceived threats to their resources and culture.

## 6 | FURTHER ANALYSES

To confirm our findings, we conducted a series of additional analyses addressing potential concerns about data quality and experiment demand effects.

**TABLE 8** Heterogeneous treatment effects on policy preferences—income.

	Summary Index Redistr. (1)	Summary Index Exclus. (2)
Inequality Tr. (T1)	0.197 (0.120)	-0.184 (0.115)
Poverty Tr. (T2)	0.020 (0.115)	-0.316*** (0.115)
Diversity Tr. (T3)	0.066 (0.116)	-0.154 (0.109)
All Tr. (T4)	-0.058 (0.119)	-0.356*** (0.110)
Inequality Tr. (T1) * Rich	-0.326* (0.179)	0.238 (0.171)
Poverty Tr. (T2) * Rich	-0.170 (0.179)	0.362** (0.170)
Diversity Tr. (T3) * Rich	-0.114 (0.180)	0.346** (0.175)
All Tr. (T4) * Rich	0.089 (0.184)	0.296* (0.174)
Rich	-0.044 (0.126)	-0.400*** (0.123)
Inequality Tr. (T1) * Middle	-0.135 (0.147)	0.229 (0.144)
Poverty Tr. (T2) * Middle	0.066 (0.144)	0.260* (0.144)
Diversity Tr. (T3) * Middle	-0.082 (0.146)	0.228 (0.138)
All Tr. (T4) * Middle	0.047 (0.146)	0.359** (0.141)
Middle	-0.011 (0.105)	-0.318*** (0.105)
<i>p</i> -value [T1 + T1 × Rich]	0.330	0.672
<i>p</i> -value [T2 + T2 × Rich]	0.276	0.708
<i>p</i> -value [T3 + T3 × Rich]	0.724	0.158
<i>p</i> -value [T4 + T4 × Rich]	0.822	0.655
<i>p</i> -value [T1 + T1 × Middle]	0.468	0.610
<i>p</i> -value [T2 + T2 × Middle]	0.327	0.524
<i>p</i> -value [T3 + T3 × Middle]	0.858	0.391
<i>p</i> -value [T4 + T4 × Middle]	0.900	0.971
<i>N</i>	2568	2568

Notes: See Table 7.

TABLE 9 Heterogeneous treatment effects on policy preferences—meritocrats.

	Summary Index Redistr. (1)	Summary Index Exclus. (2)
Inequality Tr. (T1)	0.084 (0.059)	-0.071 (0.060)
Poverty Tr. (T2)	0.088 (0.059)	-0.100 (0.063)
Diversity Tr. (T3)	0.110* (0.059)	-0.001 (0.060)
All Tr. (T4)	0.042 (0.060)	-0.193*** (0.062)
Inequality Tr. (T1) * Meritocrat	-0.225* (0.127)	0.129 (0.119)
Poverty Tr. (T2) * Meritocrat	-0.181 (0.126)	-0.027 (0.112)
Diversity Tr. (T3) * Meritocrat	-0.283** (0.122)	0.116 (0.118)
All Tr. (T4) * Meritocrat	-0.136 (0.124)	0.200* (0.118)
Meritocrat	-0.339*** (0.085)	-0.117 (0.081)
<i>p</i> -value [T1 + T1 × Meritocrat]	0.211	0.577
<i>p</i> -value [T2 + T2 × Meritocrat]	0.402	0.174
<i>p</i> -value [T3 + T3 × Meritocrat]	0.104	0.255
<i>p</i> -value [T4 + T4 × Meritocrat]	0.387	0.947
<i>N</i>	3521	3521

Notes: See Table 7.

## 6.1 | Robustness analysis

We test the robustness of our treatment effects on preferences for redistribution, perceptions, and other beliefs regarding inequality and immigration by re-estimating regressions in Tables 2, 4 and 5 in four different ways.

First, we evaluated whether low-quality responses could have biased our results. We dropped respondents who explicitly declared that they had not paid sufficient attention to the survey ( $N = 38$ ) and those who spent too little or too much time on questions, namely those in the bottom 5% and top 5% of the survey time distribution ( $N = 345$ ). In sum, 383 observations were dropped. We re-estimate our models with this new restricted sample of 3138 individuals, and show that results presented in Appendix Tables A15, A16 and A17 remain robust. Specifically, information on the native–immigrant composition of poverty continues to reduce exclusionary welfare preferences, and the mechanism at work is the reduction of misperceptions. Second, we excluded respondents with an extreme pattern of answers on a set of 28 questions as in Alesina *et al.* (2023), and we still find our main treatment effects using this new sample of 3456 (Appendix Tables A18, A19 and A20). Third, we re-estimate our coefficients without probability weights to check whether our results depend excessively on weighting. We find again that information on the native–immigrant composition of poverty reduces exclusionary welfare preferences

(Appendix Tables A21, A22 and A23). Finally, we combine *Poverty Tr.* and *All Tr.* to gain more statistical power. This combined approach confirms the consistency of our findings, as reported in Appendix Tables A24, A25 and A26.

## 6.2 | Experimenter demand effects

Experimenter demand effects might pose a potential challenge in information provision experiments. However, we provide evidence suggesting that such effects are unlikely to significantly influence the results of this study, especially when considering the main finding that information on the native–immigrant composition of poverty reduces exclusionary redistributive preferences.

First, recent research suggests that demand effects have limited quantitative significance in online surveys. Anonymity, a key feature of online survey experiments, is considered a powerful approach to reducing experimenter demand effects (Haaland *et al.* 2023; De Quidt *et al.* 2018). Second, we assessed participants' perceptions of the survey's neutrality by asking whether they believed it was biased. Thirteen percent of respondents indicated that they thought it was. After excluding these individuals, we re-estimate the main model and show that the main result—information on the native–immigrant composition of poverty reduces exclusionary redistributive preferences—remains robust (see Appendix Table A27). Finally, if demand effects influence experimental behaviour, then they are likely to be stronger among participants who can more readily detect the experiment's intent and adjust their responses accordingly. To explore this further, we investigate whether the main result is affected by stronger demand effects among educated, young or student respondents who are more likely to be in contact with the providers of the survey. We present heterogeneous treatment effects among these groups in Appendix Tables A28, A29 and A30. We find that educated, young individuals and students are not more likely than other groups to provide responses that align with our main results.

## 7 | CONCLUSIONS

We conducted a survey experiment in Italy to investigate how information affects policy preferences for redistribution, particularly regarding policies that deliberately exclude immigrants from redistributive measures. As a unique contribution to the existing literature, we provided participants with information on both wealth inequality *and* immigration. To address the economic and cultural dimension of immigration, we included insights into the composition of poverty, distinguishing between natives and immigrants, as well as the cultural diversity of immigrants, which encompasses their countries of origin and religions. By integrating these aspects of inequality and immigration—often discussed in isolation in the experimental literature—our research offers a distinct perspective.

Our findings revealed significant misperceptions among participants regarding both income inequality and immigration. Notably, these misperceptions were more pronounced for statistics on wealth concentration at the bottom of the income distribution and the incidence of poverty among Italians. We observed that on average, preferences for redistribution were relatively inelastic to the provision of information. However, when participants were presented with information about the native–immigrant composition of poverty, they reduced their support for a welfare state that grants access only to Italians. Through mediation analysis, we showed that these treatment effects are linked to changes in perceptions regarding the incidence of poverty among Italians. Therefore, our study reveals the existence of an economic in-group bias driven by misperceptions on the native–immigrant composition of poverty. Additionally, by exploring heterogeneous treatment effects, we found evidence of a cultural in-group bias along the income

and social preferences dimensions. This suggests that the impact of information on attitudes may vary depending on individual characteristics.

Our results require further discussion to provide a better understanding and possible avenues for future research, especially with respect to the relation between information, policy preferences and perceptions updating. On the one hand, we showed that respondents generally correct their misperceptions when presented with new information; however, they still rely on these misperceptions to shape most of their policy preferences. Nevertheless, it appears that exclusionary policy preferences are more elastic than other, more general redistributive preferences. This result is consistent with previous studies (Magni 2021; Daniele *et al.* 2024).

Also, we showed that only certain pieces of information matter, and their identification is crucial for implementing educational campaigns to inform the citizenry. However, it remains unclear why individuals often fail to update their perceptions when new information is presented. We can rule out the possibility that respondents did not watch the videos, did not pay attention to them, or distrusted the source of information. Since the perceptions that were not updated (e.g. the share of wealth held by the bottom 50%) are in the same videos as the updated perceptions (e.g. the share of wealth held by the top 10%), we tend to believe that respondents did watch the videos, pay attention, and trust the source of information. However, if respondents viewed the videos, then why did they not adjust their perceptions accordingly? Here, we outline several potential explanations, which are not mutually exclusive, for why respondents may disregard information or update their perceptions differently than expected.

First, consider the information about the share of wealth going to the bottom 50%. In this case, cognitive dissonance might be at work: individuals sometimes might disregard pieces of information that look inconsistent with their internal beliefs and values to a great extent (Festinger 1957). Several studies show that both advantaged and disadvantaged members of unequal societies are more likely to justify income differences and to adjust their descriptions of inequality as a form of self-protection (Jost *et al.* 2004; Trump and White 2018; Dover 2022). This suggests the importance of considering the potential impact of information that significantly differs from the pre-existing beliefs held by respondents.

Second, but closely related to cognitive dissonance, individuals might exhibit directional rather than accuracy motivations when processing information. In simpler terms, motivated reasoning may play a significant role in determining which information is considered when updating beliefs (Flynn *et al.* 2017; Epley and Gilovich 2016; Bénabou and Tirole 2016). Individuals tend to hold beliefs and opinions that are more conducive to their existing views, and to accept only those pieces of information that are consistent with their worldviews or with their shared social identities. Motivated reasoning can explain why systematic differences in misperceptions and preferences may be self-serving in nature (Deffains *et al.* 2016). For instance, Kraus *et al.* (2019) document how white Americans engage in motivated cognition to remain ignorant about racial economic inequality, in service of their prevailing narrative. Alesina *et al.* (2021a) find similar results but exacerbated by partisan gaps. As a theory, motivated reasoning might explain why people ignore the information on the share of wealth going to the bottom 50%, but it also helps us to understand why information on a factual reality (e.g. information on poverty in *Poverty Tr.*) pushes people to update perceptions on other factual realities (e.g. the share of non-European immigrants in *Poverty Tr.*). The presence of a multi-dimensional updating of perceptions is thus a crucial aspect to be taken into account in this case. Alesina *et al.* (2020) elaborate a conceptual framework that explains that when information is given, it enters a multi-dimensional space of perceptions and policy preferences, and the way in which perceptions change depends on how learning occurs when people receive different pieces of information, which are weighted before the updating process. Under this light, studies that fail to detect effects of informational treatments on policy preferences might also be explained by people updating perceptions different from the ones included into the information provided, yet crucial for shaping those preferences. Similar in spirit to motivated reasoning, there is also evidence that people are better at integrating

desirable information into their beliefs than undesirable information (Eil and Rao 2011; Lefebvre *et al.* 2017).

Overall, the most common pattern is that individuals selectively update their perceptions based on the information provided, focusing on some aspects while disregarding others. Unfortunately, our design was not elaborated to disentangle the above explanations, which are all plausible. Furthermore, cognitive dissonance and motivated reasoning are hard to reconcile with the fact that individuals update all their perceptions in *All Tr.*, namely, the treatment where all pieces of information are provided. In this regard, our study provides new evidence that giving people multiple information sources may have stronger effects and reduce selective updating. A similar finding emerges in Grigorieff *et al.* (2020) that—contrary to Hopkins *et al.* (2019), who provide only information on the share of the immigrant population residing in the USA—shows that by including information on several characteristics of the immigrant population, respondents reduce misperceptions and increase public support for immigration. Since few studies have included more than one piece of information (Martinangeli and Windsteiger 2023; Di Tella and Rodrik 2020), it is difficult to understand how people update multiple pieces of information. However, and again in line with the above framework on multi-dimensional updating of perceptions, our findings clearly suggest that people make more sense of factual realities when provided with multiple pieces of information. While this was already shown in Grigorieff *et al.* (2020), to our knowledge, not much evidence to explain why this happens has been collected. Our study shows that this can be a fruitful avenue for future research.

## ACKNOWLEDGMENTS

The authors wish to thank two anonymous referees and the editor for their insightful comments and suggestions, which greatly helped to improve the paper. The authors also wish to thank participants at the following conferences for their valuable comments and suggestions: European Economic Science Association (ESA) Conference 2022; Jornada Anual Institut UB—IREA 2023; The Political Economy of Democracy and Dictatorship 2023; Third Catalan Economic Society Conference (CESC) 2023; CISEPS 2023 Annual Workshop, Tackling Inequality—Challenges, Research, and Policies; CESifo Venice Summer Institute 2023, People's Understanding and Support for Economic Policies.

This work was supported by: the Marie Curie Research Grants Scheme, grant H2020-MSCA-IF-2019-891256; the Secretaria General de Recerca—Generalitat de Catalunya (2021 SGR 00261); the University of Florence within the framework of researcher competitive projects scheme 2019–2020 (*Progetti competitivi dei ricercatori a tempo determinato*).

## ENDNOTES

- <sup>1</sup> For a review of the topic, see Elsner and Concannon (2020), Cavaillé and Van der Straeten (2023) and Alesina *et al.* (2021b).
- <sup>2</sup> In other similar studies, this channel is often referred to as the taste or anti-solidarity effect (Senik *et al.* 2009; Lee *et al.* 2006; Garand *et al.* 2017).
- <sup>3</sup> See, for example, Gilens (1995), Garand *et al.* (2017), Sniderman *et al.* (2004), Citrin *et al.* (1997), Gründler and Köllner (2020), Burgoon and Rooduijn (2021), Senik *et al.* (2009), Dahlberg *et al.* (2012), Stichnoth (2012), Alt and Iversen (2017), Cruces *et al.* (2013), Kuziemko *et al.* (2015), Karadjia *et al.* (2017), Hoy and Mager (2021), Fehr *et al.* (2022), Alesina *et al.* (2023), Grigorieff *et al.* (2020), Hopkins *et al.* (2019), Jørgensen and Osmundsen (2022), Magni (2021) and Martinangeli and Windsteiger (2023).
- <sup>4</sup> While most studies on perceptions of inequality focus on income inequality, research also examines perceptions of wealth inequality (Bastani and Waldenström 2021; Callaghan *et al.* 2021). This is related to recent trends shown by Chancel *et al.* (2022) that highlight how wealth inequalities are more pronounced than income inequalities. For instance, at the global level, the bottom 50% of the global population owns just 2% of the total wealth, while the top 10% of the global population owns 76% of the total wealth. These disparities, however, are present not only at the global level but within countries.
- <sup>5</sup> The classification of the Five Star Movement as a populist party is accepted unanimously, although there is disagreement on its political position because it results from a mix of left-libertarian and anti-immigrant stances (Mosca and Tronconi 2019; Coticchia and Vignoli 2020; Font *et al.* 2021).

- <sup>6</sup> In 2019, the government led by Prime Minister Giuseppe Conte (leader of the Five Star Movement) introduced a basic income called ‘citizenship income’ (*reddito di cittadinanza*), which is a strict, means-tested programme for poor individuals who have been residing in Italy for the last 10 years and have annual income less than 9360 euros. On average, households entitled to receive the benefit get a monthly basic income of 540 euros. Recently, ‘citizenship income’ has been abolished by the current Italian right-wing government.
- <sup>7</sup> Understanding exclusionary redistributive preferences is essential for capturing what scholars refer to as welfare chauvinism. Specifically, a welfare chauvinist is someone who does not necessarily advocate for a reduction in the overall level of redistribution but prefers to deny immigrants access to social benefits. The concept of welfare chauvinism is gaining significant attention in several European countries, especially in light of the rise of far-right and anti-immigrant political parties. In these countries, voters often support stronger interventions by the government, while endorsing a particular vision of the welfare system based more on principles such as nativism or equity/reciprocity rather than equality, solidarity and need (Burgoon and Rooduijn 2021; Cavaillé and Van der Straeten 2023; Dahlberg *et al.* 2012; Elsner and Concannon 2020; Alesina *et al.* 2021b).
- <sup>8</sup> See, for example, Burgoon and Rooduijn (2021), Cavaillé and Van der Straeten (2023), Dahlberg *et al.* (2012), Elsner and Concannon (2020), and Alesina *et al.* (2021b).
- <sup>9</sup> Our study differs from Magni (2021) in both treatments and design, which poses some limitations in comparison. However, the comparison contributes to the related literature by underlining the importance of understanding when information works and through which mechanism.
- <sup>10</sup> GDPR (General Data Protection Regulation) is Europe’s data privacy and security law.
- <sup>11</sup> Respondents who decided to participate in the survey clicked on the link and were directed to the questionnaire. Respondents were paid only if they fully completed the survey. They received incentives, in the form of ‘points’ for participation. For most surveys, a respondent could earn between 25 and 120 points (1000 points = 10 euros) for completing a survey according to the survey length. Our survey offers 50 points as compensation.
- <sup>12</sup> According to Haaland *et al.* (2023), information provision experiments should have at least 80% power to detect a treatment effect of 15% of a standard deviation. This, in turn, requires a sample size of around 700 respondents per treatment.
- <sup>13</sup> The explanation that we offered could mitigate concerns about negative emotional reactions to the use of attention checks on the part of participants.
- <sup>14</sup> One concern could be that our sample represents only the online population. However, Grewenig *et al.* (2018) show that response differences between online and offline populations disappear when controlling for background characteristics in the regression analysis.
- <sup>15</sup> We purposefully placed our treatments after these questions. This design ensures that we can estimate heterogeneous treatment effects without worrying that the treatment influences the responses, particularly those regarding political orientation.
- <sup>16</sup> Providing information in graphical format seems to be more effective than providing the same information in text form (Nyhan and Reifler 2019; Meyer *et al.* 1999; Zacks and Tversky 1999; Brandts *et al.* 2024).
- <sup>17</sup> As in Alesina *et al.* (2023), we prefer to focus on legal instead of illegal immigrants since the latter may pose additional challenges (e.g. entry law), and it is a much more controversial and politicized issue.
- <sup>18</sup> As above, before watching the video, we clarified that we referred to legal immigrants.
- <sup>19</sup> We use a question from the European Social Survey that allows us to discriminate between (i) unconditional stances towards immigrants’ access to welfare benefits, (ii) conditionality based on welfare contributions, and (iii) conditionality based upon citizenship.
- <sup>20</sup> The questions on perceptions are strategically placed at the end of the questionnaire to mitigate the influence of priming respondents. For example, eliciting perceptions of immigration in *Inequality Tr.* might lead participants to focus on immigration when the primary focus is on inequality. However, this choice in the design also means that we did not gather information on participants’ prior beliefs, which could have facilitated the separation of the effects of salience from genuine belief updating (Haaland *et al.* 2023).
- <sup>21</sup> Appendix Table A1 reports the values of the actual statistics, the average, standard deviation and interquartile ranges of individuals’ perceptions.
- <sup>22</sup> The groups are: male versus female; married versus not married; young respondents (18–45 years old) versus older respondents (more than 45 years old); working individuals (part- and full-time employees, and self-employed) versus unemployed; highly educated (college and more) versus less educated; southern Italian residents (including Islands) versus centre and northern Italian residents; populist voters versus non-populist voters; meritocrats (namely those who believe that only effort should determine economic outcomes) versus non-meritocrats; those who distrust political institutions versus those who trust; right versus left respondents; poor (first quartile of the income distribution) versus rich (last quartile of the income distribution).
- <sup>23</sup> We compare quantitatively our group differences in perceptions in the baseline control group with those of other studies (Settele 2022; Alesina *et al.* 2018; Haaland and Roth 2020). To this end, we report a regression analysis examining perceptions based on gender, political ideology, income, populist voter status, and education level in Online Appendix F. While not all perceptions show ideological, educational or gender differences, when we do find some statistically significant differences, they range from about 20% to 44% of a standard deviation. These numbers reassure us of the validity of our findings since they are close to those reported by Settele (2022, Table C.1).

