Perceptions of the Income Distribution and Preferences for Redistribution: Evidence from a survey experiment in India

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Abstract: We use data from a survey of 116,061 households in India to study how individual perceptions of their position on the income distribution shape support for redistribution. We find that household income is uncorrelated with support for redistribution, whereas individuals who perceived their household to be higher on the income distribution were less likely to support redistribution. While there are large biases in these perceptions, informing individuals of their household's position has no discernible effect on support for redistribution. We posit that perceptions may be unresponsive to information because measures of household income don't account for the sharing of resources within groups, implicit in religious and social public goods. Spending on such goods is likely prevalent across the income distribution. Conditional on income, respondents perceive their households as wealthier in districts with greater spending on religious or social goods. Our findings indicate the need to consider the provision of public goods within communities seriously when studying beliefs about inequality.

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1. Introduction

How do an individual's perceptions of their position on the income distribution influence their support for redistribution? While the shape of the income distribution matters crucially in the determination of policies with redistributive elements, preferences for redistribution are likely shaped more by how individuals perceive the income distribution rather than its actual shape (Gimpelson and Treisman 2018). A growing literature examines how individuals form their beliefs about inequality and redistribution, and why these beliefs matter (Alesina, Glaeser, and Sacerdote 2001; Alesina, Stantcheva, and Teso 2018; Benabou and Ok 2001; Bénabou and Tirole 2006; Iversen and Soskice 2020; Mo and Conn 2018). However, existing research has largely focused on studying these beliefs in high income countries.

In this research letter, we present results from the first large scale survey of perceptions of the income distribution in India. How do citizens of the world's most populous democracy, and one of the world's fastest growing economies, perceive their country's income distribution? What shapes these perceptions? Our data comes from a nationwide study of 116,061 households, spanning all major states of India. We make three main empirical contributions. First, we find that household income does not predict support for redistribution in India. Rather, where people believe their household stands on the income distribution is a significant predictor of the belief that the government should narrow the gap between the rich and the poor.

Second, we study whether preferences for redistribution change when people are informed of their household's actual position on the income distribution. We use household income data collected on a monthly basis over nearly two years to assess each household's position on the income distribution. In an experiment embedded in the survey, a randomly selected set of households were informed about their position, and how this differed from their perception. While most households either overestimated or underestimated their relative income, informing them that they were poorer or richer than they thought has no average effect on their support for redistribution.

Third, we interrogate why support for redistribution is unresponsive to this information, despite the role of perceived position in shaping support for redistribution. Building on Dasgupta and Kanbur (2007), one reason that households might not respond to information about relative income is that such information doesn't account for the sharing of resources within groups, implicit in religious or social public goods. Some examples of religious or social public goods include religious activities, places of worship, cultural or literary production within specific ethnolinguistic traditions, and so on. These goods are often provided through voluntary contributions from community members for the benefit of their particular religious or ethnic group. In their perceptions of the income distribution, individuals also assess the benefits they derive from these goods. If the provision of such goods affects perceptions of the income distribution, standard income-based measures of a household's position are likely to be misleading.

We then use data on household expenditures on social and religious obligations to provide suggestive evidence of the prevalence of these public goods, as well as their positive association with perceived position on the income distribution. We find that nearly half the households in our sample reported spending on social or religious obligations. Further, in districts with higher levels of such spending, the average respondent perceived their household as significantly wealthier, conditional on income. These results add to the nascent literature questioning how standard political economy models have been applied to the study of redistributive preferences in developing countries (Holland 2018; Kasara and Suryanarayan 2020; Thachil 2014). While our findings raise more questions than the available data can answer, they point to the need for scholars to take the provision of public goods within communities seriously in examining beliefs about inequality.

2. Perceptions of Income Distribution and Preferences for Redistribution

Standard models of redistribution posit that growing inequality begets rising demand for redistribution. In a stylized model, Meltzer and Richard (1981) argue that as the gap between the mean and median income increases, the median voter has a stronger incentive to support policies that transfer resources from the rich to the poor. Scholars have documented how lack of information about the income distribution could be one reason why individuals may not vote in favor of their class interests. For instance, Gimpelson and Treisman (2018) combine survey data from nine countries and find that individuals tend to be poorly informed about the extent of inequality in their country, the top one percent's share of wealth, and the current poverty rate. Hoy and Mager (2020) observe that relatively poor respondents tend to have similar levels of support for raising taxes on the wealthy to fund programs to help the poor as relatively rich respondents, because poorer respondents might believe that they are higher on the income distribution than they truly are. In a similar vein, Cansunar (2021) observes that high- and low-income earners are not sufficiently polarized in their preferences for redistribution, because the affluent might fail to recognize that they belong to the high-income group.

