

(Perceptions of) Inequality, Demand
for Redistribution, and Group-Specific
Public Goods

A Survey Experiment in India

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Abstract

This paper uses data from a survey of 116,061 households in India to study people's beliefs about inequality and demand for redistribution. The findings show that a household's beliefs about inequality, implied by the perception of their position on the income distribution, is negatively correlated with support for reducing inequality. This is relevant since there are significant differences between where individuals believe their household stands and their actual position, with the gap between perceived and actual position exceeding two deciles on average. Despite these large differences, informing individuals of their household's position on the income distribution has no discernible effect on support for reducing inequality. The paper posits that demand for redistribution may be unresponsive to this information

because it is based on exclusively on household's income and does not account for the sharing of resources within communities. In communities where group-specific public goods, such as religious and social goods, are present, class antagonism and redistribution are mitigated by community solidarity. Households benefit from these goods, and such benefits alter the individuals' beliefs of inequality. Consistent with this prediction, the average individual perceives their household as richer in districts with a greater supply of religious or social goods. The sharing of resources within religious or ethnic groups can shape perceptions of the income distribution and reduce support for redistribution within these groups, and thus requires serious consideration in studies of inequality.

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**(Perceptions of) Inequality, Demand for Redistribution, and Group-Specific Public
Goods: A Survey Experiment in India**

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1. Introduction

How does an individual's perception of their position on the income distribution influence their beliefs about inequality and their demand for redistribution? What shapes this perception of one's relative position in the first place? A growing literature examines these questions (Alesina, Glaeser, and Sacerdote 2001; Alesina, Stantcheva, and Teso 2018; Benabou and Ok 2001; Benabou and Tirole 2006; Bussolo, Ferrer-i-Carbonell, Giolbas and Torre 2021; Iversen and Soskice 2020; Mo and Conn 2018). However, existing research has studied them mainly in high income countries. India remains surprisingly understudied, considering that it is a populous democracy that harbors a deeply unequal society.

We present results from the first nationwide study of perceptions of the income distribution in India. Our data comes from a survey of 116,061 households, spanning all major states of India. We examine people's beliefs about which decile their household occupies on the income distribution, and compare this to the household's actual position based on income data collected on a monthly basis over nearly two years. We find that the difference between perceived and income-based decile in India is large, exceeding two deciles on average. Moreover, over 70% of the sample perceive themselves as poorer than they are based on income. While the presence of misperceptions has been widely documented across contexts (Cansunar 2021; Cruces, Perez-Truglia, and Tetaz 2013; Gimpelson and Treisman 2018; Hoy and Mager 2020), the magnitude we observe is striking, as is the widespread underestimation of one's position.

We find that household nominal income (the *objective* position of the household in the income distribution) does not predict support for reducing inequality in India. Rather, where people believe their household stands on the income distribution (the *subjective* perception of the position) is a significant predictor of the belief that the government should narrow the gap between the rich and the poor. Given this finding and the highlighted large differences between

perceptions and actual positions in the income distribution among Indians, we tested whether demands for redistribution change when people are informed of their actual household's position on the nominal 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. In contrast to standard models of redistribution, such as those derived from Meltzer and Richard's (1981) model, we find that informing individuals that they were poorer than they thought had no average effect on support for reducing inequality.³

Following Dasgupta and Kanbur (2007), we explore a novel reason for why the average household did not respond as expected to information about their position on the distribution of incomes—such information is related to the monetary (or nominal) income of the household, as measured by the survey, but it ignores the non-monetary benefits of group affiliation.⁴ Dasgupta and Kanbur (2007) argue that “belonging to a [religious, ethnic, linguistic or regional] group often seems to connote the existence of something beneficial and common (i.e. equally available) to all members, but from the benefits of which non-members are excluded.” [p.1817] They posit that the cohesion within the group is reinforced by sharing some unique extra-economic characteristic and by accessing goods that are non-rival for members of the group, but not available to non-members. Such goods with these simultaneous sharing and exclusion attributes are described by economists as group or community-specific public goods.