- <sup>24</sup> Respondents are not obliged to report information on their voting behaviour and the income that they earn. Thus we have smaller samples ( $N = 567$  for the populist sample, and  $N = 511$  for the income sample).
- <sup>25</sup> In Section 5, we investigate whether some specific groups respond differently to the information. To do so, we add to equation (1) an interaction between the treatment dummies and the variables corresponding to our groups of interest. We also test the significance of the sum of the treatment effect and the interaction term to determine the treatment effect for the group of interest. To do so, we report the  $p$ -value of an  $F$ -test of the sum. If the  $p$ -value is statistically significant (typically below a predetermined threshold, such as 0.05), then it suggests the existence of a treatment effect for the group of interest.
- <sup>26</sup> Since we have standardized the outcome variables, all treatment effects reported below are expressed in terms of standard deviation units of the respective outcome variable. As a reference to interpret the magnitude of treatment effects, Appendix Table A5 provides the means and standard deviations for all non-standardized outcome variables for the control and treated groups.
- <sup>27</sup> See, for example, Karadja *et al.* (2017), Fehr *et al.* (2022), Hoy and Mager (2021), Alesina *et al.* (2018).
- <sup>28</sup> We also calculate the FWER-adjusted  $p$ -values for the simultaneous estimation of a total of 17 equations corresponding to all individual policy outcome variables elicited in the survey. This represents the most restrictive specification tested. Notably, the main outcome variable supporting our primary result—*Support Poor (It)*—remains robust under this restrictive specification, reinforcing the overall validity of our findings ( $p$ -value 0.067).
- <sup>29</sup> One may wonder whether the effect of *Poverty Tr.* on exclusionary policy preferences is driven by the combination of the two pieces of information, inequality and the native–immigrant composition of poverty, or solely by the information regarding the native–immigrant composition of poverty. Although a different experimental design would be needed for a more precise assessment, we attempt to investigate this by conducting a type of difference-in-differences regression. In this analysis, respondents in the control group receive the information provided in *Inequality Tr.* Our findings show that the coefficient for *Poverty Tr.* on exclusionary policy preferences remains significant and similar in magnitude to the one reported in Table 2. This suggests that the effect is primarily driven by the information about the native–immigrant composition of poverty. Data are available on request.
- <sup>30</sup> Results like this highlight the importance of understanding the different ways in which individuals respond to new information. We find that perceptions and other reactions to information may tell different stories. Table 4 shows that respondents in *Inequality Tr.* update downwards their beliefs on the share of wealth held by the top 10%, but they do not update the share of wealth held by the bottom 50%. In theory, such an update should make respondents feel richer. However, we find the opposite. Thus our findings suggest that information may be processed not just for its factual content but also for a broader message that it might convey—namely, that the poor are getting poorer while the rich are getting richer—as well as the emotions that it evokes.
- <sup>31</sup> We define the evidence in this subsection as suggestive, given that an important problem with mediation analysis is the endogeneity of the mediator (Gerber and Green 2012). However, since mediation analysis can shed light on our main results, we believe that the study could benefit from it. Despite its limitations, mediation analysis is often used in experimental studies (Aucejo *et al.* 2020; Grimalda *et al.* 2018, 2023). This is a method used to understand the process by which one independent variable (e.g. a treatment) influences a dependent variable (e.g. policy preferences) through one or more intervening variables, known as mediators (e.g. perceptions). By decomposing the total effect into direct and indirect effects, mediation analysis helps to identify the mechanisms or pathways through which the treatment affects the outcome. While the direct effect refers to the effect of the treatment on the outcome without the influence of any mediator variable(s), the indirect effect refers to the effect of the treatment on the outcome through one or more mediator variables.

## REFERENCES

- Acciari, P., Alvaredo, F. and Morelli, S. (2024). The concentration of personal wealth in Italy 1995–2016. *Journal of the European Economic Association*, **22**(3), 1228–74.
- Alesina, A., Baqir, R. and Easterly, W. (1999). Public goods and ethnic divisions. *Quarterly Journal of Economics*, **114**(4), 1243–84.
- , Ferroni, M. F. and Stantcheva, S. (2021a). Perceptions of racial gaps, their causes, and ways to reduce them. NBER Working Paper no. 29245.
- and Giuliano, P. (2011). Preferences for redistribution. In J. Benhabib, A. Bisin and M. O. Jackson (eds), *Handbook of Social Economics*, Vol. 1. Amsterdam: Elsevier, pp. 93–131.
- and Glaeser, E. (2004). *Fighting Poverty in the US and Europe: A World of Difference*. Oxford: Oxford University Press.
- , Miano, A. and Stantcheva, S. (2020). The polarization of reality. *AEA Papers and Proceedings*, **110**, 324–8.
- , ——— and ——— (2023). Immigration and redistribution. *Review of Economic Studies*, **90**(1), 1–39.
- , Murard, E. and Rapoport, H. (2021b). Immigration and preferences for redistribution in Europe. *Journal of Economic Geography*, **21**(6), 925–54.
- , Stantcheva, S. and Teso, E. (2018). Intergenerational mobility and preferences for redistribution. *American Economic Review*, **108**(2), 521–54.

- and Tabellini, M. (2024). The political effects of immigration: culture or economics? *Journal of Economic Literature*, **62**(1), 5–46.
- Almås, I., Cappelen, A. W. and Tungodden, B. (2020). Cutthroat capitalism versus cuddly socialism: are Americans more meritocratic and efficiency-seeking than Scandinavians? *Journal of Political Economy*, **128**(5), 1753–88.
- Alt, J. and Iversen, T. (2017). Inequality, labor market segmentation, and preferences for redistribution. *American Journal of Political Science*, **61**(1), 21–36.
- Anderson, M. L. (2008). Multiple inference and gender differences in the effects of early intervention: a reevaluation of the Abecedarian, Perry Preschool, and Early Training projects. *Journal of the American Statistical Association*, **103**(484), 1481–95.
- Ashok, V., Kuziemko, I. and Washington, E. (2015). Support for redistribution in an age of rising inequality: new stylized facts and some tentative explanations. *Brookings Papers on Economic Activity*, Spring, 367–405.
- Aucejo, E. M., French, J., Araya, M. P. U. and Zafar, B. (2020). The impact of Covid-19 on student experiences and expectations: evidence from a survey. *Journal of Public Economics*, **191**, 104271.
- Bastani, S. and Waldenström, D. (2021). Perceptions of inherited wealth and the support for inheritance taxation. *Economica*, **88**(350), 532–69.
- Bénabou, R. and Tirole, J. (2016). Mindful economics: the production, consumption, and value of beliefs. *Journal of Economic Perspectives*, **30**(3), 141–64.
- Brandts, J., Busom, I., Lopez-Mayan, C. and Panadés, J. (2024). Images say more than just words: effectiveness of visual and text communication in dispelling the rent–control misconception. *Experimental Economics*, **27**(5), 417–68.
- Burgoon, B. and Rooduijn, M. (2021). ‘Immigrationization’ of welfare politics? Anti-immigration and welfare attitudes in context. *West European Politics*, **44**(2), 177–203.
- Bussolo, M., Ferrer-i Carbonell, A., Giolbas, A. and Torre, I. (2021). I perceive therefore I demand: the formation of inequality perceptions and demand for redistribution. *Review of Income and Wealth*, **67**(4), 835–71.
- Callaghan, B., Harouni, L., Dupree, C. H., Kraus, M. W. and Richeson, J. A. (2021). Testing the efficacy of three informational interventions for reducing misperceptions of the black–white wealth gap. *Proceedings of the National Academy of Sciences*, **118**(38), e2108875118.
- Cameron, A. C. and Trivedi, P. K. (2010). *Microeconometrics Using Stata*, Vol. 2. College Station, TX: Stata Press.
- Cavallé, C. and Van der Straeten, K. (2023). Immigration and support for redistribution: lessons from Europe. *Journal of Economic Literature*, **61**(3), 958–76.
- Chancel, L., Piketty, T., Saez, E. and Zucman, G. (2022). *World Inequality Report 2022*. Cambridge, MA: Harvard University Press.
- Citrin, J., Green, D. P., Muste, C. and Wong, C. (1997). Public opinion toward immigration reform: the role of economic motivations. *Journal of Politics*, **59**(3), 858–81.
- Condon, M. and Wichowsky, A. (2020). Inequality in the social mind: social comparison and support for redistribution. *Journal of Politics*, **82**(1), 149–61.
- Coticchia, F. and Vignoli, V. (2020). Populist parties and foreign policy: the case of Italy’s five star movement. *British Journal of Politics and International Relations*, **22**(3), 523–41.
- Cruces, G., Perez-Truglia, R. and Tetaz, M. (2013). Biased perceptions of income distribution and preferences for redistribution: evidence from a survey experiment. *Journal of Public Economics*, **98**, 100–12.
- Dahlberg, M., Edmark, K. and Lundqvist, H. (2012). Ethnic diversity and preferences for redistribution. *Journal of Political Economy*, **120**(1), 41–76.
- D’Alimonte, R. (2019). How the populists won in Italy. *Journal of Democracy*, **30**(1), 114–27.
- Daniele, G., Martinangeli, A. F., Passarelli, F., Sas, W. and Windsteiger, L. (2024). Pandemic distress and anti-immigration sentiments. *Economica*, **91**(363), 1124–55.
- De Quidt, J., Haushofer, J. and Roth, C. (2018). Measuring and bounding experimenter demand. *American Economic Review*, **108**(11), 3266–302.
- Deffains, B., Espinosa, R. and Thöni, C. (2016). Political self-serving bias and redistribution. *Journal of Public Economics*, **134**, 67–74.
- Di Tella, R. and Rodrik, D. (2020). Labour market shocks and the demand for trade protection: evidence from online surveys. *Economic Journal*, **130**(628), 1008–30.
- Douenne, T. and Fabre, A. (2022). Yellow vests, pessimistic beliefs, and carbon tax aversion. *American Economic Journal: Economic Policy*, **14**(1), 81–110.
- Dover, T. L. (2022). Not all inequalities are created equal: inequality framing and privilege threat for advantaged groups. *Group Processes & Intergroup Relations*, **25**(3), 746–67.
- Eil, D. and Rao, J. M. (2011). The good news–bad news effect: asymmetric processing of objective information about yourself. *American Economic Journal: Microeconomics*, **3**(2), 114–38.
- Elçi, E. (2022). Politics of nostalgia and populism: evidence from Turkey. *British Journal of Political Science*, **52**(2), 697–714.

- Elsner, B. and Concannon, J. (2020). Immigration and redistribution. IZA Discussion Paper no. 13676.
- Epley, N. and Gilovich, T. (2016). The mechanics of motivated reasoning. *Journal of Economic Perspectives*, **30**(3), 133–40.
- Fehr, D., Mollerstrom, J. and Perez-Truglia, R. (2022). Your place in the world: relative income and global inequality. *American Economic Journal: Economic Policy*, **14**(4), 232–68.
- , Müller, D. and Preuss, M. (2020). Social mobility perceptions and inequality acceptance. Working Paper in Economics and Statistics no. 2020-02, Research Platform Empirical and Experimental Economics, University of Innsbruck.
- and Vollmann, M. (2020). Misperceiving economic success: experimental evidence on meritocratic beliefs and inequality acceptance. AWI Discussion Paper no. 695, University of Heidelberg.
- Festinger, L. (1957). *A Theory of Cognitive Dissonance*. Redwood City, CA: Stanford University Press.
- Flynn, D., Nyhan, B. and Reifler, J. (2017). The nature and origins of misperceptions: understanding false and unsupported beliefs about politics. *Political Psychology*, **38**, 127–50.
- Font, N., Graziano, P. and Tsakatika, M. (2021). Varieties of inclusionary populism? Syriza, Podemos and the Five-star movement. *Government and Opposition*, **56**(1), 163–183.
- Garand, J. C., Xu, P. and Davis, B. C. (2017). Immigration attitudes and support for the welfare state in the American mass public. *American Journal of Political Science*, **61**(1), 146–62.
- Gärtner, M., Mollerstrom, J. and Seim, D. (2023). Intergenerational transmission of luck versus effort beliefs. *Economics Letters*, **232**, 111345.
- Gerber, A. S. and Green, D. P. (2012). *Field Experiments: Design, Analysis, and Interpretation*. New York: W. W. Norton and Co.
- Gilens, M. (1995). Racial attitudes and opposition to welfare. *Journal of Politics*, **57**(4), 994–1014.
- Gimpelson, V. and Treisman, D. (2018). Misperceiving inequality. *Economics and Politics*, **30**(1), 27–54.
- Grewenig, E., Lergetporer, P., Simon, L., Werner, K. and Woessmann, L. (2018). Can online surveys represent the entire population? CESifo Working Paper no. 7222.
- Grigorieff, A., Roth, C. and Ubfal, D. (2020). Does information change attitudes toward immigrants? *Demography*, **57**(3), 1117–43.
- Grimalda, G., Buchan, N. and Brewer, M. (2018). Social identity mediates the positive effect of globalization on individual cooperation: results from international experiments. *PLoS One*, **13**(12), e0206819.
- , Murin, F., Pipke, D., Putterman, L. and Sutter, M. (2023). The politicized pandemic: ideological polarization and the behavioral response to Covid-19. *European Economic Review*, **156**, 104472.
- Gründler, K. and Köllner, S. (2020). Culture, diversity, and the welfare state. *Journal of Comparative Economics*, **48**(4), 913–32.
- Guriey, S. and Papaioannou, E. (2022). The political economy of populism. *Journal of Economic Literature*, **60**(3), 753–832.
- Haaland, I. and Roth, C. (2020). Labor market concerns and support for immigration. *Journal of Public Economics*, **191**, 104256.
- , ——— and Wohlfart, J. (2023). Designing information provision experiments. *Journal of Economic Literature*, **61**(1), 3–40.
- Hauser, O. P. and Norton, M. I. (2017). (Mis)perceptions of inequality. *Current Opinion in Psychology*, **18**, 21–5.
- Hopkins, D. J., Sides, J. and Citrin, J. (2019). The muted consequences of correct information about immigration. *Journal of Politics*, **81**(1), 315–20.
- Hoy, C. and Mager, F. (2021). Why are relatively poor people not more supportive of redistribution? Evidence from a randomized survey experiment across ten countries. *American Economic Journal: Economic Policy*, **13**(4), 299–328.
- Jørgensen, F. J. and Osmundsen, M. (2022). Correcting citizens' misperceptions about non-western immigrants: corrective information, interpretations, and policy opinions. *Journal of Experimental Political Science*, **9**(1), 64–73.
- Jost, J. T., Banaji, M. R. and Nosek, B. A. (2004). A decade of system justification theory: accumulated evidence of conscious and unconscious bolstering of the status quo. *Political Psychology*, **25**(6), 881–919.
- Karadja, M., Mollerstrom, J. and Seim, D. (2017). Richer (and holier) than thou? The effect of relative income improvements on demand for redistribution. *Review of Economics and Statistics*, **99**(2), 201–12.
- Kenworthy, L. and McCall, L. (2008). Inequality, public opinion and redistribution. *Socio-Economic Review*, **6**(1), 35–68.
- Kling, J. R., Liebman, J. B. and Katz, L. F. (2007). Experimental analysis of neighborhood effects. *Econometrica*, **75**(1), 83–119.
- Kraus, M. W., Onyeador, I. N., Daumeyer, N. M., Rucker, J. M. and Richeson, J. A. (2019). The misperception of racial economic inequality. *Perspectives on Psychological Science*, **14**(6), 899–921.
- Kuziemko, I., Norton, M. I., Saez, E. and Stantcheva, S. (2015). How elastic are preferences for redistribution? Evidence from randomized survey experiments. *American Economic Review*, **105**(4), 1478–508.
- Lee, W., Roemer, J. and Van der Straeten, K. (2006). Racism, xenophobia, and redistribution. *Journal of the European Economic Association*, **4**(2–3), 446–54.