Simultaneously, the effects of informing people about the income distribution remain unclear. In a study of perceptions of the income distribution in Buenos Aires, Cruces, Perez-Truglia and Tetaz (2013) embed an experiment that informs households of their actual position on the income distribution. In this experiment, households who were told they were poorer than they thought responded by increasing their support for redistribution, as standard economic reasoning would suggest. However, in a similar experiment conducted online with respondents from 10 countries, respondents who were told they were poorer than they thought responded by *reducing* their support for redistribution (Hoy and Mager 2020). In an experiment conducted in the US, Kuziemko et al. (2015) found that informing people of inequality and tax policy in the US alters beliefs about inequality, but not support for redistribution. Findings from studies that informed people that they were richer than they thought also appear to be mixed (Cruces, Perez-Truglia, and Tetaz 2013; Fehr, Mollerstrom, and Perez-Truglia 2022; Hoy and Mager 2020; Karadja, Mollerstrom, and Seim 2016; Nair 2018). Overall, the impact of information about the income distribution on support for redistribution continues to be debated.

To this debate, we contribute evidence from the first large-scale survey of beliefs about inequality and support for redistribution from India, including 116,061 households from rural and urban areas of all major states in the country. It is noteworthy that most studies of preferences for redistribution have focused on high income countries. Even among developing countries, India remains surprisingly understudied in this literature, considering that it is the world's largest democracy and among the world's fastest growing economies. A systematic study of preferences for redistribution is warranted since upward mobility in India continues to be low and stratified by ethnic group (Asher, Novosad, and Rafkin 2018), despite the pace of economic growth in recent decades. Scholars have increasingly begun to highlight distributional concerns and the political salience of income inequalities in India (Gaikwad, Hanson, and Tóth 2019; Jaffrelot 2015, 2016; Kohli 2012; Suryanarayan 2019; Thachil 2014; Thachil and Herring 2008). Hence, in addition to estimating whether information about the income distribution shapes support for redistribution, we also contribute useful descriptive evidence of beliefs about the income distribution and inequality from a sample spanning all major regions, religious and caste groups in India.

3. Research Design and Data

Our analysis is based on data collected by the Centre for Monitoring the Indian Economy (CMIE). The CMIE conducts the Consumer Pyramids Households Survey (CPHS) every four months with a panel of over 175,000 households across all major states in India. The CPHS collects monthly data on household income, expenses, employment, ownership of assets,

access to basic household amenities, levels of education and financial inclusion. We computed the mean income reported by households in CPHS over 23 months, spanning January 2019 to November 2020. These mean incomes were then used to divide the income distribution into ten "objective" income deciles, and each household was categorized in one of these deciles.

During the months of June to August 2021, an additional module on inequality and redistribution was administered to the CPHS panel. In this round of the CPHS, interviews were successfully completed with 116,061 households in the panel. Hence, these 116,061 households make up the sample for our analysis. Of these households, 57,949 (49.93%) were randomly assigned to the treatment group, and the others to the control group. This randomization was stratified by state and whether the respondent lived in an urban or rural area. In Appendix A6, we compare the treatment and control groups on a set of observable characteristics and find no discernible difference between the groups.

The questions on inequality and redistribution began by eliciting respondents' beliefs about their position on the income distribution. Specifically, they were asked "Suppose we divide the households of India into 10 equal parts, where the poorest households are in the first part and the richest households are in the last part. See this bar [respondents were shown a long rectangle composed of 10 equally sized blocks]. The first box contains the poorest households. The second box contains the next poorest households. The last box contains the richest households. Which box do you think your household would fall into?". Following this question, the interviewer informed respondents in the treatment group whether their estimates of relative income coincided with those of the research team. Respondents were told, "Based on your answers, you belong to Group [X]. In reality, you belong to Group [Y]. Hence, you are poorer than what you thought / richer than what you thought / correct." The bias in their perceptions was thus explicitly pointed out to respondents in the treatment group. Note that there are three treatment subgroups depending on the direction of the bias—those who

overestimated their household's position on the income distribution, those who underestimated their household's position, and those for whom their prior was confirmed.

After the treatment, the module collected information on beliefs about inequality and support for redistribution. The full set of questions is listed in Appendix A7. Among other questions, respondents were asked, *"There can be a big gap between the rich and the poor in the country. Do you think this gap is a problem for society?*", with responses coded as Yes or No. They were also asked, *"Do you think the government should do something to reduce this gap between the rich and the poor?"*, with responses coded as Yes or No.

We use Equation (1) to estimate the average effect of the treatments on responses to the above two questions. We estimate this average effect separately for each of the three treatment subgroups mentioned above.

(1)
$$Y_{ijk} = \beta_0 + \beta_1 TREAT_{ijk} + \beta_2 RURAL_{ijk} + \beta_3 STATE_k + X_{ijk} \gamma + \varepsilon_{ijk}$$

Here, Y_{ijk} is the outcome of interest for respondent *i* in district *j* in state *k*; *STATE*_k is a vector of binary variables indicating the respondent's state; $RURAL_{ijk}$ is a binary variable that equals one if the household was in a rural area; X_{ijk} includes controls for religion, caste and the size of the household, and $TREAT_{jk}$ denotes treatment assignment. The coefficient β_1 represents the impact estimate.

4. Descriptive and Experimental Findings

We divide this section into three parts. Our first set of findings document differences between perceived decile (where individuals believe their household stands on the income distribution), and objective decile (the household's position on the income distribution based on income data from 2019-20). Second, we explore descriptive trends in support for redistribution in India, and explore the extent to which perceived and objective income deciles are correlated with support for redistribution. Third, we test if information on the household's objective decile has any

effect on beliefs about inequality and support for redistribution, among individuals whose perceived decile was higher or lower than this objective decile.