In this paper, we consider religious and social goods – such as the conduct of religious ceremonies and celebrations, community kitchens, the maintenance of places of worship

³ In the basic Meltzer and Richard (1981) framework, a simple redistribution scheme is funded by taxes on incomes above a certain threshold and, if people *are* above that threshold, they will not support this scheme as they will not benefit from it. When perceptions are incorporated in such a model what matters is whether people *believe* or not that they are above the threshold, not their actual position. This is the reason why correcting with a treatment information the overestimation of people's position in the distribution should lead to more support for redistribution. Note, however, that individuals may have other motives, in addition to self-interest, to support redistribution (see Alesina and Giuliano, 2009 for a review). With additional motives, the relationship between misperception and its correction and support for redistribution may be more complex.

⁴ See also, for a similar argument Akerlof, G. A., & Kranton, R. E. (2000).

specific to many communities in India – a prime example of group-specific public goods. These goods are often provided through voluntary contributions from community members for the benefit of their particular religious, linguistic, or ethnic group. We argue that in the perceptions of their economic standing, individuals assess the benefits they derive from these group-specific public goods. Hence, household nominal income alone is an inaccurate barometer for an individual when forming their beliefs about economic inequality and their demands for redistribution.

As the local (within community) supply of religious and social goods increases, do households feel richer on average? Using data on expenditures on social and religious obligations as a proxy for the district-level supply of social and religious goods, we find that as district-level spending on social and religious obligations increases, the perceived household decile rises significantly on average. This result remains valid even after controlling for household income and household spending on religious and social obligations, along with other covariates. The magnitude of the relationship is substantial. Moving from a district below the median in terms of spending on religious and social goods to a district above the median is comparable to the change in perceived decile that would result if the household's income-based position rose by one decile.

In sum, the benefits from these group-specific public goods are included in the perceptions of relative economic standing, and therefore these perceptions – rather than the position in the distribution of nominal incomes – are what matters for demands for redistribution. In a community with widespread community-specific public goods, inequality gauged solely on the distribution of nominal incomes is not expected to motivate demands for redistribution and providing information about the correct position in the distribution of *nominal* incomes does not necessarily change the subjective perceptions of economic standing. Thus, such informational intervention is not expected to change demands for redistribution.

The effects of information about the income distribution on redistributive preferences continue to be debated. In a study in Buenos Aires, Cruces, Perez-Truglia and Tetaz (2013) found that households who were informed that they were poorer than they thought responded by increasing their support for redistribution, much like standard economic reasoning suggests. However, in another study, people who were informed of their relative poverty responded by *reducing* their support for redistribution (Hoy and Mager 2020). Findings from other studies appear to be similarly mixed (Fehr, Mollerstrom, and Perez-Truglia 2022; Karadja, Mollerstrom, and Seim 2016; Kuziemko et al. 2015; Nair 2018). To this debate, we contribute evidence from the first large-scale survey of beliefs about inequality from India.

In contributing descriptive evidence of beliefs about the income distribution and inequality from a sample spanning all major states, religions and caste groups, we add to the research on 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). Further, our findings join a nascent literature in 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). We emphasize the need for scholars to take the role of group-specific public goods, and the implicit sharing of resources within communities, seriously when examining beliefs about inequality.

2. Research Design and Data

Our analysis is based on data from the Consumer Pyramids Household Survey (CPHS), conducted every four months with a panel of 175,000 households by the Centre for Monitoring the Indian Economy. The CPHS collects monthly data on household income, expenses, and assets, among other economic indicators. We computed the mean income reported by

households in CPHS over 23 months from 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. The mean and standard deviation of monthly income corresponding to each decile, and the number of households interviewed by decile, is given in supplementary Table S7 and Figure S9.

In the June-August 2021 wave of the CPHS, an additional module on inequality was administered to the panel. In this round of the CPHS, interviews were successfully completed with 116,061 households, which comprise the sample for our analysis.⁵ Half of these households were randomly assigned to the treatment group, and the other half to a control group. This randomization was stratified by state and whether the household was in a rural area. We compare the treatment and control groups on a set of observable characteristics and find no discernible difference between the groups (see supplementary table S4).