- Lefebvre, G., Lebreton, M., Meyniel, F., Bourgeois-Gironde, S. and Palminteri, S. (2017). Behavioural and neural characterization of optimistic reinforcement learning. *Nature Human Behaviour*, **1**(4), 1–9.
- Luttmer, E. F. (2001). Group loyalty and the taste for redistribution. *Journal of Political Economy*, **109**(3), 500–28.
- Magni, G. (2021). Economic inequality, immigrants and selective solidarity: from perceived lack of opportunity to in-group favoritism. *British Journal of Political Science*, **51**(4), 1357–80.
- Marino, M., Iacono, R. and Mollerstrom, J. (2024). (Mis-)perceptions, information, and political polarization: a survey and a systematic literature review. *European Journal of Political Economy*, **85**, 102578.
- Martinangeli, A. F. and Windsteiger, L. (2023). Immigration versus poverty: causal impact on demand for redistribution in a survey experiment. *European Journal of Political Economy*, **78**, 102348.
- Meltzer, A. H. and Richard, S. F. (1981). A rational theory of the size of government. *Journal of Political Economy*, **89**(5), 914–27.
- Meyer, J., Shamo, M. K. and Gopher, D. (1999). Information structure and the relative efficacy of tables and graphs. *Human Factors*, **41**(4), 570–87.
- Mijs, J. J. (2021). The paradox of inequality: income inequality and belief in meritocracy go hand in hand. *Socio-Economic Review*, **19**(1), 7–35.
- Mollerstrom, J., Strulov-Shlain, A. and Taubinsky, D. (2024). The impact of group size on giving versus demand for redistribution. *Journal of Public Economics*, **237**, 105200.
- Mosca, L. and Tronconi, F. (2019). Beyond left and right: the eclectic populism of the Five-star movement. *West European Politics*, **42**(6), 1258–83.
- Nyhan, B. (2020). Facts and myths about misperceptions. *Journal of Economic Perspectives*, **34**(3), 220–36.
- and Reifler, J. (2019). The roles of information deficits and identity threat in the prevalence of misperceptions. *Journal of Elections, Public Opinion and Parties*, **29**(2), 222–44.
- Preacher, K. J. and Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, **40**(3), 879–91.
- Rhodes-Purdy, M., Navarre, R. and Utych, S. M. (2021). Populist psychology: economics, culture, and emotions. *Journal of Politics*, **83**(4), 1559–72.
- Roth, C. and Wohlfart, J. (2018). Experienced inequality and preferences for redistribution. *Journal of Public Economics*, **167**, 251–62.
- Senik, C., Stichnoth, H. and Van der Straeten, K. (2009). Immigration and natives' attitudes towards the welfare state: evidence from the European Social Survey. *Social Indicators Research*, **91**(3), 345–70.
- Settele, S. (2022). How do beliefs about the gender wage gap affect the demand for public policy? *American Economic Journal: Economic Policy*, **14**(2), 475–508.
- Sniderman, P. M., Hagendoorn, L. and Prior, M. (2004). Predisposing factors and situational triggers: exclusionary reactions to immigrant minorities. *American Political Science Review*, **98**(1), 35–49.
- Stichnoth, H. (2012). Does immigration weaken natives' support for the unemployed? *Evidence from Germany. Public Choice*, **151**(3), 631–54.
- Trump, K.-S. and White, A. (2018). Does inequality beget inequality? Experimental tests of the prediction that inequality increases system justification motivation. *Journal of Experimental Political Science*, **5**(3), 206–16.
- Westfall, P. H., Young, S. S. and Wright, S. P. (1993). On adjusting  $p$ -values for multiplicity. *Biometrics*, **49**(3), 941–5.
- Zacks, J. and Tversky, B. (1999). Bars and lines: a study of graphic communication. *Memory & Cognition*, **27**(6), 1073–9.

## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

**How to cite this article:** Bruni, R., Gioffré, A. and Marino, M. (2025). In-group bias in preferences for redistribution: a survey experiment in Italy. *Economica*, 1–72. <https://doi.org/10.1111/ecca.12584>

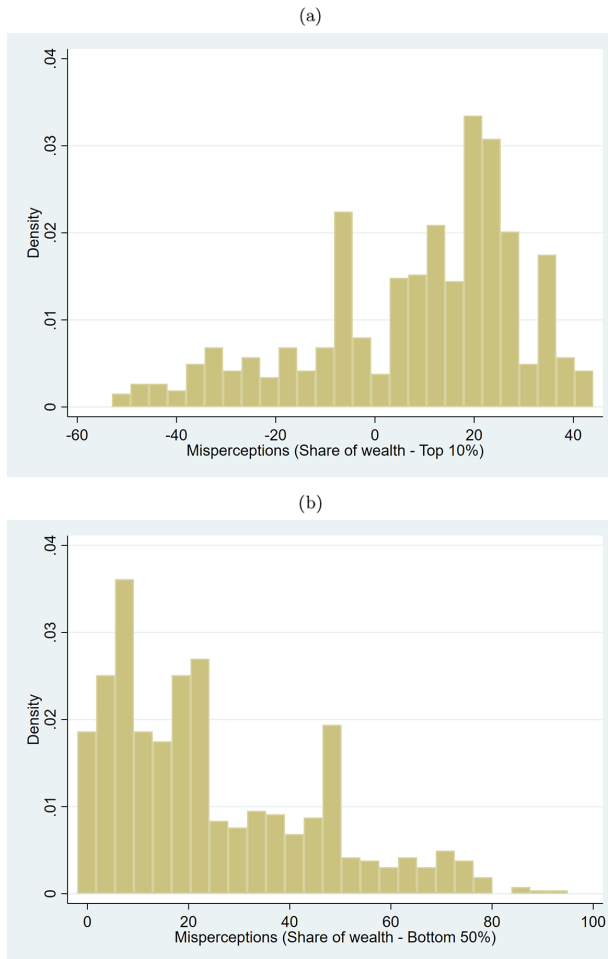
## APPENDIX A

## A.1 Perceptions: baseline analysis

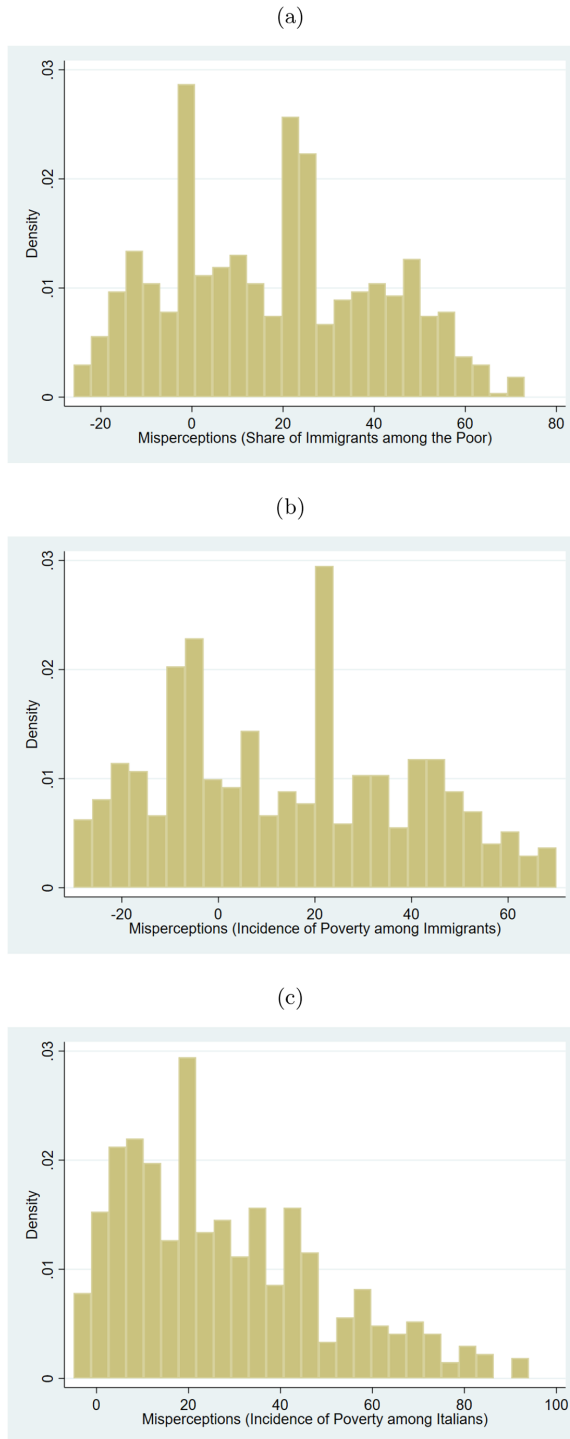
TABLE A1 Perceptions.

Perceptions	Actual (1)	Mean (2)	S.D. (3)	25th (4)	75th (5)
Share of wealth—top 10%	56	64.48	21.21	51.00	80.00
Share of wealth—bottom 50%	3	27.43	20.46	11.00	42.00
Share of immigrants among the poor	27	44.66	22.63	25.00	62.00
Incidence of poverty among immigrants	30	44.30	25.18	24.00	64.00
Incidence of poverty among Italians	6	33.90	21.89	16.00	48.00
Share of non-European immigrants	50	64.26	21.31	49.00	82.00
Share of non-Catholic immigrants	80	71.15	20.34	55.00	88.00

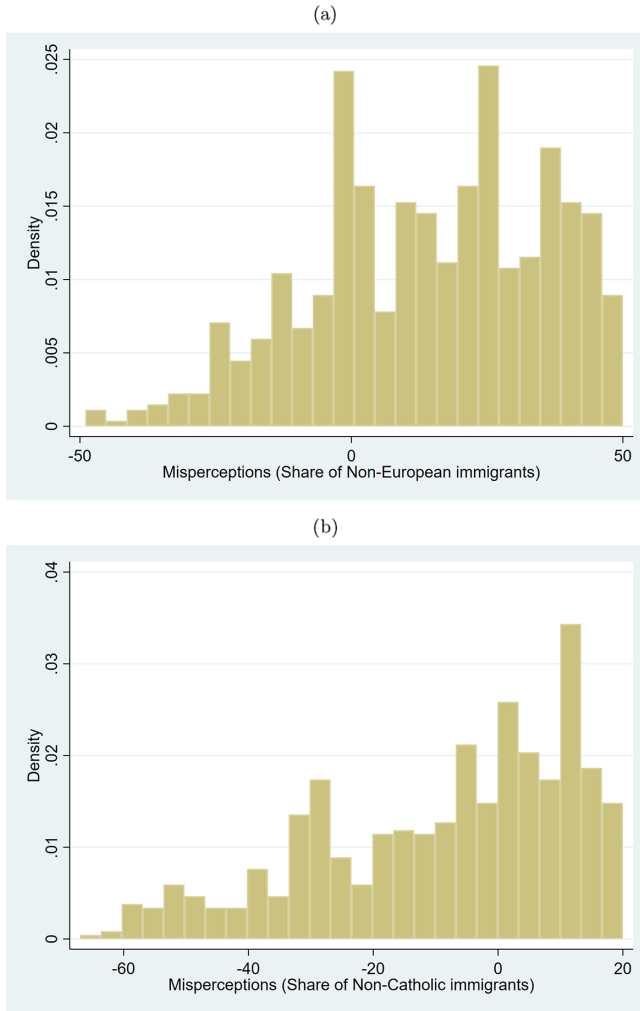
*Notes:* For each perception under analysis, column (1) reports the actual value of the corresponding statistic, while columns (2)–(5) report average, standard deviation and interquartile ranges of each perception based on the baseline control group ( $N = 705$ ). The definitions of the variables are in Online Appendix C.



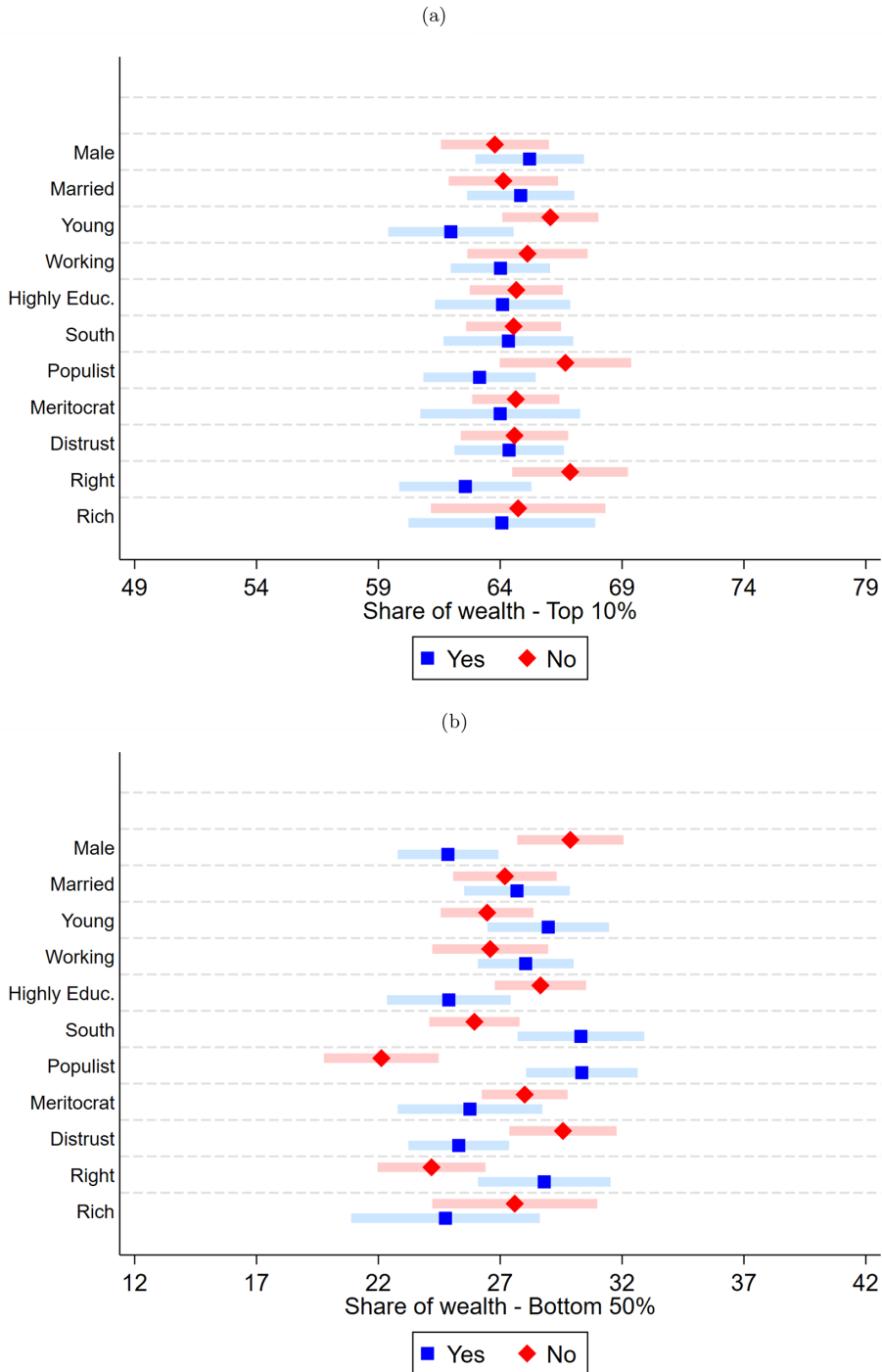
**FIGURE A1** Misperceptions on wealth inequality (top 10% and bottom 50%). *Notes:* Distribution of misperceptions on the share of wealth held by (a) the top 10% and (b) the bottom 50%. Misperceptions are calculated as the difference between perceptions and actual values. Positive (negative) differences correspond to overestimation (underestimation). Baseline control group ( $N = 705$ ).



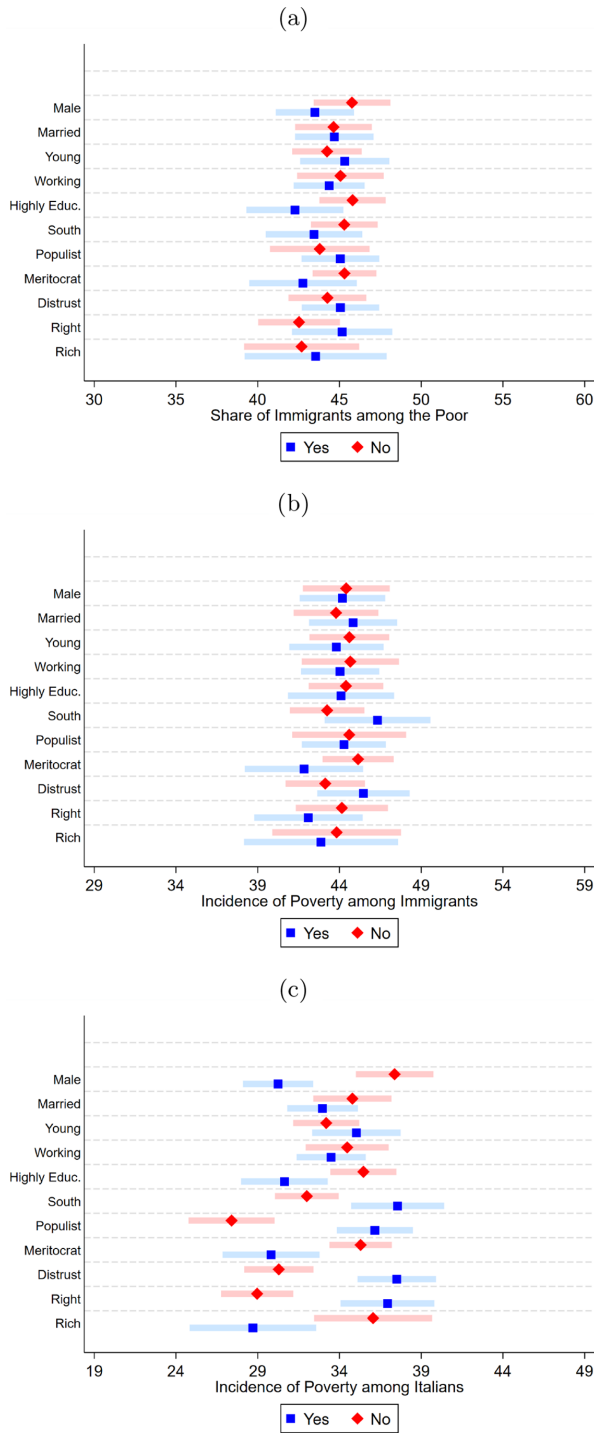
**FIGURE A2** Misperceptions on the native–immigrant composition of poverty. *Notes:* Distribution of misperceptions on (a) the share of poor immigrants among the poor, (b) the incidence of poverty among immigrants, and (c) the incidence of poverty among Italians. Misperceptions are calculated as the difference between perceptions and actual values. Positive (negative) differences correspond to overestimation (underestimation). Baseline control group ( $N = 705$ ).