4.1. Perceptions of household position on the income distribution

Where do individuals believe their household stands on the income distribution? How does this compare with the household's position based on income data? In Table 1, we present answers to these questions by income quintiles. We list the average difference between perceived decile and objective decile in Column (4), the proportion of households whose perceived decile exceeded their objective decile in Column (5), and the proportion whose perceived decile was lower their objective decile in Column (7). In other words, Column (5) refers to people who perceived themselves as wealthier than they were based on their income, whereas Column (7) refers to people who perceived themselves as poorer than they were.

Strikingly, most households underestimated their position on the income distribution. Over 70% of the sample perceived themselves to be poorer than their incomes would suggest. This is an exceptionally high percentage when compared to other studies. For instance, a household survey in Buenos Aires found that 55% of the sample underestimated their position (Cruces, Perez-Truglia, and Tetaz 2013). In an online survey with respondents from 10 countries, less than 10% of the sample from India underestimated their position (Hoy and Mager 2020). Surveys from high-income countries have shown that most people tend to think they are positioned around the middle of the national income distribution, implying that households below the median typically overestimate their position (Gimpelson and Treisman 2018).

In our data, households that overestimated their position on the income distribution are found predominantly in the bottom quintile of the income distribution, as Column (5) shows. In this quintile, the average individual believed their household to be about 1.2 deciles higher on the income distribution than it was. Hence, in the experiment, only the bottom quintile can can be told that they are poorer than they actually are and may thus be compelled to demand more redistribution. All of the other groups will generally receive the news that they are richer than they thought.

In Appendix A1 and A2, we present the bias in perceived income decile by caste and religion, respectively. Like the trend observed in Table 1, the majority of households in each group underestimate their position. Among those who overestimated their position, i.e., were poorer than they thought, it appears that the extent to which they overestimated their position does not differ significantly across caste or religious groups.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Quintiles of income	Average objective	Average perceived	Mean bias	Proportion with positive	Average positive	Proportion with	Average negative
	decile	decile		bias	bias	negative bias	bias
Lowest	1.502	2.717	1.215	0.658	1.948	0.067	-1.000
Second	3.529	3.273	-0.256	0.287	1.752	0.474	-1.600
Third	5.503	3.752	-1.751	0.108	1.559	0.770	-2.494
Fourth	7.525	4.165	-3.361	0.030	1.332	0.919	-3.702
Highest	9.545	5.219	-4.327	0.005	1.000	0.964	-4.495
Overall (N=116,061)	6.147	4.020	-2.136	0.172	1.813	0.705	-3.472

Notes: "Bias" refers to the difference between perceived and objective decile. Positive bias means perceived decile exceeded objective decile, i.e., the respondent perceived their household as higher up on the income distribution than it was based on income data. Negative bias means perceived decile was lower than objective decile, i.e., the respondent perceived their household as lower down on the income distribution than it was.

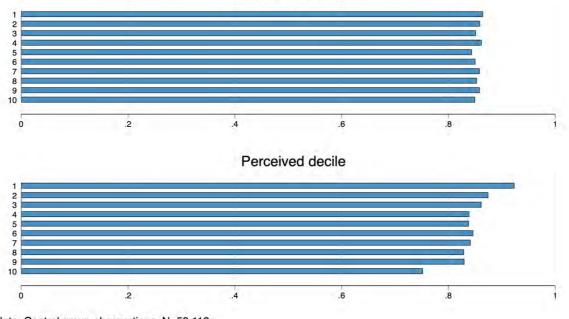
Table 1. Objective income decile, perceived decile, and bias by quintile of objective income

4.2. Support for redistribution

In Figure 1, we plot whether respondents agree with the statement "The government should narrow the gap between the rich and the poor". The upper panel of Figure 1 aggregates respondents by their objective income decile, with 1 being the lowest income decile and 10 being the highest. Overall, the vast majority of the population appears to favor a reduction in the gap between the rich and the poor. Notably, this support is uniform across objective income

deciles. In both the topmost and the bottom income decile, nearly 85% respondents supported redistribution. Appendix A8 and A9 display the uniformly high support for redistribution across caste and religious groups. We find greater variation by state, as shown in Appendix A10, though a majority of respondents support redistribution in all states.

In contrast, support for redistribution does decline with perceived decile. The lower panel of Figure 1 aggregates respondents by their perceived income decile, with 1 being the lowest and 10 being the highest. Respondents who perceive themselves—correctly or not—to be in upper income deciles are less likely to favor redistribution than respondents who perceive themselves to be in lower income deciles. Nonetheless, support for redistribution remains high across the board. Even among respondents who believe that they are in top 10% of India's income distribution, over 70% said that the government should narrow the gap between the rich and the poor.



Govt should reduce gap between rich and poor

Objective decile

Figure 1. Preferences for redistribution by objective and perceived income decile

Note: Control group observations, N=58,112

4.3. Experimental results

Given the substantial differences between perceived and objective deciles, does informing people of their position on the income distribution alter their support for redistribution? There are three distinct treatments involved here. First, respondents who had overestimated their position on the income distribution (perceived > objective decile) were told they were relatively poorer than they thought. Second, respondents who had underestimated their position on the income distribution (perceived < objective decile) were told they were relatively wealthier than they thought. Third, respondents who correctly estimated their position on the income distribution had these beliefs confirmed. We estimate the effects of these treatments separately, using Equation (1).