The module on inequality began by eliciting respondents’ beliefs about their position on the income distribution, “*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, respondents in the treatment group were informed if their estimates 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. This

⁵ Since interviews were not completed with a significant fraction of the CPHS sample, this sample on which our analysis is based is not nationally representative. More generally, the representativeness of the CPHS sample has been debated by scholars and analysts—a limitation that we acknowledge.

results in three treatment subgroups—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. Note that households that responded to the inequality module had previously been interviewed for the CPHS several times. Hence, they were familiar with the scope and credibility of the survey.

After the treatment, the module collected information on beliefs about inequality. 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 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 yes or no.⁶ These questions mirror the survey-based measures of beliefs about inequality that have been extensively used by scholars (Alesina, Stantcheva, and Teso 2018; Cruces, Perez-Truglia, and Tetaz 2013; Hoy and Mager 2020; Kuziemko et al. 2015).

We use Equation (1) to estimate the average effect of the treatments on responses to these two questions. We estimate this average effect separately for the three treatment subgroups mentioned above. As a robustness check, we also estimate a version of Equation (1) that excludes all controls.

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

Here, Y_{ijk} is the outcome 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 household size; and $TREAT_{ijk}$ denotes treatment assignment, with β_1 being the quantity of interest.

⁶ The full set of questions is in the supplementary materials.

3. Descriptive and Experimental Findings

We divide this section into three parts. First, we 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). Next, we explore descriptive trends in support for reducing inequality in India, and explore the extent to which perceived and objective income deciles are correlated with support for reducing inequality. Finally, we test if information on the household's objective decile has any causal effect on support for reducing inequality.

3.1. Perceptions of household position in the income distribution

In Table 1, 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 their households as richer than they were based on income, whereas Column (7) refers to people who perceived their households as poorer.

Strikingly, over 70% of the sample perceived themselves to be poorer than their incomes would suggest. This is much higher compared to what other studies have found. For instance, Hoy and Mager (2020) found that less than 10% of their online sample from India underestimated their position. A household survey in Buenos Aires found that 55% of the sample underestimated their position (Cruces, Perez-Truglia, and Tetaz 2013). Surveys from high-income countries have found that most people think they are around the middle of the national income distribution, with households below the median typically overestimating their position (Gimpelson and Treisman 2018).

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Quintiles of income	Average objective decile	Average perceived decile	Mean bias	Proportion with positive bias	Average positive bias	Proportion with negative bias	Average negative 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 overestimated their position because they 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.

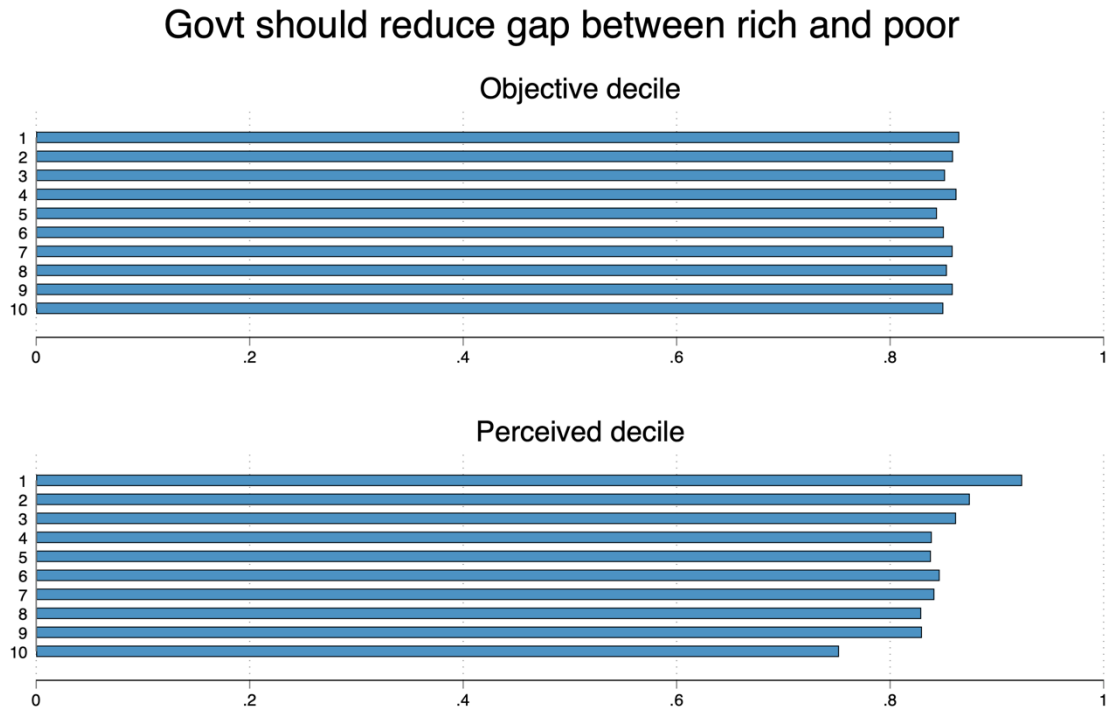
Table 1. Objective income decile, perceived decile, and bias by quintile of objective income