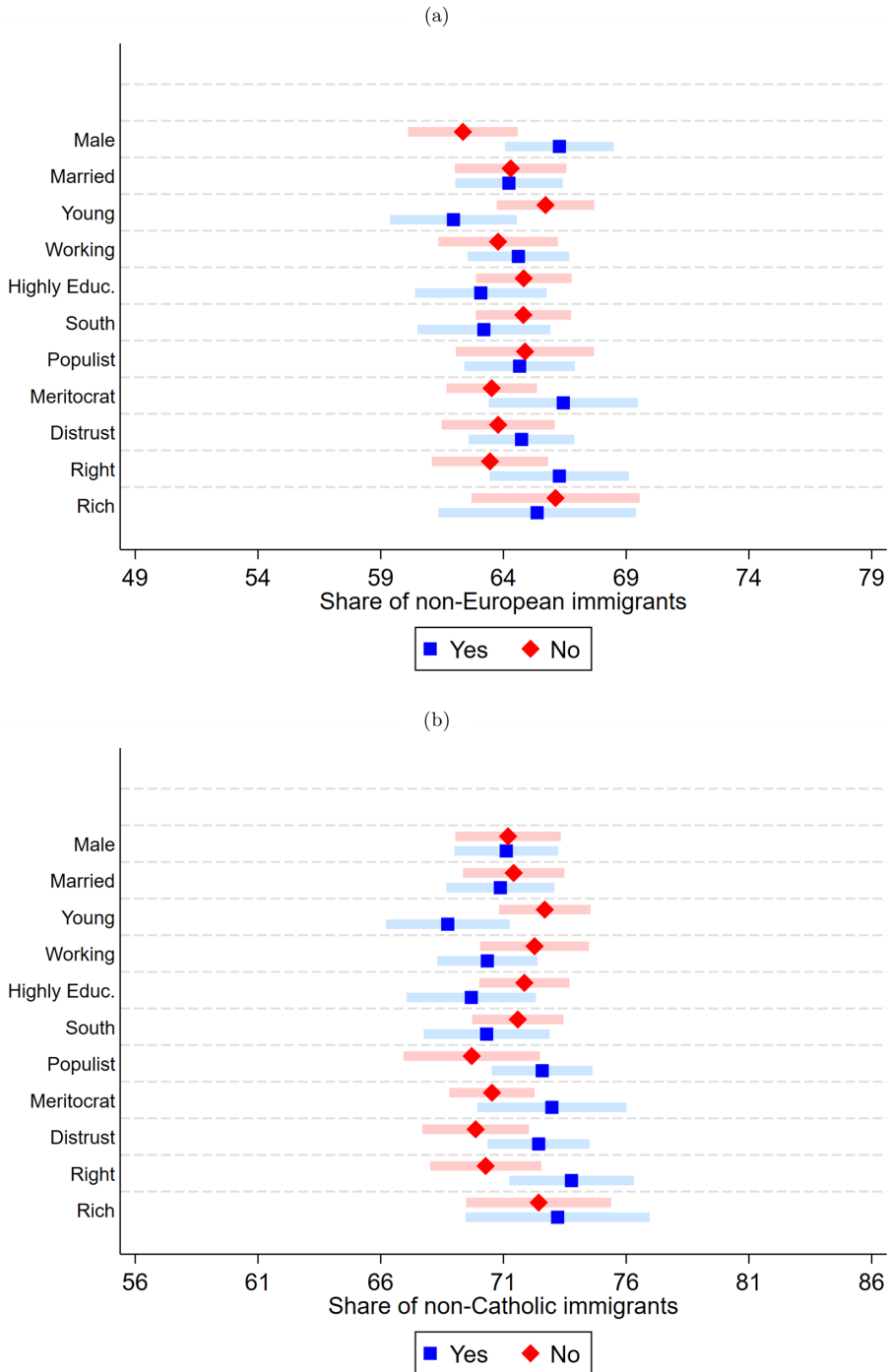
**FIGURE A3** Misperceptions on immigrants’ cultural diversity. *Notes:* Distribution of misperceptions of the shares of immigrants (a) coming from non-European countries, and (b) who are non-Catholic. Misperceptions are calculated as the difference between perceptions and actual values. Positive (negative) differences correspond to overestimation (underestimation). Baseline control group ( $N = 705$ ).



**FIGURE A4** Polarization in perceptions on wealth inequality. *Notes:* The figure shows the average perceptions of wealth in (a) the top 10%, and (b) the bottom 50%, for different groups of respondents. The definitions of the variables are in Online Appendix C. The Yes label refers to answers of the groups on the vertical axis; the No label refers to answers of the opposite groups in the comparison. The shaded areas are 95% confidence intervals around the average response. Baseline control group ( $N = 705$ ).



**FIGURE A5** Polarization in perceptions on the native-immigrant composition of poverty. *Notes:* The figure shows the average perceptions on the native-immigrant composition of poverty for different groups of respondents: (a) the share of poor immigrants among the poor; (b) the poverty incidence among immigrants; (c) the poverty incidence among Italians. The definitions of the variables are in Online Appendix C. The Yes label refers to answers of the groups on the vertical axis; the No label refers to answers of the opposite groups in the comparison. The shaded areas are 95% confidence intervals around the average response. Baseline control group ( $N = 705$ ).



**FIGURE A6** Polarization in perceptions on immigrants' cultural diversity. *Notes:* The figure shows the average perceptions on immigrants' cultural diversity for different groups of respondents: (a) the share of non-European immigrants; (b) the share of non-Catholic immigrants. The definitions of the variables are in Online Appendix C. The Yes label refers to answers of the groups on the vertical axis; the No label refers to answers of the opposite groups in the comparison. The shaded areas are 95% confidence intervals around the average response. Baseline control group ( $N = 705$ ).

## A.2 Policy preferences: baseline analysis

TABLE A2 Correlation between perceptions and policy preferences.

	Redistributive preferences					Exclusionary preferences					
	General		Estate		Summary	Support		Exclusive		Summary	
	Redistr.	Tax	Wealth	Tax		Poor (all)	Poor	Unemploy.	Index		Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
Share of wealth—top 10%	0.093** (0.045)	0.014 (0.019)	0.049 (0.040)	0.051 (0.043)	0.034 (0.046)	-0.057 (0.043)	-0.123*** (0.045)	0.020 (0.045)	0.024 (0.043)	0.026 (0.016)	0.056 (0.038)
Share of wealth—bottom 50%	0.007 (0.046)	-0.062*** (0.021)	0.022 (0.045)	0.043 (0.047)	0.031 (0.047)	-0.048 (0.047)	-0.089* (0.046)	-0.043 (0.046)	0.038 (0.044)	0.010 (0.019)	0.041 (0.041)
Share of immigrants among poor	-0.024 (0.045)	0.015 (0.022)	-0.002 (0.050)	-0.007 (0.051)	-0.113** (0.048)	0.041 (0.046)	0.078* (0.046)	0.001 (0.049)	-0.036 (0.046)	0.007 (0.020)	-0.013 (0.044)
Incidence of poverty among immigrants	-0.015 (0.043)	-0.008 (0.021)	0.071 (0.050)	-0.018 (0.049)	0.155*** (0.045)	-0.054 (0.043)	-0.038 (0.042)	0.022 (0.043)	0.047 (0.045)	-0.040** (0.019)	-0.030 (0.045)
Incidence of poverty among Italians	0.101** (0.047)	0.026 (0.020)	-0.117** (0.050)	-0.112** (0.048)	0.001 (0.050)	-0.008 (0.048)	0.100** (0.047)	0.005 (0.045)	0.158*** (0.044)	0.072*** (0.020)	0.218*** (0.044)
Share of non-European immigrants	0.058 (0.053)	0.043* (0.022)	0.032 (0.048)	0.031 (0.049)	-0.033 (0.056)	-0.005 (0.047)	0.039 (0.046)	0.055 (0.049)	0.023 (0.049)	0.006 (0.021)	0.025 (0.048)
Share of non-Catholic immigrants	-0.099** (0.050)	-0.015 (0.022)	0.002 (0.051)	-0.051 (0.049)	0.015 (0.053)	0.008 (0.048)	-0.042 (0.048)	-0.052 (0.048)	0.111** (0.046)	0.026 (0.020)	0.116*** (0.045)
Male	0.164** (0.077)	0.059 (0.037)	0.184** (0.077)	0.203*** (0.077)	0.064 (0.077)	-0.024 (0.080)	0.013 (0.077)	0.192** (0.078)	0.139* (0.076)	0.067** (0.032)	0.199*** (0.073)
Age 18–24	-0.404** (0.199)	-0.356*** (0.096)	-0.590*** (0.186)	-0.446** (0.186)	-0.256 (0.204)	-0.008 (0.219)	-0.058 (0.218)	-0.658*** (0.199)	-0.105 (0.192)	-0.114 (0.074)	-0.248 (0.182)
Age 25–34	-0.220* (0.127)	-0.128** (0.063)	-0.376*** (0.129)	-0.253* (0.130)	-0.102 (0.127)	-0.175 (0.126)	-0.103 (0.132)	-0.394*** (0.124)	0.003 (0.123)	-0.019 (0.055)	-0.028 (0.119)
Age 35–44	-0.035 (0.120)	-0.032 (0.055)	-0.212* (0.109)	-0.131 (0.116)	-0.116 (0.111)	0.017 (0.116)	-0.018 (0.121)	-0.148 (0.111)	-0.167 (0.119)	0.037 (0.051)	-0.055 (0.117)

TABLE A2 (Continued)

	Redistributive preferences					Exclusionary preferences					Summary Index Excl. (11)
	General Redistr. (1)	Tax Rich (2)	Wealth Tax (3)	Estate Tax (4)	Support Poor (all) (5)	Spend Poor (6)	Spend Unemploy. (7)	Index Redistr. (8)	Support Poor (It) (9)	Exclusive Welfare (10)	
Age 45–54	-0.160 (0.112)	-0.083 (0.051)	-0.109 (0.108)	-0.152 (0.110)	-0.131 (0.107)	-0.002 (0.111)	-0.091 (0.108)	-0.215* (0.111)	0.078 (0.103)	-0.041 (0.045)	-0.010 (0.099)
Married	0.060 (0.083)	0.024 (0.039)	0.043 (0.083)	0.082 (0.082)	0.007 (0.082)	-0.127 (0.085)	0.011 (0.082)	0.033 (0.083)	0.023 (0.081)	-0.075** (0.036)	-0.100 (0.079)
Highly educated	-0.031 (0.086)	0.091** (0.040)	0.129 (0.083)	0.078 (0.084)	-0.005 (0.084)	-0.037 (0.083)	-0.122 (0.082)	0.053 (0.083)	-0.247*** (0.087)	-0.090*** (0.033)	-0.307*** (0.081)
Working	0.049 (0.105)	0.073 (0.047)	0.108 (0.098)	0.130 (0.100)	0.137 (0.100)	-0.058 (0.102)	0.045 (0.095)	0.148 (0.098)	-0.095 (0.094)	-0.165*** (0.044)	-0.320*** (0.094)
Unemployed	0.126 (0.158)	-0.015 (0.072)	0.234* (0.139)	0.055 (0.145)	0.249 (0.157)	0.049 (0.167)	0.303* (0.162)	0.260 (0.160)	0.187 (0.135)	-0.064 (0.070)	0.027 (0.135)
Student	0.323 (0.220)	0.204** (0.099)	0.531** (0.208)	0.342* (0.206)	0.231 (0.216)	0.153 (0.226)	0.126 (0.226)	0.560*** (0.214)	-0.172 (0.220)	-0.278*** (0.078)	-0.547*** (0.200)
South	0.120 (0.081)	-0.016 (0.039)	0.021 (0.080)	0.044 (0.081)	0.180** (0.078)	0.167** (0.083)	0.096 (0.081)	0.156* (0.082)	0.107 (0.081)	0.001 (0.034)	0.074 (0.076)
Living in a city	-0.110 (0.100)	-0.111** (0.049)	-0.182* (0.108)	-0.094 (0.102)	-0.121 (0.107)	-0.175* (0.101)	0.077 (0.098)	-0.219** (0.106)	-0.060 (0.102)	0.044 (0.044)	0.028 (0.098)
Living in a suburb	0.051 (0.097)	0.044 (0.044)	0.038 (0.088)	0.057 (0.095)	0.126 (0.094)	-0.129 (0.097)	0.089 (0.093)	0.085 (0.091)	0.167* (0.089)	-0.017 (0.040)	0.087 (0.089)
Living in a rural area	-0.023 (0.153)	-0.054 (0.066)	-0.151 (0.152)	-0.093 (0.147)	-0.076 (0.144)	0.029 (0.152)	0.195 (0.169)	-0.061 (0.145)	-0.019 (0.160)	0.017 (0.067)	0.012 (0.148)
Constant	-0.094 (0.106)	0.592*** (0.051)	-0.091 (0.111)	-0.152 (0.108)	-0.136 (0.114)	0.131 (0.116)	-0.083 (0.110)	-0.132 (0.111)	0.006 (0.107)	0.418*** (0.050)	0.250** (0.109)

Notes: Baseline control group ( $N = 705$ ). The table reports estimates of separate regressions of the variable in the column on standardized perceptions (Kling *et al.* 2007) and controls. Regressions are with probability weights and robust standard errors in parentheses.  
 \*, \*\*, \*\*\* indicate  $p < 0.1$ ,  $p < 0.05$ ,  $p < 0.01$ , respectively.

TABLE A3 Correlation between perceptions and policy preferences—populist sample.

	Redistributive preferences				Exclusionary preferences				Summary Index Excl. (11)		
	General Redistr. (1)	Tax Rich (2)	Wealth Tax (3)	Estate Tax (4)	Support Poor (all) (5)	Spent Poor (6)	Spent Unemploy. (7)	Index Redistr. (8)		Support Poor (It) (9)	Exclusive Welfare (10)
Share of wealth—top 10%	0.092* (0.049)	0.006 (0.022)	0.057 (0.045)	0.056 (0.047)	0.056 (0.052)	-0.043 (0.048)	-0.112** (0.050)	0.031 (0.050)	0.039 (0.048)	0.025 (0.018)	0.065 (0.042)
Share of wealth—bottom 50%	0.031 (0.052)	-0.060*** (0.023)	0.030 (0.050)	0.052 (0.053)	0.044 (0.053)	-0.021 (0.052)	-0.100** (0.049)	-0.024 (0.052)	0.030 (0.048)	0.006 (0.021)	0.029 (0.046)
Share of immigrants among the poor	-0.018 (0.048)	0.011 (0.024)	0.008 (0.054)	-0.014 (0.055)	-0.104* (0.054)	0.017 (0.049)	0.101** (0.049)	0.004 (0.052)	-0.032 (0.051)	0.005 (0.022)	-0.014 (0.049)
Incidence of poverty among immigrants	-0.025 (0.047)	-0.012 (0.023)	0.037 (0.056)	-0.025 (0.055)	0.139*** (0.050)	-0.066 (0.047)	-0.044 (0.045)	-0.002 (0.048)	0.066 (0.051)	-0.027 (0.021)	0.003 (0.051)
Incidence of poverty among Italians	0.135*** (0.052)	0.035 (0.023)	-0.092* (0.055)	-0.089* (0.053)	0.026 (0.054)	0.022 (0.054)	0.084* (0.049)	0.042 (0.051)	0.104** (0.049)	0.060*** (0.023)	0.163*** (0.051)
Share of non-European immigrants	0.098* (0.057)	0.051** (0.024)	0.055 (0.052)	0.063 (0.053)	0.006 (0.060)	0.019 (0.050)	0.025 (0.048)	0.098* (0.052)	0.019 (0.054)	0.011 (0.024)	0.030 (0.054)
Share of non-Catholic immigrants	-0.098* (0.053)	-0.024 (0.025)	-0.008 (0.055)	-0.052 (0.054)	0.017 (0.059)	0.003 (0.054)	-0.058 (0.052)	-0.065 (0.051)	0.091* (0.052)	0.011 (0.022)	0.080 (0.051)
Populist	-0.324*** (0.089)	-0.072 (0.045)	-0.282*** (0.091)	-0.281*** (0.092)	-0.126 (0.088)	-0.097 (0.089)	-0.011 (0.090)	-0.335*** (0.092)	0.399*** (0.092)	0.110*** (0.038)	0.442*** (0.089)
Constant	0.067 (0.127)	0.656*** (0.062)	0.076 (0.138)	0.043 (0.131)	-0.119 (0.136)	0.255* (0.133)	-0.098 (0.128)	0.073 (0.134)	-0.273** (0.130)	0.366*** (0.058)	-0.020 (0.126)

Notes: Baseline control group ( $N = 567$ ). The table reports estimates of separate regressions of the variable in the column on the relative standardized perception (Kling *et al.* 2007). Regressions are with probability weights and robust standard errors in parentheses. Controls included in all regressions are: male, age brackets, married, left-wing, highly educated, working, unemployed, student, living in a city, suburb, rural area, and living in the south or islands.