On average, we find no evidence to suggest that any of the treatments impacted whether respondents saw the gap between the rich and the poor as a problem, or that they believed the government should reduce this gap. The corresponding average treatment effects are displayed in Figures 2 and 3. Across the board, the point estimates are numerically close to zero and estimated quite precisely. Of course, the lack of a treatment effect is unsurprising for those who correctly estimated their position on the income distribution. However, the other null findings run counter to the standard economic logic that preferences for redistribution respond to one's position on the income distribution.

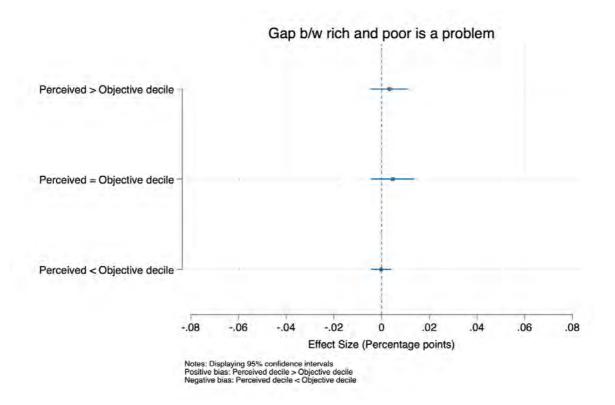


Figure 2. Average treatment effects on belief about inequality

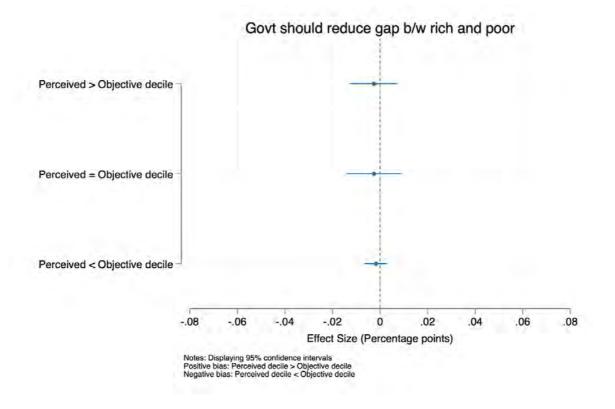


Figure 3. Average treatment effects on support for redistribution

What explains the findings in Figures 2 and 3? One possibility is that there was a treatment effect for those who overestimated their position on the income distribution, which we fail to detect because 70% of the sample underestimated their position. In a similar study in Argentina, preferences for redistribution were more responsive to information for those receiving the "bad" news that they were poorer than they thought (Cruces, Perez-Truglia, and Tetaz 2013). However, this is unlikely to explain our findings because over 16,000 households in the sample did overestimate their position, and the small point estimates and narrow confidence intervals in Figures 2 and 3 indicate that statistical power was likely not an issue.

A second possibility is that respondents did not regard the information on their objective decile as credible. This is unlikely since the CPHS is a well-known and long-running survey, in which the same panel of respondents is interviewed every four months. Households that responded to the inequality and redistribution module had previously been interviewed for the CPHS many times over six years. Hence, they were likely to be familiar with the scope and details of the survey on which the objective income deciles were based. That they share detailed information on their income, consumption and borrowing on a regular basis also indicates that the survey itself was regarded as a credible exercise.

A third possibility is ceiling effects. Perhaps the high support for redistribution shown in Figure 1 means that there was no room for an increase among respondents who received who were told they were poorer than they thought. This is plausible, but note that there is a substantial difference in support for redistribution between the bottom perceived decile, and the second and third perceived deciles. Hence, variation in support for redistribution does exist even among households on the lower end of the income distribution. Further, ceiling effects wouldn't explain the null findings for respondents who underestimated their position.

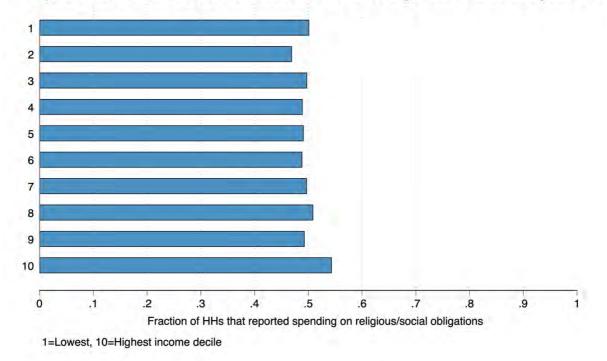
A fourth possibility, raised by Dasgupta and Kanbur (2007), is that household income is an incomplete measure in that it doesn't account for the sharing of resources implicit in religious or social public goods. This refers to the voluntary exchange of resources among community members outside of state institutions. Individuals may contribute to and benefit from the provision of community-level public goods—social, cultural, religious—and consider the value of these community-level goods when deciding whether to support their class interests. Departures from the standard economic logic of redistribution are simply more likely when people are already sharing resources extensively within their community. We now explore this possibility in more detail.