In the supplementary materials (Tables S1-S3), we present the bias in perceived income decile by caste category and religion, respectively. Across religious and caste groups, most households underestimate their position. The implication is that a relatively small fraction of our sample could be told, when undergoing the information treatment of our experiment, that they were poorer than they thought, and only this fraction could thus feel compelled to demand greater equality.

3.2. Support for redistribution

In Figure 1, we display the fraction of respondents who agree with the statement “The government should narrow the gap between the rich and the poor”. The upper panel of Figure 1 aggregates responses by objective income decile, with 1 being the lowest and 10 the highest. Overall, support for reducing inequality is prevalent and strikingly uniform across income deciles. Supplementary figures S1 and S2 display the uniformly high support for reducing inequality across caste categories and religious groups. We find greater variation by state, as shown in Figure S3, though most respondents support redistribution in all states.

We do observe a decline in support for reducing inequality by perceived decile, as shown in the lower panel of Figure 1. Respondents who perceive their households—correctly or not—to be in upper income deciles are less likely to favor government action to reduce inequality than respondents who identify with lower income deciles.



Note: Control group observations, N=58,112

Figure 1. Support for reducing inequality by objective and perceived income decile

3.3. Experimental results

Given the differences between perceived and objective deciles documented in Table 1, does informing people of their household’s position on the income distribution alter support for reducing inequality? We estimate treatment effects separately for three subgroups, using Equation (1). First, those who overestimated their position on the income distribution (perceived > objective decile) were told they were poorer than they thought. Second, those who underestimated their position (perceived < objective decile) were told they were richer. Third, respondents who correctly estimated their position had their prior confirmed.

On average, we find no evidence to suggest a treatment effect on whether respondents saw the gap between the rich and the poor as a problem, or whether they believed the government should reduce this gap. The average treatment effects are displayed for each of the three subgroups in Figures 2 and 3. As a robustness check, we estimate the treatment effect excluding control variables, and this does not alter our conclusion as shown in Tables S8 and S9 in the supplementary materials.

The null findings run counter to the standard economic logic that preferences for redistribution respond to one’s position on the income distribution. The finding is especially surprising for the subgroup who were informed that they were poorer than they thought. Based on prior studies, this subgroup tends to be particularly responsive to such information (Cruces, Perez-Truglia, and Tetaz 2013; Hoy and Mager 2020). We also do not observe a discernible treatment effect among individuals who misperceived their household’s position by more than two, or even three, deciles (see Section D of the supplementary materials). This is surprising because the treatment arguably conveys starker information to such individuals.