\*, \*\*, \*\*\* indicate  $p < 0.1$ ,  $p < 0.05$ ,  $p < 0.01$ , respectively.

TABLE A4 Correlation between perceptions and policy preferences—income sample.

	Redistributive preferences					Exclusionary preferences					Summary Index Excl. (11)		
	General		Wealth		Estate	Support		Spent		Summary Index Redistr. (8)		Support	Exclusive
	Redistr. (1)	Tax Rich (2)	Tax (3)	Tax (3)	Tax (4)	Poor (all) (5)	Poor (6)	Unemploy. (7)	Poor (It) (9)	Welfare (10)			
Share of wealth—top 10%	0.098* (0.058)	-0.018 (0.022)	0.053 (0.050)	0.074 (0.053)	0.038 (0.049)	-0.084* (0.050)	0.013 (0.056)	-0.094* (0.052)	0.029 (0.051)	0.012 (0.019)	0.039 (0.048)		
Share of wealth—bottom 50%	-0.005 (0.059)	-0.081*** (0.025)	0.030 (0.054)	0.044 (0.055)	0.045 (0.052)	-0.011 (0.055)	-0.026 (0.058)	-0.037 (0.056)	0.040 (0.051)	0.020 (0.023)	0.058 (0.051)		
Share of immigrants among the poor	-0.008 (0.053)	0.032 (0.026)	0.020 (0.057)	0.017 (0.060)	-0.147*** (0.054)	0.068 (0.053)	0.029 (0.057)	0.094* (0.054)	-0.029 (0.055)	0.002 (0.024)	-0.017 (0.054)		
Incidence of poverty among immigrants	-0.040 (0.051)	-0.019 (0.024)	0.016 (0.058)	-0.044 (0.059)	0.114** (0.050)	-0.049 (0.048)	-0.027 (0.051)	-0.061 (0.048)	0.010 (0.052)	-0.029 (0.024)	-0.039 (0.053)		
Incidence of poverty among Italians	0.048 (0.054)	0.023 (0.024)	-0.113* (0.062)	-0.109* (0.058)	-0.007 (0.056)	0.012 (0.058)	-0.003 (0.056)	0.109* (0.057)	0.196*** (0.051)	0.052** (0.024)	0.214*** (0.055)		
Share of non-European immigrants	0.040 (0.059)	0.052* (0.027)	0.040 (0.061)	0.071 (0.060)	-0.070 (0.064)	0.018 (0.058)	0.061 (0.062)	0.026 (0.054)	0.019 (0.060)	-0.007 (0.026)	0.002 (0.060)		
Share of non-Catholic immigrants	-0.082 (0.062)	-0.038 (0.026)	-0.018 (0.063)	-0.060 (0.060)	-0.003 (0.064)	-0.019 (0.059)	-0.064 (0.061)	0.019 (0.056)	0.075 (0.058)	0.036 (0.024)	0.106* (0.056)		
Rich	-0.245* (0.143)	-0.007 (0.069)	-0.130 (0.146)	0.056 (0.142)	-0.263* (0.137)	0.022 (0.147)	-0.168 (0.143)	-0.066 (0.150)	-0.306** (0.127)	-0.087 (0.061)	-0.343** (0.134)		
Middle	-0.098 (0.116)	-0.046 (0.054)	-0.073 (0.110)	-0.008 (0.113)	-0.259** (0.109)	0.110 (0.116)	-0.117 (0.112)	-0.023 (0.119)	-0.347*** (0.105)	-0.021 (0.052)	-0.269** (0.115)		
Constant	-0.059 (0.133)	0.673*** (0.064)	-0.023 (0.137)	-0.170 (0.139)	-0.016 (0.139)	0.124 (0.142)	-0.024 (0.136)	-0.039 (0.135)	0.319** (0.135)	0.383*** (0.065)	0.408*** (0.148)		

Notes: Baseline control group ( $N = 511$ ). The table reports estimates of separate regressions of the variable in the column on the relative standardized perception (Kling *et al.* 2007). Regressions are with probability weights and robust standard errors in parentheses. Controls included in all regressions are: male, age brackets, married, left-wing, highly educated, working, unemployed, student, living in a city, suburb, rural area, and living in the south or islands.

\*, \*\*, \*\*\* indicate  $p < 0.1$ ,  $p < 0.05$ ,  $p < 0.01$ , respectively.

TABLE A5 Descriptive statistics of the non-standardized outcome variables.

	Control and treated groups					Total
	Control	Inequality Tr.	Poverty Tr.	Diversity Tr.	All Tr.	
<i>Policy preferences</i>						
General Redistr.	7.10 (2.46)	7.15 (2.48)	7.06 (2.48)	7.10 (2.51)	7.11 (2.54)	7.10 (2.49)
Tax Rich	0.63 (0.48)	0.65 (0.48)	0.61 (0.49)	0.64 (0.48)	0.64 (0.48)	0.63 (0.48)
Wealth Tax	7.12 (3.11)	7.30 (3.02)	7.23 (3.10)	7.23 (2.96)	7.10 (3.17)	7.20 (3.07)
Estate Tax	6.08 (3.56)	6.24 (3.52)	6.33 (3.45)	6.04 (3.47)	6.17 (3.45)	6.17 (3.49)
Support Poor (all)	6.48 (2.78)	6.56 (2.90)	6.36 (2.79)	6.69 (2.77)	6.47 (2.76)	6.51 (2.80)
Spend Poor	11.77 (7.67)	12.31 (8.25)	12.17 (7.87)	12.22 (8.03)	12.34 (8.41)	12.16 (8.04)
Spend Unemployed	11.33 (8.14)	10.44 (7.58)	11.31 (7.50)	10.76 (7.91)	10.44 (7.61)	10.86 (7.76)
Support Poor (It)	6.42 (2.91)	6.36 (3.00)	5.97 (3.04)	6.50 (2.93)	6.03 (3.06)	6.25 (3.00)
Exclusive Welfare	0.26 (0.44)	0.23 (0.42)	0.25 (0.43)	0.26 (0.44)	0.22 (0.41)	0.24 (0.43)
<i>Perceptions</i>						
Share of wealth—top 10%	64.48 (21.21)	61.34 (20.79)	60.44 (20.33)	61.06 (19.45)	61.67 (19.59)	61.80 (20.32)
Share of wealth—bottom 50%	27.43 (20.46)	25.28 (20.63)	25.58 (20.66)	24.68 (21.15)	23.38 (20.62)	25.27 (20.73)
Share of immigrants among the poor	44.66 (22.63)	41.99 (23.72)	39.74 (21.12)	43.32 (22.06)	41.21 (22.03)	42.19 (22.38)
Incidence of poverty among immigrants	44.30 (25.18)	42.37 (26.03)	38.64 (22.14)	42.75 (25.05)	39.52 (21.82)	41.52 (24.19)
Incidence of poverty among Italians	33.90 (21.89)	33.26 (22.50)	27.39 (21.27)	32.71 (20.84)	29.13 (21.70)	31.28 (21.78)
Share of non-European immigrants	64.26 (21.31)	65.94 (21.00)	67.37 (20.19)	63.26 (18.76)	61.28 (18.58)	64.42 (20.10)
Share of non-Catholic immigrants	71.15 (20.34)	73.03 (19.75)	72.42 (20.05)	74.66 (17.50)	74.14 (17.25)	73.08 (19.05)
<i>Beliefs on inequality and immigration</i>						
Poor—rich wealth scale	4.98 (1.54)	4.70 (1.67)	5.07 (1.56)	4.71 (1.56)	4.90 (1.60)	4.87 (1.59)
Migrant economic threat	3.92 (2.96)	3.84 (2.91)	3.77 (2.85)	4.07 (2.98)	3.71 (2.91)	3.87 (2.92)
Migrant cultural threat	4.63 (2.94)	4.56 (2.78)	4.43 (2.74)	4.62 (2.83)	4.43 (2.91)	4.53 (2.84)
Problem: low education	4.64 (2.07)	4.54 (2.05)	4.49 (2.08)	4.50 (1.97)	4.56 (2.07)	4.55 (2.05)
Problem: income differences	4.91 (2.17)	5.07 (2.17)	5.18 (2.16)	5.13 (2.27)	5.28 (2.09)	5.11 (2.17)
Problem: loss of identity	3.39 (2.16)	3.29 (2.12)	3.32 (2.17)	3.37 (2.23)	3.29 (2.22)	3.33 (2.18)
Problem: unconditional welfare	3.26 (2.19)	3.26 (2.14)	3.34 (2.12)	3.48 (2.11)	3.38 (2.17)	3.34 (2.15)
<i>N</i>	705 (20.0%)	701 (19.9%)	703 (20.0%)	711 (20.2%)	701 (19.9%)	3521 (100.0%)

Notes: Regressions are with probability weights and robust standard errors in parentheses.

## A.3 Heterogeneous treatment effects

TABLE A6 Heterogeneous treatment effects on perceptions—political ideology.

	Perceptions of inequality			Perceptions of poverty			Perceptions of diversity		
	Share of wealth Top 10% (1)	Share of wealth Bottom 50% (2)	Share of immigrants among the poor (3)	Incidence of poverty among immigrants (4)	Incidence of poverty among Italians (5)	Share of non-European immigrants (6)	Share of non-Catholic immigrants (7)		
Inequality Tr. (T1)	-0.266*** (0.079)	0.007 (0.079)	-0.114 (0.080)	-0.009 (0.080)	0.089 (0.073)	0.037 (0.078)	0.032 (0.078)		
Poverty Tr. (T2)	-0.297*** (0.080)	-0.137* (0.077)	-0.184** (0.077)	-0.269*** (0.073)	-0.280*** (0.069)	0.226*** (0.078)	0.125 (0.077)		
Diversity Tr. (T3)	-0.289*** (0.078)	-0.132* (0.078)	0.026 (0.079)	-0.030 (0.078)	-0.002 (0.071)	-0.113 (0.073)	0.164** (0.074)		
All Tr. (T4)	-0.246*** (0.075)	-0.182*** (0.076)	-0.079 (0.077)	-0.176** (0.074)	-0.153*** (0.072)	-0.205*** (0.073)	0.176** (0.071)		
Inequality Tr. (T1) * Right	0.155 (0.123)	-0.236* (0.120)	-0.000 (0.128)	-0.017 (0.128)	-0.184 (0.121)	0.101 (0.123)	0.118 (0.119)		
Poverty Tr. (T2) * Right	0.177 (0.120)	0.079 (0.121)	-0.007 (0.120)	0.155 (0.118)	-0.035 (0.114)	-0.181 (0.121)	-0.100 (0.119)		
Diversity Tr. (T3) * Right	0.244** (0.117)	-0.020 (0.122)	-0.091 (0.124)	0.029 (0.124)	-0.050 (0.117)	0.036 (0.115)	-0.001 (0.110)		
All Tr. (T4) * Right	0.218* (0.119)	0.046 (0.123)	-0.108 (0.125)	0.068 (0.117)	-0.087 (0.115)	0.150 (0.117)	-0.077 (0.112)		
Right	-0.209** (0.087)	0.195** (0.087)	0.107 (0.090)	-0.089 (0.088)	0.338*** (0.083)	0.114 (0.088)	0.158* (0.085)		
Inequality Tr. (T1) * Centre	0.263* (0.135)	-0.100 (0.137)	-0.012 (0.139)	-0.241* (0.137)	-0.180 (0.138)	0.072 (0.132)	0.104 (0.135)		

TABLE A6 (Continued)

	Perceptions of inequality		Perceptions of poverty			Perceptions of diversity		
	Share of wealth Top 10% (1)	Share of wealth Bottom 50% (2)	Share of immigrants among the poor (3)	Incidence of poverty among immigrants (4)	Incidence of poverty among Italians (5)	Share of non-European immigrants (6)	Share of non-Catholic immigrants (7)	
Poverty Tr. (T2) * Centre	0.189 (0.135)	0.056 (0.133)	-0.169 (0.131)	-0.017 (0.127)	-0.038 (0.134)	-0.059 (0.131)	-0.103 (0.136)	
Diversity Tr. (T3) * Centre	0.203 (0.129)	0.015 (0.135)	-0.247* (0.130)	-0.158 (0.134)	-0.145 (0.127)	0.248** (0.126)	0.046 (0.129)	
All Tr. (T4) * Centre	0.162 (0.132)	-0.105 (0.135)	-0.191 (0.132)	-0.157 (0.126)	-0.107 (0.138)	0.090 (0.125)	-0.018 (0.130)	
Centre	-0.177* (0.096)	0.299*** (0.093)	0.227** (0.094)	0.125 (0.095)	0.360*** (0.095)	-0.026 (0.094)	-0.046 (0.098)	
<i>p</i> -value [T1 + T1 × Right]	0.237	0.011	0.254	0.798	0.322	0.144	0.090	
<i>p</i> -value [T2 + T2 × Right]	0.179	0.531	0.038	0.211	0.000	0.626	0.785	
<i>p</i> -value [T3 + T3 × Right]	0.616	0.106	0.495	0.989	0.574	0.384	0.047	
<i>p</i> -value [T4 + T4 × Right]	0.759	0.158	0.056	0.236	0.008	0.543	0.253	
<i>p</i> -value [T1 + T1 × Centre]	0.979	0.405	0.268	0.025	0.435	0.304	0.217	
<i>p</i> -value [T2 + T2 × Centre]	0.321	0.458	0.001	0.006	0.005	0.111	0.843	
<i>p</i> -value [T3 + T3 × Centre]	0.407	0.291	0.032	0.082	0.163	0.189	0.048	
<i>p</i> -value [T4 + T4 × Centre]	0.436	0.010	0.012	0.001	0.028	0.260	0.145	
<i>N</i>	3521	3521	3521	3521	3521	3521	3521	

Notes: The table reports the effects of the treatments on the variables in the columns. Outcome variables are described in Online Appendix C and are standardized (Kling *et al.* 2007). Regressions are with probability weights and robust standard errors in parentheses. Controls included in all regressions are: male, age brackets, married, working, highly educated, and living in the south and islands. \*, \*\*, \*\*\* indicate  $p < 0.1$ ,  $p < 0.05$ ,  $p < 0.01$ , respectively.

TABLE A7 Heterogeneous treatment effects on other beliefs on inequality and immigration—political ideology.

	Poor–rich wealth scale (1)	Migrants economic threat (2)	Migrants cultural threat (3)	Problem: low education (4)	Problem: income differences (5)	Problem: loss of identity (6)	Problem: unconditional welfare (7)
Inequality Tr. (T1)	−0.196** (0.079)	0.049 (0.069)	0.014 (0.068)	0.060 (0.074)	0.099 (0.076)	0.058 (0.070)	−0.083 (0.074)
Poverty Tr. (T2)	0.070 (0.079)	0.052 (0.072)	−0.027 (0.070)	−0.028 (0.079)	0.210*** (0.076)	0.063 (0.073)	−0.053 (0.077)
Diversity Tr. (T3)	−0.130* (0.076)	0.066 (0.070)	−0.073 (0.069)	−0.007 (0.076)	0.136* (0.077)	−0.013 (0.071)	0.068 (0.076)
All Tr. (T4)	−0.084 (0.077)	−0.028 (0.068)	−0.081 (0.070)	0.010 (0.076)	0.223*** (0.074)	−0.022 (0.071)	0.009 (0.074)
Inequality Tr. (T1) * Right	−0.038 (0.124)	−0.079 (0.116)	−0.058 (0.117)	−0.221* (0.119)	0.039 (0.125)	−0.168 (0.118)	0.149 (0.121)
Poverty Tr. (T2) * Right	−0.070 (0.117)	−0.207* (0.118)	−0.093 (0.115)	−0.074 (0.120)	−0.128 (0.123)	−0.139 (0.120)	0.150 (0.119)
Diversity Tr. (T3) * Right	−0.187 (0.119)	−0.073 (0.116)	0.108 (0.113)	−0.137 (0.116)	0.036 (0.125)	0.006 (0.119)	0.005 (0.118)
All Tr. (T4) * Right	−0.056 (0.118)	0.010 (0.116)	0.093 (0.116)	−0.107 (0.120)	−0.076 (0.121)	0.060 (0.119)	0.129 (0.120)
Right	0.042 (0.083)	0.878*** (0.083)	0.827*** (0.085)	−0.116 (0.084)	−0.382*** (0.088)	0.618*** (0.084)	0.284*** (0.086)
Inequality Tr. (T1) * Centre	−0.001 (0.140)	−0.145 (0.122)	−0.007 (0.116)	−0.224 (0.137)	−0.141 (0.131)	−0.183 (0.129)	0.208 (0.131)
Poverty Tr. (T2) * Centre	−0.091 (0.132)	−0.199* (0.117)	−0.082 (0.115)	−0.092 (0.135)	−0.114 (0.128)	−0.238* (0.131)	0.165 (0.131)
Diversity Tr. (T3) * Centre	−0.012 (0.134)	0.030 (0.123)	0.141 (0.117)	−0.075 (0.133)	−0.175 (0.135)	−0.001 (0.131)	0.134 (0.133)
All Tr. (T4) * Centre	0.077 (0.138)	−0.179 (0.120)	−0.036 (0.120)	−0.130 (0.135)	−0.083 (0.128)	−0.134 (0.134)	0.072 (0.135)
Centre	−0.064 (0.097)	0.537*** (0.086)	0.466*** (0.084)	−0.152 (0.100)	−0.095 (0.091)	0.450*** (0.091)	0.096 (0.095)
<i>p</i> -value [T1 + T1 × Right]	0.014	0.747	0.645	0.083	0.163	0.249	0.496
<i>p</i> -value [T2 + T2 × Right]	0.998	0.094	0.187	0.259	0.398	0.425	0.281
<i>p</i> -value [T3 + T3 × Right]	0.001	0.948	0.689	0.096	0.081	0.945	0.424
<i>p</i> -value [T4 + T4 × Right]	0.121	0.845	0.895	0.294	0.124	0.692	0.147
<i>p</i> -value [T1 + T1 × Centre]	0.087	0.336	0.941	0.155	0.691	0.249	0.249
<i>p</i> -value [T2 + T2 × Centre]	0.842	0.112	0.228	0.275	0.351	0.106	0.287
<i>p</i> -value [T3 + T3 × Centre]	0.195	0.334	0.466	0.451	0.723	0.897	0.066
<i>p</i> -value [T4 + T4 × Centre]	0.951	0.037	0.234	0.283	0.178	0.169	0.474
<i>N</i>	3521	3521	3521	3521	3521	3521	3521

Notes: See Table A6.