5. Group-level Public Goods and Perceived Income Decile

Studies on perceptions of inequality and support for redistribution, such as the ones reviewed in Section 2, entail two basic assumptions. First, people respond to their class interests, especially when they stand to benefit materially from income redistribution. Second, in assessing their class interests, relative household income is the primary—if not the sole— parameter that moves demand for redistribution. Dasgupta and Kanbur (2007) argue that these assumptions are non-trivial in contexts with widespread voluntary contributions to religious or social public goods. Some examples of group-specific public goods include religious activities, religious schools, places of worship, cultural or literary production within specific ethnic traditions, rituals, festivals, and so on. In their perceptions of the income distribution and their decision to support their class interests (or not), individuals may also assess the benefits they derive from these public goods. To the extent that the provision of such goods affects perceptions of relative income, standard income-based measures of a household's position are likely to be misleading. We would then be more likely to observe that individuals behave in ways that deviate from their class interests.

If people place such value on the benefits they derive from group-level public goods, this would be reflected in their perceived position on the income distribution. A simple prediction follows: Conditional on household income, in areas with greater provision of religious or social public goods, the average household perceives itself as wealthier. Although this prediction is simple, it is difficult to test with exactitude since granular data on the supply of specific group-level public goods is unavailable, as is precise information on household location. Nonetheless, we do have monthly data on household expenditures on social and religious obligations. These are expenditures made by households towards religious ceremonies, social causes, social events, donations to places of worship, contributions made towards religious events, gifts during festive occasions, and so on. We sum all expenditures on social and religious obligations in a district and use this as a proxy for the provision of group-level public goods.

This proxy, albeit noisy, does enable us to present some relevant descriptive trends. In India, expenditures on social and religious obligations are very prevalent. In Figure 4, we display the fraction of households who report any amount of spending on social/religious obligations. Across income deciles, around half the sample reports doing so, suggesting that contributions to religious or social goods may be widespread among households of all economic strata. This graph already indicates that analyses of redistributive preferences in India probably ought to take group-level public goods seriously.



By income decile: Whether HH spent on religious/social obligations

Figure 4. Fraction of households reporting expenditure on religious/social obligations, by income decile

Next, we use Equation (2) to explore whether spending on these goods is associated with the average individual's perceptions of where their household stands on the income distribution. Here, PER_{ijk} refers to the perceived income decile of household *i* in district *j* in state *k*, OBJ_{ijk} refers to the household's decile based on income data, and H_{jk} is a binary variable that equals 1 if spending on social and religious obligations in district *j* exceeds median district spending on social and religious obligations. We include a control for district sample size in the CPHS, given by N_{jk} . We cluster standard errors η_{ijk} at the district level. Further, to ensure that all districts are weighed equally in our analysis, each observation (i.e., household) is weighted by the inverse of the district sample size in the CPHS, though we obtain similar results in an unweighted regression. In this specification, π_1 is the quantity of interest.

(2)
$$PER_{ijk} = \pi_0 + \pi_1 H_{jk} + \pi_2 OBJ_{ijk} + \pi_3 N_{jk} + \pi_4 RURAL_{ijk} + \pi_5 STATE_k + X_{ijk} \delta + \eta_{ijk}$$

In Table 2, we present the correlation between district-level spending on social/religious goods and perceived household decile. As shown in Column (2), living in a district with above-median spending on religious/social obligations is positively correlated with the average respondent's perceived household decile. Conditional on objective decile, people are more likely to perceive themselves as wealthier when living in a district with greater provision of religious or social goods. In terms of magnitude, this correlation is quite substantial and exceeds the correlation between objective and perceived household decile.⁴

As a robustness check, we run the same analysis as presented in Table 2 but using data on social/religious expenditures from the February 2022 round of the CPHS, which was conducted a few months after the August 2021 survey in which the inequality and redistribution questions were fielded. If utility derived from social or religious goods is valued in households' perceived decile, we shouldn't observe a significant association between perceived decile measured in August 2021 and district-level spending on religious/social obligations measured in February 2022. This is because households surveyed in August 2021 cannot derive utility from goods provided in February 2022. As shown in Appendix A5, we do not find any discernible association between perceived decile in August 2021 and district-level spending on religious/social obligations in February 2022. Overall, this evidence appears to be consistent with the interpretation that households perceive themselves as wealthier owing to the greater provision of religious or social goods in their locality.

	(1)		(2)	
	Perceived decile	ΗH	Perceived decile	HH
District: Above median spending on religious/social obligations			0.308***	
			(0.117)	
Objective HH decile	0.234***		0.239***	

⁴ To ascertain that these results aren't driven by districts with smaller sample sizes that might spuriously drive up both perceived decile and spending on social religious/obligations, we run a robustness check dropping smaller districts from our analysis. The results are given in Appendix A4.