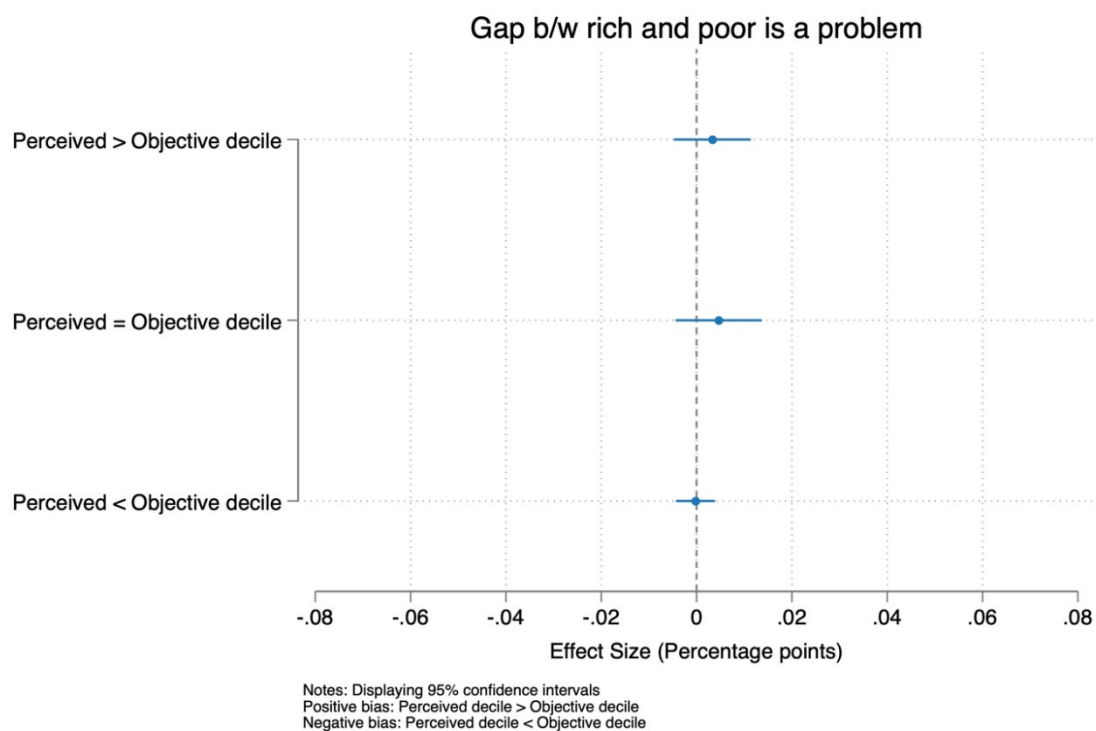


Figure 2. Average treatment effect on belief that inequality is a problem for society