TABLE A8 Heterogeneous treatment effects on policy preferences—populist.

	Redistributive preferences							Summary			Exclusionary preferences			Summary			
	General Redistr.	Tax Rich	Wealth Tax	Estate Tax	Support Poor (all)	Spend Poor	Spend Unemploy.	Index Redistr.	Support Poor (It)	Exclusive Welfare	Index Excl.	Support Poor (It)	Exclusive Welfare	Index Excl.	Support Poor (It)	Exclusive Welfare	Index Excl.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(9)	(10)	(11)	(9)	(10)	(11)
Inequality Tr. (T1)	0.018 (0.084)	0.014 (0.043)	0.004 (0.085)	0.140 (0.085)	0.052 (0.093)	0.135 (0.098)	-0.130 (0.087)	0.065 (0.088)	0.057 (0.100)	-0.009 (0.035)	0.025 (0.092)	0.057 (0.100)	-0.009 (0.035)	0.025 (0.092)	0.057 (0.100)	-0.009 (0.035)	0.025 (0.092)
Poverty Tr. (T2)	-0.111 (0.084)	-0.014 (0.044)	-0.082 (0.087)	0.001 (0.090)	-0.018 (0.091)	0.004 (0.095)	0.014 (0.087)	-0.058 (0.087)	-0.121 (0.100)	-0.017 (0.035)	-0.108 (0.092)	-0.121 (0.100)	-0.017 (0.035)	-0.108 (0.092)	-0.121 (0.100)	-0.017 (0.035)	-0.108 (0.092)
Diversity Tr. (T3)	-0.053 (0.087)	0.014 (0.045)	-0.013 (0.086)	0.019 (0.089)	0.141 (0.093)	0.066 (0.100)	-0.006 (0.092)	0.048 (0.091)	0.102 (0.102)	-0.020 (0.035)	0.038 (0.093)	0.102 (0.102)	-0.020 (0.035)	0.038 (0.093)	0.102 (0.102)	-0.020 (0.035)	0.038 (0.093)
All Tr. (T4)	0.051 (0.082)	-0.005 (0.044)	-0.051 (0.089)	0.056 (0.087)	0.139 (0.091)	0.103 (0.098)	-0.021 (0.088)	0.070 (0.089)	-0.203** (0.101)	-0.063* (0.033)	-0.236*** (0.089)	-0.203** (0.101)	-0.063* (0.033)	-0.236*** (0.089)	-0.203** (0.101)	-0.063* (0.033)	-0.236*** (0.089)
Inequality Tr. (T1) * Populist	0.058 (0.117)	0.036 (0.057)	0.136 (0.115)	-0.143 (0.116)	0.025 (0.122)	-0.143 (0.125)	0.046 (0.114)	0.014 (0.118)	-0.063 (0.123)	-0.038 (0.050)	-0.102 (0.117)	-0.063 (0.123)	-0.038 (0.050)	-0.102 (0.117)	-0.063 (0.123)	-0.038 (0.050)	-0.102 (0.117)
Poverty Tr. (T2) * Populist	0.187 (0.117)	-0.004 (0.058)	0.230* (0.118)	0.155 (0.118)	0.006 (0.120)	0.136 (0.123)	0.023 (0.114)	0.192 (0.120)	-0.010 (0.124)	-0.017 (0.050)	-0.033 (0.119)	-0.010 (0.124)	-0.017 (0.050)	-0.033 (0.119)	-0.010 (0.124)	-0.017 (0.050)	-0.033 (0.119)
Diversity Tr. (T3) * Populist	0.144 (0.118)	0.003 (0.057)	0.136 (0.115)	-0.032 (0.118)	-0.031 (0.121)	-0.051 (0.125)	-0.074 (0.119)	0.026 (0.120)	-0.048 (0.123)	-0.001 (0.050)	-0.034 (0.118)	-0.048 (0.123)	-0.001 (0.050)	-0.034 (0.118)	-0.048 (0.123)	-0.001 (0.050)	-0.034 (0.118)
All Tr. (T4) * Populist	-0.011 (0.115)	0.023 (0.057)	0.151 (0.118)	-0.012 (0.115)	-0.169 (0.119)	-0.058 (0.125)	-0.083 (0.115)	-0.036 (0.118)	0.187 (0.123)	0.023 (0.048)	0.163 (0.116)	0.187 (0.123)	0.023 (0.048)	0.163 (0.116)	0.187 (0.123)	0.023 (0.048)	0.163 (0.116)
Populist	-0.304*** (0.081)	-0.105*** (0.041)	-0.367*** (0.083)	-0.328*** (0.084)	-0.147* (0.085)	-0.089 (0.084)	0.027 (0.085)	-0.375*** (0.083)	0.452*** (0.084)	0.151*** (0.036)	0.541*** (0.083)	0.452*** (0.084)	0.151*** (0.036)	0.541*** (0.083)	0.452*** (0.084)	0.151*** (0.036)	0.541*** (0.083)
<i>p</i> -value [T1 + T1 × Populist]	0.339	0.172	0.069	0.962	0.339	0.917	0.259	0.309	0.936	0.178	0.287	0.936	0.178	0.287	0.936	0.178	0.287
<i>p</i> -value [T2 + T2 × Populist]	0.339	0.634	0.062	0.042	0.879	0.072	0.616	0.102	0.073	0.341	0.061	0.073	0.341	0.061	0.073	0.341	0.061
<i>p</i> -value [T3 + T3 × Populist]	0.257	0.628	0.103	0.868	0.155	0.843	0.284	0.338	0.442	0.544	0.956	0.442	0.544	0.956	0.442	0.544	0.956
<i>p</i> -value [T4 + T4 × Populist]	0.626	0.625	0.195	0.565	0.691	0.562	0.162	0.655	0.818	0.246	0.319	0.818	0.246	0.319	0.818	0.246	0.319
<i>N</i>	2791	2791	2791	2791	2791	2791	2791	2791	2791	2791	2791	2791	2791	2791	2791	2791	2791

Notes: See Table A6.

TABLE A9 Heterogeneous treatment effects on perceptions—populist.

	Perceptions of inequality		Perceptions of poverty			Perceptions of diversity	
	Share of wealth Top 10% (1)	Share of wealth Bottom 50% (2)	Share of immigrants among the poor (3)	Incidence of poverty among immigrants (4)	Incidence of poverty among Italians (5)	Share of non-European immigrants (6)	Share of non-Catholic immigrants (7)
Inequality Tr. (T1)	-0.263*** (0.092)	0.083 (0.092)	-0.153 (0.097)	-0.072 (0.097)	0.095 (0.086)	-0.070 (0.095)	-0.028 (0.098)
Poverty Tr. (T2)	-0.280*** (0.089)	0.041 (0.092)	-0.186** (0.094)	-0.313*** (0.087)	-0.199** (0.083)	0.094 (0.092)	0.015 (0.097)
Diversity Tr. (T3)	-0.350*** (0.092)	-0.110 (0.088)	-0.015 (0.096)	-0.041 (0.098)	0.022 (0.084)	-0.083 (0.089)	0.243*** (0.088)
All Tr. (T4)	-0.214** (0.086)	-0.053 (0.091)	-0.100 (0.096)	-0.257*** (0.090)	-0.123 (0.087)	-0.297*** (0.086)	0.149 (0.091)
Inequality Tr. (T1) * Populist	0.224* (0.120)	-0.305** (0.119)	0.052 (0.126)	0.021 (0.124)	-0.166 (0.115)	0.201* (0.121)	0.150 (0.121)
Poverty Tr. (T2) * Populist	0.179 (0.117)	-0.211* (0.120)	-0.037 (0.120)	0.141 (0.115)	-0.115 (0.112)	0.070 (0.119)	0.090 (0.122)
Diversity Tr. (T3) * Populist	0.296** (0.118)	-0.065 (0.118)	-0.103 (0.123)	-0.081 (0.124)	-0.100 (0.113)	0.019 (0.114)	-0.113 (0.112)
All Tr. (T4) * Populist	0.144 (0.114)	-0.222* (0.119)	-0.091 (0.122)	0.088 (0.114)	-0.084 (0.114)	0.173 (0.113)	-0.034 (0.113)
Populist	-0.183** (0.085)	0.342*** (0.082)	0.044 (0.088)	-0.007 (0.088)	0.356*** (0.080)	-0.021 (0.086)	0.134 (0.087)
$p$ -value [T1 + T1 × Populist]	0.602	0.004	0.201	0.506	0.355	0.081	0.084
$p$ -value [T2 + T2 × Populist]	0.185	0.026	0.003	0.020	0.000	0.028	0.151
$p$ -value [T3 + T3 × Populist]	0.464	0.028	0.116	0.106	0.295	0.380	0.060
$p$ -value [T4 + T4 × Populist]	0.349	0.000	0.012	0.018	0.005	0.086	0.092
$N$	2791	2791	2791	2791	2791	2791	2791

Notes: See Table A6.

**TABLE A10** Heterogeneous treatment effects on other beliefs on inequality and immigration—populist.

	Poor–rich wealth scale (1)	Migrants economic threat (2)	Migrants cultural threat (3)	Problem: low education (4)	Problem: income differences (5)	Problem: loss of identity (6)	Problem: unconditional welfare (7)
Inequality Tr. (T1)	−0.246*** (0.088)	0.090 (0.082)	0.053 (0.079)	0.077 (0.089)	0.063 (0.094)	0.034 (0.089)	−0.031 (0.080)
Poverty Tr. (T2)	0.063 (0.083)	−0.072 (0.075)	−0.015 (0.079)	−0.028 (0.090)	0.086 (0.093)	−0.105 (0.085)	0.108 (0.086)
Diversity Tr. (T3)	−0.103 (0.088)	0.099 (0.082)	0.011 (0.082)	0.064 (0.091)	0.078 (0.095)	−0.146 (0.089)	0.174** (0.083)
All Tr. (T4)	0.009 (0.087)	−0.028 (0.076)	−0.010 (0.080)	0.015 (0.092)	0.261*** (0.088)	−0.034 (0.088)	0.026 (0.083)
Inequality Tr. (T1) * Populist	0.001 (0.119)	−0.187* (0.112)	−0.124 (0.109)	−0.122 (0.117)	0.062 (0.122)	−0.156 (0.118)	−0.035 (0.113)
Poverty Tr. (T2) * Populist	−0.074 (0.113)	−0.007 (0.107)	−0.124 (0.109)	−0.030 (0.118)	0.120 (0.121)	0.070 (0.116)	−0.166 (0.116)
Diversity Tr. (T3) * Populist	−0.090 (0.116)	−0.119 (0.112)	−0.060 (0.109)	−0.125 (0.117)	0.043 (0.123)	0.128 (0.118)	−0.138 (0.114)
All Tr. (T4) * Populist	−0.169 (0.115)	−0.084 (0.108)	−0.118 (0.109)	−0.051 (0.118)	−0.043 (0.116)	−0.037 (0.117)	0.009 (0.114)
Populist	−0.051 (0.080)	0.730*** (0.076)	0.790*** (0.078)	−0.165** (0.083)	−0.253*** (0.085)	0.477*** (0.083)	0.363*** (0.081)
<i>p</i> -value [T1 + T1 × Populist]	0.002	0.198	0.340	0.542	0.106	0.109	0.406
<i>p</i> -value [T2 + T2 × Populist]	0.882	0.300	0.062	0.443	0.009	0.660	0.455
<i>p</i> -value [T3 + T3 × Populist]	0.011	0.800	0.489	0.404	0.122	0.809	0.647
<i>p</i> -value [T4 + T4 × Populist]	0.036	0.144	0.088	0.629	0.004	0.363	0.647
<i>N</i>	2791	2791	2791	2791	2791	2791	2791

Notes: See Table A6.

TABLE A11 Heterogeneous treatment effects on perceptions—income.

	Perceptions of inequality		Perceptions of poverty		Perceptions of diversity	
	Share of wealth Top 10% (1)	Share of wealth Bottom 50% (2)	Share of immigrants among the poor (3)	Incidence of poverty among immigrants (4)	Share of non-European immigrants (6)	Share of non-Catholic immigrants (7)
Inequality Tr. (T1)	-0.104 (0.119)	-0.098 (0.119)	-0.081 (0.122)	-0.061 (0.121)	0.099 (0.113)	-0.010 (0.116)
Poverty Tr. (T2)	-0.204* (0.114)	-0.128 (0.117)	-0.100 (0.110)	-0.186* (0.110)	0.132 (0.108)	0.081 (0.106)
Diversity Tr. (T3)	-0.093 (0.114)	-0.130 (0.117)	-0.014 (0.111)	-0.126 (0.110)	-0.072 (0.109)	0.211** (0.098)
All Tr. (T4)	-0.192* (0.113)	-0.149 (0.119)	-0.135 (0.112)	-0.177* (0.104)	-0.180 (0.111)	0.088 (0.104)
Inequality Tr. (T1) * Rich	0.050 (0.172)	0.055 (0.178)	0.036 (0.189)	0.181 (0.182)	-0.081 (0.174)	-0.078 (0.173)
Poverty Tr. (T2) * Rich	-0.008 (0.170)	-0.006 (0.174)	-0.120 (0.173)	-0.118 (0.165)	0.208 (0.167)	-0.104 (0.167)
Diversity Tr. (T3) * Rich	-0.012 (0.169)	-0.054 (0.178)	-0.106 (0.175)	0.090 (0.175)	0.025 (0.169)	-0.017 (0.157)
All Tr. (T4) * Rich	0.229 (0.169)	-0.004 (0.178)	0.120 (0.179)	0.037 (0.164)	0.085 (0.165)	0.035 (0.159)
Rich	-0.075 (0.127)	-0.186 (0.129)	-0.046 (0.129)	-0.043 (0.127)	0.020 (0.130)	0.120 (0.124)
Inequality Tr. (T1) * Middle	-0.019 (0.149)	-0.061 (0.148)	-0.130 (0.152)	-0.098 (0.151)	-0.130 (0.143)	0.150 (0.145)

TABLE A11 (Continued)

	Perceptions of inequality			Perceptions of poverty			Perceptions of diversity		
	Share of wealth Top 10% (1)	Share of wealth Bottom 50% (2)	Share of immigrants among the poor (3)	Incidence of poverty among immigrants (4)	Incidence of poverty among Italians (5)	Share of non-European immigrants (6)	Share of non-Catholic immigrants (7)		
Poverty Tr. (T2) * Middle	0.025 (0.143)	0.068 (0.145)	-0.121 (0.139)	0.011 (0.139)	0.003 (0.139)	-0.116 (0.139)	-0.065 (0.138)		
Diversity Tr. (T3) * Middle	-0.018 (0.141)	-0.032 (0.148)	0.040 (0.143)	0.117 (0.143)	0.118 (0.141)	-0.018 (0.138)	-0.064 (0.129)		
All Tr. (T4) * Middle	0.066 (0.141)	-0.082 (0.147)	-0.086 (0.141)	-0.058 (0.134)	0.055 (0.141)	0.004 (0.137)	0.107 (0.133)		
Middle	0.000 (0.108)	-0.112 (0.107)	0.046 (0.104)	0.024 (0.104)	-0.280*** (0.103)	-0.000 (0.106)	0.024 (0.103)		
<i>p</i> -value [T1 + T1 × Rich]	0.665	0.746	0.755	0.380	0.916	0.895	0.489		
<i>p</i> -value [T2 + T2 × Rich]	0.091	0.299	0.101	0.013	0.009	0.007	0.863		
<i>p</i> -value [T3 + T3 × Rich]	0.399	0.168	0.374	0.789	0.849	0.716	0.113		
<i>p</i> -value [T4 + T4 × Rich]	0.766	0.248	0.916	0.267	0.173	0.439	0.307		
<i>p</i> -value [T1 + T1 × Centre]	0.171	0.069	0.020	0.081	0.154	0.719	0.108		
<i>p</i> -value [T2 + T2 × Centre]	0.038	0.488	0.009	0.036	0.007	0.860	0.851		
<i>p</i> -value [T3 + T3 × Centre]	0.186	0.073	0.778	0.917	0.366	0.279	0.082		
<i>p</i> -value [T4 + T4 × Centre]	0.140	0.008	0.010	0.005	0.086	0.028	0.018		
<i>N</i>	2568	2568	2568	2568	2568	2568	2568		

Notes: See Table A6.

TABLE A12 Heterogeneous treatment effects on other beliefs on inequality and immigration—income.