	(0.0117)	(0.0119)
District sample size		-3.05e-05
		(0.000265)
Observations	113,122	112,719

Notes: All specifications include controls for state, caste, religion, household size, and whether the household is urban or rural. The unit of analysis is the household, and each household is weighted by the inverse of the district sample size. The analysis excludes districts with sample size less than ten. Standard errors clustered at the district level are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

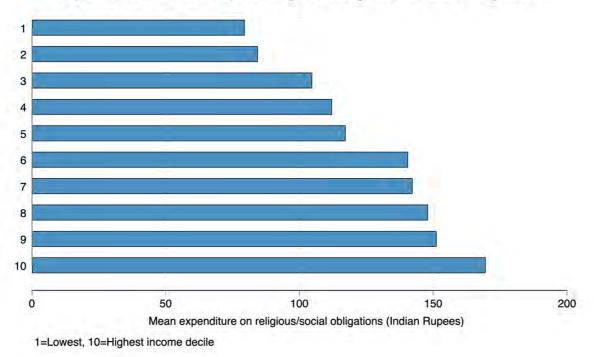
Table 2. District-level spending on religious/social obligations and perceived income decile

Does spending on religious/social obligations represent a net transfer from the rich to the poor? Unfortunately, this is impossible to answer without fine-grained data on who derives benefits from community-level goods, the type of benefits derived, and the value placed on their provision. Nonetheless, we note two features of spending on social or religious obligations that have distributional implications. The volume of spending increases with income. Figure 5 indicates that the average household in the top income decile reported spending nearly twice as much as the average household in the bottom income decile. However, poorer households spend a larger *fraction* of their income on social or religious obligations. Figure 6 indicates that the poorest households spend about 1.25% of their monthly income on these obligations, which is thrice the 0.4% spent by the wealthiest households. Overall, the distributional effects of community-level public goods are unlikely to be straightforward and merit further study.

Future research should also focus on overcoming the limitations of our data, by focusing on the provision of specific goods with a finer lens on who benefits to what extent. The challenge of establishing a causal relationship also remains. To our knowledge, our findings are the first to suggest an empirical link between group-specific public goods and beliefs about the income distribution. Since our understanding of this link is at a nascent stage, any strategy for causal identification would need to be foregrounded by thorough descriptive work. Further, individuals benefitting from these public goods may value them either because they benefit from the good or because they experience a "warm glow" from having contributed

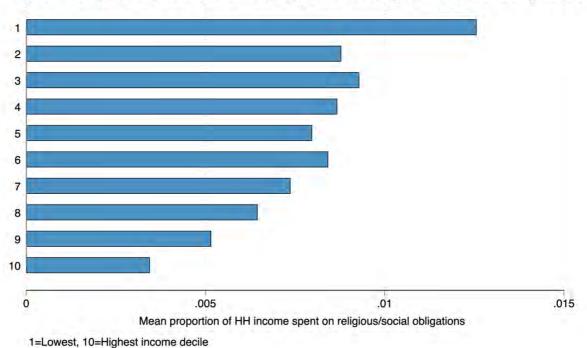
to its provision (Andreoni 1990). Establishing the precise mechanisms at play is another avenue for further work.

Our analysis raises the possibility that religious or social goods are valued in individuals' assessment of their class identity. While our analysis is focused on group-level public goods India, group-specific mechanisms of redistribution and risk sharing are prevalent across the developing world (De Weerdt and Fafchamps 2011; Di Falco et al. 2018; Di Tella and MacCulloch 2002; Fafchamps 2011; Mobarak and Rosenzweig 2013; Olken and Singhal 2011). Hence, our findings have wider implications for the study of redistributive preferences in developing countries. We advance one potential reason why preferences for redistribution may respond in counterintuitive ways to information about the income distribution, in the process calling into question the assumption that income alone is an adequate barometer for a household's material interests. There is a greater need for empirical work on perceptions of inequality that engages with the role of community-level resource sharing arrangements in shaping citizens' beliefs.



By income decile: Spending on religious/social obligations

Figure 5. Mean spending on religious/social obligations, by income decile



By income decile: Prop. income spent on religious/social obligations

Figure 6. Mean proportion of household spending on religious/social obligations

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Appendix

Caste	Average objective decile	Average perceived decile	Mean bias	Proportion with positive bias	Average positive bias	Proportion with negative bias	Average negative bias
Upper Caste	7.239	4.661	-2.583	0.120	1.815	0.777	-3.606
Intermediate Caste	7.072	4.475	-2.596	0.136	1.854	0.758	-3.757
Scheduled Caste	5.343	3.523	-1.829	0.207	1.766	0.658	-3.337
Scheduled Tribe	4.946	3.385	-1.569	0.235	1.963	0.617	-3.291
Other Backward Classes	5.773	3.798	-1.988	0.186	1.807	0.684	-3.397
Overall (N=116,061)	6.147	4.020	-2.136	0.172	1.813	0.705	-3.472

A1. Objective income decile, perceived decile, and bias by caste

Notes: "Bias" refers to the difference between perceived and objective decile. Positive bias means perceived decile exceeded objective decile, i.e., the respondent perceived their household as higher up on the income distribution than it was based on income data. Negative bias means perceived decile was lower than objective decile, i.e., the respondent perceived their household as lower down on the income distribution than it was.

Religion	Average objective decile	Average perceived decile	Mean bias	Proportion with positive bias	Average positive bias	Proportion with negative bias	Average negative bias
Hindu	6.084	4.006	-2.088	0.176	1.825	0.698	-3.454
Muslim	5.752	3.893	-1.862	0.186	1.764	0.679	-3.227
Christian	6.289	3.610	-2.679	0.119	1.567	0.774	-3.702
Sikh	8.320	4.734	-3.586	0.067	1.750	0.885	-4.186
Buddhist	6.303	4.065	-2.238	0.147	1.662	0.748	-3.320
Jain	8.353	5.471	-2.882	0.074	1.815	0.858	-3.518
Overall (N=116,061)	6.147	4.020	-2.136	0.172	1.813	0.705	-3.472

A2. Objective income decile, perceived decile, and bias by religion

Notes: "Bias" refers to the difference between perceived and objective decile. Positive bias means perceived decile exceeded objective decile, i.e., the respondent perceived their household as higher up on the income distribution than it was based on income data. Negative bias means perceived decile was lower than objective decile, i.e., the respondent perceived their household as lower down on the income distribution than it was.

A3. Objective income	e decile, perceived	decile, and bias by state
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State	Average objective	Average perceived	Mean bias	Proportion with positive	Average positive	Proportion with negative	Average negative
. 11	decile	decile	1.550	bias	bias	bias	bias
Andhra Pradesh	4.802	3.028	-1.772	0.124	1.495	0.664	-2.947
Assam	6.584	3.585	-2.999	0.070	1.529	0.846	-3.671
Bihar	4.295	3.408	-0.865	0.318	1.803	0.488	-2.948
Chandigarh	8.919	3.811	-5.108	0.000		1.000	-5.108
Chhattisgarh	5.068	2.892	-2.176	0.174	1.542	0.690	-3.540
Delhi	9.045	4.360	-4.685	0.001	1.000	0.988	-4.741
Goa	7.707	3.526	-4.187	0.059	1.846	0.905	-4.746
Gujarat	5.593	4.076	-1.518	0.240	1.878	0.633	-3.109
Haryana	8.844	5.823	-3.021	0.048	1.563	0.869	-3.564
Himachal Pradesh	8.128	5.336	-2.793	0.066	1.859	0.880	-3.313
Jammu & Kashmir	7.970	6.764	-1.209	0.214	1.876	0.625	-2.576
Jharkhand	5.640	2.358	-3.282	0.085	1.633	0.832	-4.111
Karnataka	6.163	4.798	-1.389	0.190	1.711	0.663	-2.583
Kerala	7.064	3.932	-3.131	0.055	1.662	0.895	-3.603
Madhya Pradesh	5.804	4.767	-1.055	0.288	2.079	0.578	-2.860
Maharashtra	6.378	4.376	-2.001	0.175	1.838	0.705	-3.295
Meghalaya	8.869	2.973	-5.896	0.000		1.000	-5.896
Odisha	4.543	4.074	-0.467	0.305	1.871	0.440	-2.356
Puducherry	6.155	3.484	-2.671	0.099	1.650	0.781	-3.629
Punjab	8.144	4.404	-3.740	0.064	1.855	0.898	-4.300
Rajasthan	7.564	4.649	-2.928	0.086	1.484	0.836	-3.654
Sikkim	6.019	4.824	-1.195	0.236	1.556	0.610	-2.558
Tamil Nadu	5.257	2.940	-2.317	0.162	1.686	0.710	-3.648
Telangana	6.538	2.162	-4.376	0.040	1.797	0.896	-4.962
Tripura	5.774	2.178	-3.596	0.002	1.000	0.969	-3.715
Uttar Pradesh	5.811	4.188	-1.660	0.234	1.898	0.634	-3.321
Uttarakhand	8.618	4.566	-4.052	0.002	1.250	0.994	-4.080
West Bengal	4.533	2.996	-1.537	0.185	1.514	0.609	-2.985
Overall (N=116,061)	6.147	4.020	-2.136	0.172	1.813	0.705	-3.472

Notes: "Bias" refers to the difference between perceived and objective decile. Positive bias means perceived decile exceeded objective decile, i.e., the respondent perceived their household as higher up on the income distribution than it was based on income data. Negative bias means perceived decile was lower than objective decile, i.e., the respondent perceived their household as lower down on the income distribution than it was.

A4. Robustness check, dropping with sample size less than the 10th percentile: District-

	(1)	(2)
	Perceived HH decile	Perceived HH decile
District: Above median spending on religious/social obligations		0.309**
		(0.133)
Objective HH decile	0.241***	0.240***
	(0.0137)	(0.0139)
District sample size		0.000106
		(0.000291)
Observations	102,079	102,079

level spending on religious/social obligations and perceived income decile

Notes: All specifications include controls for state, caste, religion, household size, and whether the household is urban or rural. The unit of analysis is the household, and each household is weighted by the inverse of the district sample size. The analysis excludes districts with sample size less than the 10^{th} percentile of district sample size. Standard errors clustered at the district level are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

A5. Robustness check: District-level spending on religious/social obligations in

February 2022 and perceived income decile

	(1)
	Perceived HH decile
District, Feb '22: Above median spending on religious/social obligations	0.191
	(0.129)
Objective HH decile	0.236***
	(0.0120)
District sample size	8.06e-05
	(0.000268)
Observations	112,422