	Poor–rich wealth scale (1)	Migrants economic threat (2)	Migrants cultural threat (3)	Problem: low education (4)	Problem: income differences (5)	Problem: loss of identity (6)	Problem: unconditional welfare (7)
Inequality Tr. (T1)	−0.408*** (0.126)	−0.111 (0.121)	−0.015 (0.114)	−0.012 (0.107)	0.100 (0.116)	0.041 (0.117)	0.165 (0.124)
Poverty Tr. (T2)	−0.203* (0.116)	−0.014 (0.120)	−0.075 (0.110)	0.036 (0.111)	0.176 (0.110)	−0.051 (0.110)	0.193 (0.118)
Diversity Tr. (T3)	−0.413*** (0.110)	−0.002 (0.121)	0.012 (0.113)	0.037 (0.107)	0.071 (0.117)	0.026 (0.110)	0.157 (0.117)
All Tr. (T4)	−0.240** (0.116)	−0.137 (0.116)	−0.042 (0.111)	0.090 (0.108)	0.115 (0.106)	0.074 (0.115)	0.116 (0.113)
Inequality Tr. (T1) * Rich	0.352** (0.170)	0.009 (0.180)	−0.161 (0.172)	0.222 (0.166)	0.058 (0.181)	−0.221 (0.185)	−0.051 (0.174)
Poverty Tr. (T2) * Rich	0.177 (0.158)	−0.041 (0.178)	0.029 (0.171)	0.004 (0.170)	0.043 (0.172)	0.158 (0.181)	0.002 (0.168)
Diversity Tr. (T3) * Rich	0.414*** (0.159)	−0.150 (0.186)	−0.090 (0.178)	−0.028 (0.170)	0.128 (0.184)	−0.093 (0.184)	0.165 (0.173)
All Tr. (T4) * Rich	0.226 (0.161)	0.175 (0.189)	0.068 (0.181)	−0.037 (0.179)	0.153 (0.172)	−0.136 (0.189)	0.100 (0.173)
Rich	0.755*** (0.119)	0.057 (0.134)	0.047 (0.130)	0.171 (0.125)	−0.255** (0.128)	0.075 (0.133)	−0.257** (0.122)
Inequality Tr. (T1) * Middle	0.225 (0.150)	0.136 (0.150)	0.103 (0.144)	−0.243* (0.140)	−0.031 (0.146)	−0.117 (0.146)	−0.188 (0.150)
Poverty Tr. (T2) * Middle	0.369*** (0.139)	−0.055 (0.148)	0.040 (0.140)	−0.239* (0.142)	−0.134 (0.143)	−0.034 (0.142)	−0.207 (0.145)
Diversity Tr. (T3) * Middle	0.293** (0.133)	0.114 (0.150)	0.058 (0.142)	−0.303** (0.139)	0.039 (0.149)	−0.113 (0.145)	−0.047 (0.145)
All Tr. (T4) * Middle	0.214 (0.138)	0.116 (0.145)	0.017 (0.143)	−0.270* (0.138)	0.115 (0.138)	−0.235 (0.143)	−0.080 (0.141)
Middle	0.257** (0.101)	−0.043 (0.110)	−0.009 (0.106)	0.265*** (0.102)	−0.075 (0.104)	0.085 (0.104)	0.001 (0.105)
<i>p</i> -value [T1 + T1 × Rich]	0.625	0.446	0.169	0.098	0.254	0.207	0.347
<i>p</i> -value [T2 + T2 × Rich]	0.807	0.675	0.722	0.755	0.097	0.453	0.105
<i>p</i> -value [T3 + T3 × Rich]	0.994	0.281	0.573	0.946	0.161	0.651	0.012
<i>p</i> -value [T4 + T4 × Rich]	0.903	0.800	0.851	0.712	0.048	0.681	0.098
<i>p</i> -value [T1 + T1 × Centre]	0.023	0.777	0.318	0.005	0.440	0.383	0.788
<i>p</i> -value [T2 + T2 × Centre]	0.028	0.418	0.690	0.023	0.647	0.345	0.877
<i>p</i> -value [T3 + T3 × Centre]	0.110	0.208	0.417	0.003	0.235	0.350	0.200
<i>p</i> -value [T4 + T4 × Centre]	0.735	0.808	0.787	0.036	0.010	0.062	0.677
<i>N</i>	2568	2568	2568	2568	2568	2568	2568

Notes: See Table A6.

TABLE A13 Heterogeneous treatment effects on perceptions—meritocrats.

	Perceptions of inequality		Perceptions of poverty		Perceptions of diversity		
	Share of wealth Top 10% (1)	Share of wealth Bottom 50% (2)	Share of immigrants among the poor (3)	Incidence of poverty among immigrants (4)	Incidence of poverty among Italians (5)	Share of non-European immigrants (6)	Share of non-Catholic immigrants (7)
Inequality Tr. (T1)	-0.137** (0.060)	-0.104* (0.061)	-0.132** (0.062)	-0.089 (0.062)	-0.023 (0.061)	0.105* (0.061)	0.113* (0.060)
Poverty Tr. (T2)	-0.197*** (0.061)	-0.098 (0.062)	-0.201*** (0.060)	-0.190*** (0.059)	-0.252*** (0.061)	0.145** (0.061)	0.063 (0.061)
Diversity Tr. (T3)	-0.129** (0.058)	-0.146** (0.063)	-0.086 (0.061)	-0.074 (0.061)	-0.058 (0.060)	-0.039 (0.058)	0.181*** (0.056)
All Tr. (T4)	-0.106* (0.058)	-0.203*** (0.062)	-0.168*** (0.061)	-0.222*** (0.058)	-0.186*** (0.061)	-0.147** (0.058)	0.139** (0.057)
Inequality Tr. (T1) * Meritocrat	-0.075 (0.126)	0.026 (0.122)	0.032 (0.132)	0.066 (0.129)	-0.014 (0.121)	-0.069 (0.119)	-0.075 (0.122)
Poverty Tr. (T2) * Meritocrat	0.009 (0.119)	0.035 (0.117)	-0.070 (0.116)	-0.093 (0.112)	-0.113 (0.107)	-0.000 (0.113)	-0.001 (0.118)
Diversity Tr. (T3) * Meritocrat	-0.116 (0.119)	0.036 (0.118)	0.091 (0.120)	0.058 (0.122)	0.025 (0.111)	-0.020 (0.110)	-0.023 (0.112)
All Tr. (T4) * Meritocrat	-0.118 (0.120)	0.024 (0.120)	0.029 (0.121)	0.120 (0.115)	-0.107 (0.111)	0.043 (0.113)	0.036 (0.111)
Meritocrat	-0.012 (0.089)	-0.108 (0.085)	-0.110 (0.086)	-0.123 (0.085)	-0.229*** (0.079)	0.154* (0.084)	0.140 (0.088)
$p$ -value [T1 + T1 × Meritocrat]	0.057	0.459	0.391	0.833	0.724	0.722	0.717
$p$ -value [T2 + T2 × Meritocrat]	0.067	0.525	0.006	0.003	0.000	0.127	0.538
$p$ -value [T3 + T3 × Meritocrat]	0.018	0.270	0.965	0.884	0.724	0.529	0.102
$p$ -value [T4 + T4 × Meritocrat]	0.032	0.079	0.181	0.309	0.001	0.290	0.066
$N$	3521	3521	3521	3521	3521	3521	3521

Notes: See Table A6.

**TABLE A14** Heterogeneous treatment effects on other beliefs on inequality and immigration—meritocrats.

	Poor–rich wealth scale (1)	Migrants economic threat (2)	Migrants cultural threat (3)	Problem: low education (4)	Problem: income differences (5)	Problem: loss of identity (6)	Problem: unconditional welfare (7)
Inequality Tr. (T1)	−0.200*** (0.062)	−0.081 (0.059)	−0.044 (0.059)	−0.081 (0.060)	0.035 (0.059)	−0.051 (0.059)	−0.010 (0.061)
Poverty Tr. (T2)	0.003 (0.060)	−0.050 (0.061)	−0.117* (0.060)	−0.114* (0.061)	0.166*** (0.060)	−0.065 (0.061)	−0.006 (0.062)
Diversity Tr. (T3)	−0.195*** (0.060)	−0.010 (0.060)	−0.063 (0.060)	−0.070 (0.059)	0.112* (0.061)	−0.043 (0.061)	0.062 (0.061)
All Tr. (T4)	−0.116* (0.061)	−0.112* (0.060)	−0.096 (0.061)	−0.065 (0.060)	0.202*** (0.058)	−0.045 (0.061)	0.025 (0.061)
Inequality Tr. (T1) * Meritocrat	−0.033 (0.125)	0.286** (0.129)	0.137 (0.123)	0.122 (0.124)	0.127 (0.125)	0.024 (0.127)	0.075 (0.121)
Poverty Tr. (T2) * Meritocrat	0.066 (0.115)	−0.016 (0.117)	0.168 (0.112)	0.110 (0.117)	−0.052 (0.118)	0.109 (0.124)	0.176 (0.113)
Diversity Tr. (T3) * Meritocrat	0.001 (0.119)	0.227* (0.122)	0.227** (0.116)	−0.002 (0.117)	−0.009 (0.122)	0.119 (0.124)	0.153 (0.116)
All Tr. (T4) * Meritocrat	0.127 (0.117)	0.148 (0.121)	0.112 (0.117)	0.062 (0.121)	−0.087 (0.118)	0.012 (0.125)	0.158 (0.118)
Meritocrat	0.035 (0.083)	0.118 (0.087)	0.113 (0.084)	0.093 (0.086)	−0.501*** (0.086)	0.065 (0.088)	−0.043 (0.081)
<i>p</i> -value [T1 + T1 × Meritocrat]	0.030	0.072	0.386	0.703	0.140	0.813	0.534
<i>p</i> -value [T2 + T2 × Meritocrat]	0.478	0.504	0.586	0.965	0.261	0.684	0.072
<i>p</i> -value [T3 + T3 × Meritocrat]	0.060	0.041	0.097	0.474	0.328	0.482	0.029
<i>p</i> -value [T4 + T4 × Meritocrat]	0.909	0.732	0.870	0.978	0.262	0.762	0.071
<i>N</i>	3521	3521	3521	3521	3521	3521	3521

Notes: See Table A6.

## A.4 Robustness

### A.4.1 Restricted sample—robustness test

Tables A15, A16 and A17 replicate results in Tables 2, 4 and 5, using a restricted sample where observations flagged as low quality are dropped. The results suggest that our findings are not driven by the potential difference in quality in the observations.

TABLE A15 Treatment effects on policy preferences—restricted sample.

	Redistributive preferences					Exclusionary preferences			Summary		
	General Redistr. (1)	Tax Rich (2)	Wealth Tax (3)	Estate Tax (4)	Support Poor (all) (5)	Spend Poor (6)	Spend Unemploy. (7)	Index Redistr. (8)	Support Poor (It) (9)	Exclusive Welfare (10)	Index Exclus. (11)
Inequality Tr.	0.022 (0.055)	0.024 (0.026)	0.041 (0.054)	0.029 (0.055)	0.018 (0.057)	0.020 (0.058)	-0.072 (0.055)	0.028 (0.053)	-0.014 (0.056)	-0.039 (0.024)	-0.068 (0.053)
Poverty Tr.	-0.010 (0.055)	-0.020 (0.027)	0.024 (0.055)	0.082 (0.054)	-0.056 (0.056)	0.048 (0.058)	0.046 (0.055)	0.024 (0.055)	-0.152*** (0.056)	-0.014 (0.024)	-0.122** (0.054)
Diversity Tr.	-0.006 (0.056)	0.004 (0.026)	0.016 (0.054)	-0.023 (0.054)	0.066 (0.056)	0.070 (0.058)	-0.016 (0.057)	0.030 (0.054)	0.013 (0.056)	-0.004 (0.024)	0.002 (0.053)
All Tr.	-0.029 (0.055)	-0.001 (0.026)	-0.026 (0.055)	-0.008 (0.053)	-0.038 (0.055)	0.069 (0.060)	-0.068 (0.056)	-0.027 (0.054)	-0.126** (0.056)	-0.037 (0.024)	-0.139*** (0.053)
Observations	3138	3138	3138	3138	3138	3138	3138	3138	3138	3138	3138

Notes: See Table 2. Flagged respondents are excluded from the estimation sample.

TABLE A16 Treatment effects on perceptions—restricted sample.

	Perceptions of inequality		Perceptions of poverty		Perceptions of diversity		
	Share of wealth Top 10% (1)	Share of wealth Bottom 50% (2)	Share of immigrants among the poor (3)	Incidence of poverty among immigrants (4)	Incidence of poverty among Italians (5)	Share of non-European immigrants (6)	Share of non-Catholic immigrants (7)
Inequality Tr.	-0.179*** (0.056)	-0.069 (0.056)	-0.083 (0.058)	-0.059 (0.057)	0.018 (0.056)	0.031 (0.056)	0.105* (0.055)
Poverty Tr.	-0.236*** (0.056)	-0.031 (0.057)	-0.178*** (0.055)	-0.204*** (0.053)	-0.241*** (0.054)	0.110** (0.055)	0.056 (0.056)
Diversity Tr.	-0.176*** (0.054)	-0.087 (0.057)	-0.034 (0.056)	-0.066 (0.056)	-0.009 (0.055)	-0.101* (0.053)	0.172*** (0.052)
All Tr.	-0.173*** (0.055)	-0.156*** (0.057)	-0.123** (0.056)	-0.173*** (0.053)	-0.161*** (0.055)	-0.212*** (0.053)	0.134*** (0.052)
Observations	3138	3138	3138	3138	3138	3138	3138

Notes: See Table 4. Flagged respondents are excluded from the estimation sample.

**TABLE A17** Treatment effects on other beliefs on inequality and immigration—restricted sample.

	Poor–rich wealth scale (1)	Migrants economic threat (2)	Migrants cultural threat (3)	Problem: low education (4)	Problem: income differences (5)	Problem: loss of identity (6)	Problem: unconditional welfare (7)
Inequality Tr.	−0.163*** (0.057)	−0.016 (0.056)	−0.024 (0.055)	−0.048 (0.056)	0.054 (0.056)	−0.035 (0.055)	0.037 (0.056)
Poverty Tr.	0.061 (0.054)	−0.019 (0.056)	−0.041 (0.054)	−0.089 (0.055)	0.091 (0.056)	0.001 (0.057)	0.079 (0.056)
Diversity Tr.	−0.180*** (0.055)	0.067 (0.057)	0.013 (0.055)	−0.087 (0.054)	0.087 (0.058)	0.004 (0.057)	0.150*** (0.056)
All Tr.	−0.047 (0.055)	−0.056 (0.055)	−0.060 (0.055)	−0.066 (0.055)	0.155*** (0.056)	−0.043 (0.057)	0.109* (0.056)
Observations	3138	3138	3138	3138	3138	3138	3138

Notes: See Table 5. Flagged respondents are now excluded from the estimation sample.

#### A.4.2 Sample excluding extreme patterns—robustness test

Similar to Alesina *et al.* (2023), we also compute the share of respondents who gave extreme answers, namely the first and the last option, on 28 questions. We then drop respondents whose answers lie at least half the time in one of the two extremes (1.11% of the sample), and we re-estimate the main results, reported in Tables A18, A19 and A20.

**TABLE A18** Treatment effects on policy preferences—no extreme answer sample.

	Redistributive preferences					Exclusionary preferences					Summary Index Exclus. Index (11)
	General Redistr. (1)	Tax Rich (2)	Wealth Tax (3)	Estate Tax (4)	Support Poor (all) (5)	Spend Poor (6)	Spend Unemploy. (7)	Index Redistr. (8)	Support Poor (It) (9)	Exclusive Welfare (10)	
Inequality Tr.	0.020 (0.052)	0.018 (0.025)	0.056 (0.052)	0.036 (0.052)	0.015 (0.055)	0.086 (0.056)	-0.092* (0.051)	0.041 (0.051)	-0.002 (0.053)	-0.028 (0.023)	-0.044 (0.051)
Poverty Tr.	-0.004 (0.052)	-0.016 (0.025)	0.048 (0.052)	0.086* (0.051)	-0.040 (0.053)	0.058 (0.054)	0.022 (0.051)	0.036 (0.052)	-0.155*** (0.053)	-0.017 (0.023)	-0.131** (0.051)
Diversity Tr.	0.003 (0.052)	0.007 (0.025)	0.040 (0.050)	-0.007 (0.051)	0.077 (0.053)	0.068 (0.055)	-0.064 (0.053)	0.034 (0.051)	0.042 (0.053)	-0.002 (0.023)	0.025 (0.050)
All Tr.	0.004 (0.052)	0.009 (0.025)	0.000 (0.053)	0.022 (0.051)	-0.009 (0.053)	0.080 (0.056)	-0.081 (0.052)	0.009 (0.051)	-0.112** (0.053)	-0.037* (0.022)	-0.133*** (0.051)
Observations	3456	3456	3456	3456	3456	3456	3456	3456	3456	3456	3456

*Notes:* See Table 2. Respondents with extreme patterns are now excluded from the estimation sample.

TABLE A19 Treatment effects on perceptions—no extreme answer sample.

	Perceptions of inequality		Perceptions of poverty		Perceptions of diversity		
	Share of wealth Top 10% (1)	Share of wealth Bottom 50% (2)	Share of immigrants among the poor (3)	Incidence of poverty among immigrants (4)	Incidence of poverty among Italians (5)	Share of non-European immigrants (6)	Share of non-Catholic immigrants (7)
Inequality Tr.	-0.161*** (0.053)	-0.105** (0.053)	-0.142*** (0.055)	-0.094* (0.055)	-0.043 (0.053)	0.085 (0.053)	0.110** (0.052)
Poverty Tr.	-0.196*** (0.053)	-0.095* (0.053)	-0.226*** (0.052)	-0.223*** (0.051)	-0.305*** (0.051)	0.152*** (0.052)	0.082 (0.053)
Diversity Tr.	-0.162*** (0.052)	-0.135** (0.054)	-0.057 (0.053)	-0.062 (0.054)	-0.052 (0.051)	-0.052 (0.050)	0.184*** (0.049)
All Tr.	-0.143*** (0.052)	-0.199*** (0.054)	-0.164*** (0.054)	-0.199*** (0.051)	-0.216*** (0.052)	-0.139*** (0.051)	0.167*** (0.050)
Observations	3456	3456	3456	3456	3456	3456	3456

Notes: See Table 4. Respondents with extreme patterns are now excluded from the estimation sample.