Notes: All specifications include controls for state, caste, religion, household size, and whether the household is urban or rural. The unit of analysis is the household, and each household is weighted by the inverse of the district sample size. The analysis excludes districts with sample size less than ten. Standard errors clustered at the district level are in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

A6. Randomization check

	Variable	Treatment	Control	Difference	p-value
		group	group		
(1)	Rural household (Yes=1, No=0)	0.33	0.33	0.00	0.90
(2)	Household (HH) head education	8.78	8.77	0.01	0.74
(3)	Average monthly HH income	22619.47	22726.77	-107.30	0.27
(4)	Total expenditure	10585.13	10522.97	62.15	0.14
(5)	Number of HH members	4.95	4.96	-0.01	0.38
(6)	Number of adult female members	1.39	1.39	0.00	0.20
(7)	Number of govt welfare programs that the HH benefits from	1.02	1.02	0.00	0.71
(8)	Scheduled Caste (Yes=1, No=0)	0.21	0.21	0.00	0.24
(9)	Scheduled Tribe	0.05	0.05	0.00	0.68
(10)	Other Backward Classes	0.39	0.40	0.00	0.76
(11)	Muslim	0.09	0.09	0.00	0.84
(12)	Christian	0.02	0.02	0.00	0.73
(13)	Sikh	0.04	0.04	0.00	0.34
(14)	Buddhist	0.01	0.01	0.00	0.07
(15)	Jain	0.00	0.00	0.00	0.85

A7. Questions in the CPHS module on inequality and redistribution

Q.1. Suppose we divide the households of India into 10 equal parts, where the poorest households are in the first part and the richest households are in the last part. See this bar.* The first box contains the poorest households. The second box contains the next poorest households. The last box contains the richest households. Which box do you think your household would fall into?

* Options 1 through 10 were implemented through a graphic bar; a long rectangle composed of 10 equally sized blocks.

Q.2. [TREATMENT, read out only to households chosen at random]: Based on your answers, you belong to Group [answer to Q1]. In reality, you belong to Group [based on income data]. Hence, you are [poorer than what you thought/richer than what you thought/correct].

Q.3. There can be a big gap between the rich and the poor in the country. Do you think this gap is a problem for society? [Response: Yes/No]

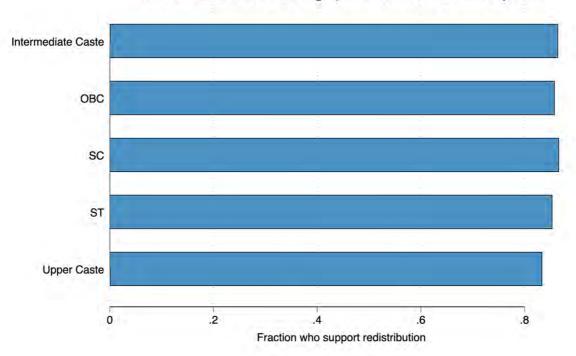
Q.4. Is there any way the government can reduce the gap between the rich and the poor in the country? [Response: Yes/No]

Q.5. Do you think the government should do something to reduce this gap between the rich and the poor? [Response: Yes/No]

Q.6. If this gap between the rich and the poor was somehow reduced, do you think that people like you or your household would benefit or be made worse off from it? [Responses: People like me or my household would benefit from it / People like me or my household would be worse off from it / Don't know].

Q.7. Do you think that a person's economic situation depends more on things that they can control like hard work, or more on things that they cannot control like their family background? [Responses: Things they can control / Things they cannot control / Don't know].

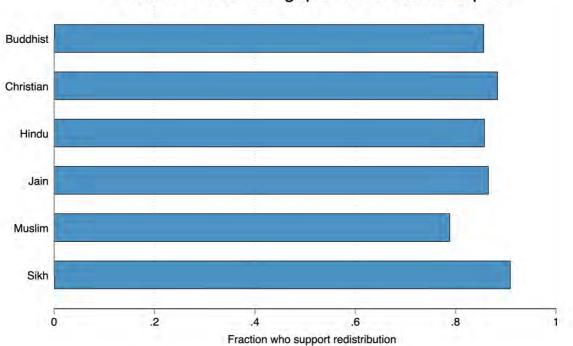
A8. Support for redistribution by caste



Govt should reduce gap between rich and poor

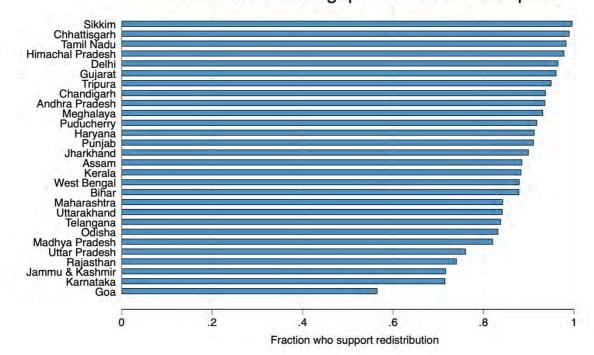
Note: "SC" refers to Scheduled Caste, "ST" to Scheduled Tribe, and OBC to "Other Backward Classes"





Govt should reduce gap between rich and poor

A10. Support for redistribution by state



Govt should reduce gap between rich and poor