**TABLE A20** Treatment effects on other beliefs on inequality and immigration—no extreme answer sample.

	Poor–rich wealth scale (1)	Migrants economic threat (2)	Migrants cultural threat (3)	Problem: low education (4)	Problem: income differences (5)	Problem: loss of identity (6)	Problem: unconditional welfare (7)
Inequality Tr.	−0.200*** (0.054)	−0.026 (0.053)	−0.009 (0.052)	−0.056 (0.053)	0.083 (0.054)	−0.050 (0.053)	0.001 (0.053)
Poverty Tr.	0.038 (0.051)	−0.046 (0.053)	−0.059 (0.051)	−0.074 (0.053)	0.137** (0.053)	−0.027 (0.054)	0.042 (0.053)
Diversity Tr.	−0.184*** (0.053)	0.059 (0.053)	0.006 (0.052)	−0.060 (0.051)	0.105* (0.055)	−0.005 (0.053)	0.107** (0.052)
All Tr.	−0.078 (0.053)	−0.065 (0.053)	−0.057 (0.053)	−0.047 (0.053)	0.192*** (0.053)	−0.038 (0.054)	0.070 (0.053)
Observations	3456	3456	3456	3456	3456	3456	3456

*Notes:* See Table 5. Respondents with extreme patterns are now excluded from the estimation sample.

#### A.4.3 Unweighted—robustness test

We also investigate the role of probability weights that we have employed in the main analysis to correct for oversampling and undersampling. Estimating our main results without probability weights leaves them literally unaffected (see Tables A21, A22 and A23).

TABLE A21 Treatment effects on policy preferences—unweighted.

	Redistributive preferences					Exclusionary preferences					Summary Index Exclus. (11)
	General Redistr. (1)	Tax Rich (2)	Wealth Tax (3)	Estate Tax (4)	Support Poor (all) (5)	Spend Poor (6)	Spend Unemploy. (7)	Index Redistr. (8)	Support Poor (It) (9)	Exclusive Welfare (10)	
Inequality Tr.	0.021 (0.052)	0.019 (0.025)	0.053 (0.051)	0.039 (0.052)	0.027 (0.054)	0.068 (0.055)	-0.101** (0.051)	0.038 (0.050)	0.001 (0.053)	-0.020 (0.022)	-0.031 (0.051)
Poverty Tr.	0.002 (0.051)	-0.015 (0.025)	0.044 (0.052)	0.080 (0.051)	-0.028 (0.052)	0.061 (0.054)	0.008 (0.051)	0.036 (0.051)	-0.151*** (0.053)	-0.013 (0.023)	-0.122** (0.051)
Diversity Tr.	0.008 (0.052)	0.010 (0.025)	0.037 (0.050)	-0.011 (0.050)	0.081 (0.052)	0.059 (0.054)	-0.066 (0.052)	0.034 (0.050)	0.034 (0.052)	0.002 (0.023)	0.027 (0.050)
All Tr.	0.006 (0.052)	0.008 (0.025)	-0.009 (0.052)	0.015 (0.051)	0.001 (0.052)	0.077 (0.055)	-0.097* (0.052)	0.002 (0.051)	-0.116** (0.053)	-0.037* (0.022)	-0.137*** (0.051)
Observations	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521

Notes: See Table 2. Regression without probability weights.

TABLE A22 Treatment effects on perceptions—unweighted.

	Perceptions of inequality		Perceptions of poverty		Perceptions of diversity		
	Share of wealth Top 10% (1)	Share of wealth Bottom 50% (2)	Share of immigrants among the poor (3)	Incidence of poverty among immigrants (4)	Incidence of poverty among Italians (5)	Share of non-European immigrants (6)	Share of non-Catholic immigrants (7)
Inequality Tr.	-0.153*** (0.053)	-0.094* (0.053)	-0.120** (0.055)	-0.070 (0.054)	-0.017 (0.053)	0.084 (0.052)	0.092* (0.052)
Poverty Tr.	-0.194*** (0.052)	-0.092* (0.052)	-0.225*** (0.052)	-0.222*** (0.050)	-0.294*** (0.051)	0.151*** (0.052)	0.068 (0.052)
Diversity Tr.	-0.160*** (0.051)	-0.137*** (0.053)	-0.063 (0.052)	-0.060 (0.053)	-0.054 (0.051)	-0.043 (0.050)	0.177*** (0.049)
All Tr.	-0.136*** (0.051)	-0.197*** (0.053)	-0.161*** (0.053)	-0.191*** (0.050)	-0.212*** (0.052)	-0.136*** (0.050)	0.148*** (0.049)
Observations	3521	3521	3521	3521	3521	3521	3521

Notes: See Table 4. Regression without probability weights.

**TABLE A23** Treatment effects on other beliefs on inequality and immigration—unweighted.

	Poor–rich wealth scale (1)	Migrants economic threat (2)	Migrants cultural threat (3)	Problem: low education (4)	Problem: income differences (5)	Problem: loss of identity (6)	Problem: unconditional welfare (7)
Inequality Tr.	−0.208*** (0.054)	−0.024 (0.052)	−0.019 (0.051)	−0.058 (0.052)	0.083 (0.053)	−0.048 (0.052)	0.008 (0.052)
Poverty Tr.	0.024 (0.051)	−0.050 (0.052)	−0.063 (0.051)	−0.078 (0.052)	0.131** (0.053)	−0.030 (0.053)	0.044 (0.052)
Diversity Tr.	−0.194*** (0.052)	0.051 (0.053)	−0.002 (0.051)	−0.069 (0.051)	0.105* (0.054)	−0.011 (0.053)	0.102** (0.052)
All Tr.	−0.084 (0.052)	−0.076 (0.052)	−0.068 (0.053)	−0.050 (0.052)	0.182*** (0.052)	−0.042 (0.053)	0.065 (0.052)
Observations	3521	3521	3521	3521	3521	3521	3521

Notes: See Table 5. Regression without probability weights.

#### A.4.4 Combined treatments—robustness test

We finally investigate whether combining *Poverty Tr.* and *All Tr.* affects our results. Tables A24, A25 and A26 indicate that the main findings remain consistent.

**TABLE A24** Treatment effects on policy preferences—combined treatments.

	Redistributive preferences						Exclusionary preferences			Summary Index Redistr. (8)	Exclusionary preferences			Summary Index Exclus. Welfare (10)	Summary Index Exclus. (11)				
	General Redistr. (1)	Tax Rich (2)	Wealth Tax (3)	Estate Tax (4)	Support Poor (all) (5)	Spend Poor (6)	Support Poor (It) (9)	Spend Unemploy. (7)	Support Poor (It) (9)		Spend Unemploy. (7)	Support Poor (It) (9)	Spend Unemploy. (7)			Support Poor (It) (9)	Spend Unemploy. (7)	Support Poor (It) (9)	Spend Unemploy. (7)
Inequality Tr.	0.021 (0.681)	0.019 (0.449)	0.053 (0.300)	0.039 (0.450)	0.027 (0.622)	0.068 (0.218)	0.001 (0.980)	-0.101** (0.047)	0.038 (0.448)	0.034 (0.501)	0.002 (0.923)	-0.020 (0.362)	0.001 (0.980)	0.034 (0.509)	0.002 (0.923)	-0.020 (0.362)	-0.031 (0.542)		
Diversity Tr.	0.008 (0.880)	0.010 (0.692)	0.037 (0.463)	-0.011 (0.827)	0.081 (0.119)	0.059 (0.274)	0.034 (0.509)	-0.065 (0.212)	0.034 (0.501)	0.034 (0.501)	0.002 (0.923)	0.002 (0.923)	0.034 (0.509)	0.034 (0.509)	0.002 (0.923)	0.002 (0.923)	0.027 (0.592)		
Poverty + All Tr.	0.004 (0.929)	-0.004 (0.870)	0.018 (0.694)	0.048 (0.277)	-0.014 (0.759)	0.069 (0.142)	-0.134*** (0.003)	-0.044 (0.325)	0.019 (0.662)	0.019 (0.662)	-0.025 (0.194)	-0.025 (0.194)	-0.134*** (0.003)	-0.134*** (0.003)	-0.025 (0.194)	-0.025 (0.194)	-0.130*** (0.003)		
Observations	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521	3521		

Notes: See Table 4. Regression combining *Poverty Tr.* and *All Tr.*

TABLE A25 Treatment effects on perceptions—combined treatments.

	Perceptions of inequality			Perceptions of poverty			Perceptions of diversity		
	Share of wealth Top 10% (1)	Share of wealth Bottom 50% (2)	Share of immigrants among the poor (3)	Incidence of poverty among immigrants (4)	Incidence of poverty among Italians (5)	Share of non-European immigrants (6)	Share of non-Catholic immigrants (7)		
Inequality Tr.	-0.153*** (0.004)	-0.090* (0.086)	-0.119** (0.030)	-0.071 (0.193)	-0.012 (0.819)	0.086 (0.101)	0.093* (0.074)		
Diversity Tr.	-0.160*** (0.002)	-0.135** (0.010)	-0.063 (0.233)	-0.059 (0.266)	-0.053 (0.293)	-0.043 (0.381)	0.174*** (0.000)		
Poverty + All Tr.	-0.165*** (0.000)	-0.143*** (0.002)	-0.193*** (0.000)	-0.206*** (0.000)	-0.253*** (0.000)	0.007 (0.872)	0.106** (0.017)		
Observations	3521	3521	3521	3521	3521	3521	3521		

Notes: See Table 4. Regression combining *Poverty Tr.* and *All Tr.*

**TABLE A26** Treatment effects on other beliefs on inequality and immigration—combined treatments.

	Poor–rich wealth scale (1)	Migrants economic threat (2)	Migrants cultural threat (3)	Problem: low education (4)	Problem: income differences (5)	Problem: loss of identity (6)	Problem: unconditional welfare (7)
Inequality Tr.	−0.209*** (0.000)	−0.012 (0.812)	−0.006 (0.906)	−0.063 (0.228)	0.077 (0.144)	−0.039 (0.441)	0.014 (0.792)
Diversity Tr.	−0.195*** (0.000)	0.049 (0.323)	−0.004 (0.930)	−0.071 (0.163)	0.106** (0.046)	−0.012 (0.811)	0.101* (0.050)
Poverty + All Tr.	−0.030 (0.504)	−0.066 (0.115)	−0.069 (0.100)	−0.064 (0.154)	0.159*** (0.000)	−0.038 (0.386)	0.053 (0.237)
Observations	3521	3521	3521	3521	3521	3521	3521

Notes: See Table 5. Regression combining *Poverty Tr.* and *All Tr.*

### A.5 Experimenter demand effects

At the end of the survey, we asked respondents whether they thought that our survey was biased. To test for the presence of experimenter demand effects, we drop from the full sample those respondents who felt that the survey was biased, and we re-estimate the main model accordingly. These respondents account for 12.87% of our sample. The treatment effects estimated in this restricted sample are slightly smaller in magnitude but still significant (see Table A27).

We also explore whether certain groups are more likely to provide responses consistent with the main result because they can more easily discern the experiment's purpose and adjust their responses accordingly. To examine this possibility, we assess whether the main results are driven by stronger demand effects among specific groups, such as students, young respondents or educated individuals, who may have greater familiarity with the survey providers. Heterogeneous treatment effects for these groups are presented in Tables A28, A29 and A30. The analysis reveals that students, young individuals and educated participants are no more likely than other groups to provide responses consistent with the main results.

TABLE A27 Treatment effects on policy preferences—no-bias sample.

	Redistributive preferences					Exclusionary preferences					Summary Index Excl. (11)
	General Redistr. (1)	Tax Rich (2)	Wealth Tax (3)	Estate Tax (4)	Support Poor (all) (5)	Spend Poor (6)	Spend Unemploy. (7)	Index Redistr. (8)	Support Poor (lt) (9)	Exclusive Welfare (10)	
Inequality Tr.	0.034 (0.054)	0.032 (0.027)	0.076 (0.054)	0.032 (0.054)	0.054 (0.057)	0.067 (0.059)	-0.112** (0.055)	0.057 (0.053)	0.061 (0.057)	-0.025 (0.024)	0.002 (0.054)
Poverty Tr.	-0.001 (0.054)	-0.016 (0.027)	0.046 (0.055)	0.075 (0.053)	0.009 (0.055)	0.021 (0.058)	0.006 (0.055)	0.032 (0.054)	-0.119** (0.057)	-0.017 (0.024)	-0.108** (0.054)
Diversity Tr.	0.039 (0.054)	0.010 (0.027)	0.040 (0.053)	-0.046 (0.053)	0.113** (0.054)	0.044 (0.058)	-0.052 (0.056)	0.042 (0.053)	0.052 (0.056)	-0.005 (0.024)	0.028 (0.054)
All Tr.	0.057 (0.054)	0.008 (0.027)	0.010 (0.056)	0.005 (0.054)	0.030 (0.055)	0.064 (0.060)	-0.101* (0.055)	0.021 (0.054)	-0.086 (0.057)	-0.047** (0.023)	-0.132** (0.054)
Observations	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068	3068

Notes: See Table 2. Respondents who think the survey was biased are now excluded from the estimation sample.

TABLE A28 Heterogeneous treatment effects on policy preferences—students.

	Summary Index Redistr. (1)	Summary Index Exclus. (2)
Inequality Tr. (T1)	0.056 (0.055)	-0.051 (0.054)
Poverty Tr. (T2)	0.047 (0.056)	-0.124** (0.054)
Diversity Tr. (T3)	0.038 (0.055)	-0.001 (0.053)
All Tr. (T4)	0.017 (0.056)	-0.155*** (0.055)
Inequality Tr. (T1) * Student	-0.105 (0.201)	0.181 (0.189)
Poverty Tr. (T2) * Student	-0.353* (0.205)	0.187 (0.199)
Diversity Tr. (T3) * Student	-0.101 (0.210)	0.447** (0.189)
All Tr. (T4) * Student	-0.115 (0.201)	0.186 (0.185)
Student	0.219 (0.163)	-0.499*** (0.146)
<i>p</i> -value [T1 + T1 × Student]	0.798	0.476
<i>p</i> -value [T2 + T2 × Student]	0.121	0.743
<i>p</i> -value [T3 + T3 × Student]	0.757	0.014
<i>p</i> -value [T4 + T4 × Student]	0.612	0.860
<i>N</i>	3521	3521

Notes: The table reports the effects of the treatments on the variables in the columns. Outcome variables are described in Online Appendix C and are standardized (Kling *et al.* 2007). Regressions are with probability weights and robust standard errors in parentheses. Controls included in all regressions are: male, age brackets, married, working, highly educated, and living in the south and islands.

\*, \*\*, \*\*\* indicate  $p < 0.1$ ,  $p < 0.05$ ,  $p < 0.01$ , respectively.

**TABLE A29** Heterogeneous treatment effects on policy preferences—young people.

	Summary Index Redistr. (1)	Summary Index Exclus. (2)
Inequality Tr. (T1)	0.025 (0.069)	-0.070 (0.067)
Poverty Tr. (T2)	-0.006 (0.069)	-0.103 (0.067)
Diversity Tr. (T3)	0.011 (0.070)	0.019 (0.068)
All Tr. (T4)	0.022 (0.068)	-0.163** (0.070)
Inequality Tr. (T1) * Young	0.058 (0.107)	0.082 (0.105)
Poverty Tr. (T2) * Young	0.073 (0.110)	-0.024 (0.106)
Diversity Tr. (T3) * Young	0.051 (0.108)	0.024 (0.104)
All Tr. (T4) * Young	-0.029 (0.109)	0.050 (0.105)
Young	-0.321** (0.148)	0.095 (0.145)
<i>p</i> -value [T1 + T1 × Young]	0.306	0.884
<i>p</i> -value [T2 + T2 × Young]	0.435	0.124
<i>p</i> -value [T3 + T3 × Young]	0.447	0.579
<i>p</i> -value [T4 + T4 × Young]	0.933	0.154
<i>N</i>	3521	3521

Notes: See Table A28.

**TABLE A30** Heterogeneous treatment effects on policy preferences—educated people.

	Summary Index Redistr. (1)	Summary Index Exclus. (2)
Inequality Tr. (T1)	0.095 (0.065)	-0.077 (0.064)
Poverty Tr. (T2)	0.089 (0.065)	-0.133** (0.063)
Diversity Tr. (T3)	0.085 (0.063)	-0.050 (0.064)
All Tr. (T4)	0.078 (0.066)	-0.191*** (0.064)
Inequality Tr. (T1) * Highly educated	-0.143 (0.110)	0.117 (0.109)
Poverty Tr. (T2) * Highly educated	-0.204* (0.116)	0.068 (0.112)
Diversity Tr. (T3) * Highly educated	-0.166 (0.115)	0.238** (0.107)
All Tr. (T4) * Highly educated	-0.210* (0.113)	0.148 (0.112)
Highly educated	0.081 (0.079)	-0.379*** (0.078)
<i>p</i> -value [T1 + T1 × Highly educated]	0.593	0.647
<i>p</i> -value [T2 + T2 × Highly educated]	0.230	0.479
<i>p</i> -value [T3 + T3 × Highly educated]	0.400	0.030
<i>p</i> -value [T4 + T4 × Highly educated]	0.150	0.642
<i>N</i>	3521	3521

Notes: See Table A28.