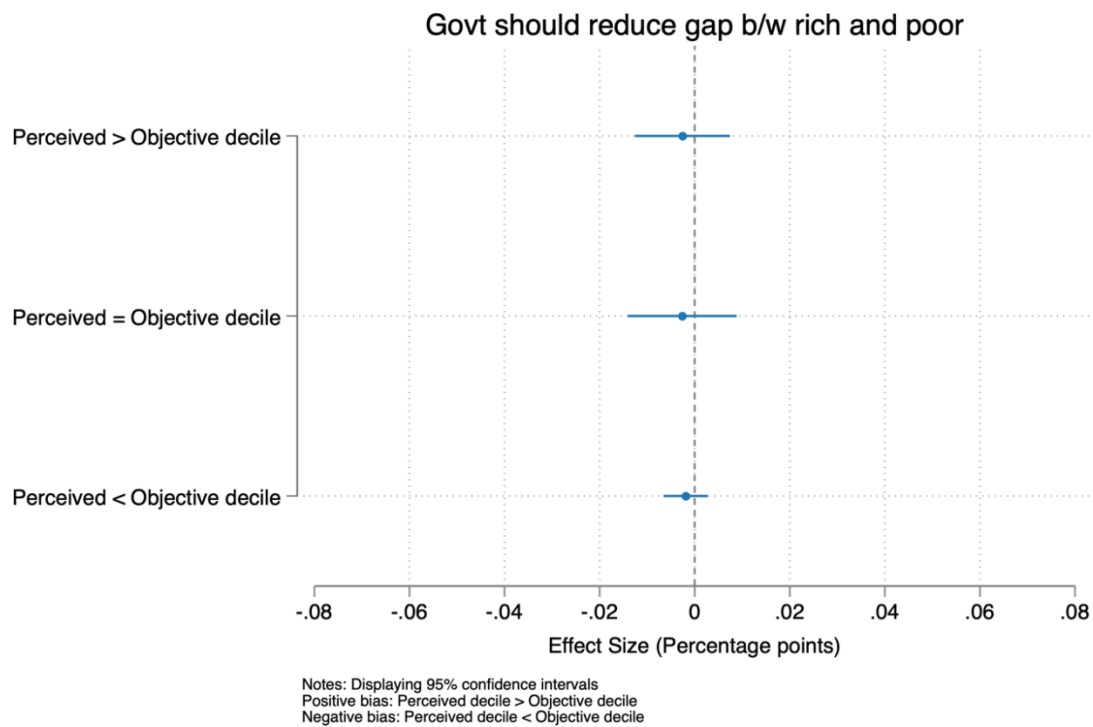


Figure 3. Average treatment effect on support for reducing inequality

We can be reasonably confident that the null findings reflect a genuine lack of response to the treatment. The numerically small point estimates and narrow confidence intervals in Figures 2 and 3 suggest that statistical power is not likely an issue. Although a minority received the news that they were poorer than they thought, there were still 16,000 such observations in the sample. Further, note the substantial difference in support for redistribution between the bottom perceived decile in Figure 1, and the second and third perceived deciles. The variation in support for reducing inequality even among households on the lower end of the income distribution suggests that a “ceiling effect”, or a lack of room for a treatment effect due to high support for reducing inequality, is unlikely to be an entirely satisfactory explanation.

Existing work has explored a number of reasons why beliefs about inequality may not accord with the predictions of standard models of redistribution, including beliefs about the role of government (Alesina, Stantcheva, and Teso 2018), the scope for upward mobility (Benabou and Ok 2001; Benabou and Tirole 2006), and skepticism about state capacity (Holland 2018). In the next section, we explore a novel possibility, building on Dasgupta and Kanbur (2007).

4. Religious and Social Goods, and Perceived Income Decile

Studies on perceptions of the income distribution often assume that relative household income is the sole parameter of interest for assessing a household's class interests. Dasgupta and Kanbur (2007) argue this assumption is non-trivial in contexts with widespread provision of religious or social goods within communities. Examples of social and religious goods include religious ceremonies and festivals, community kitchens, and cultural or literary production within specific ethnic traditions. These goods are community-specific, in that they are meant to benefit members of a specific ethnic or religious group and voluntarily supplied by members of the same group. Such goods may carry an intrinsic value to group members, fostering what Dasgupta and Kanbur (2007) term "non-monetary dependencies" among group members. To the extent that the provision of community-specific goods affects perceptions of relative income, standard income-based measures of a household's position are likely to be misleading. Households may be less likely to respond to information on the income distribution based solely on household income, simply because such information ignores the sharing of resources that may be occurring locally within communities in the form of religious and social goods, and the value that individuals place on these goods.

We test this argument by examining the correlation between perceived household decile and the supply of religious and social goods. Specifically, we explore a prediction that follows

from Dasgupta and Kanbur (2007): Conditional on household income, as the supply of religious and social goods increases, perceived household decile increases. A precise test is made difficult by the lack of fine-grained geographic data on the supply of group-specific public goods. We utilize data on household expenditures on social and religious obligations. In the CPHS, spending on “religious obligations” includes the expenditure by a household during a month towards religious ceremonies, donations to places of worship, payments to religious leaders, and contributions towards religious events. Spending on “social obligations” refers to expenditures on religious ceremonies, gifts, weddings, funerals, social causes and events, and contributions to creation of local public conveniences. We sum all household expenditures on social and religious obligations in a district and use this as a proxy for the supply of social and religious goods in the district. Approximately half the sample across economic strata reports expenditures on social and religious obligations, and the amount of spending increases with household income (see Section F of the supplementary materials).

Using Equation (2), we explore whether district-level spending on these goods is correlated with perceived household income decile. Here, PER_{ijk} refers to the perceived income decile of household i in district j in state k . R_{jk} refers to the district-level mean household expenditure on social and religious obligations in district j in state k , with π_1 being the quantity of interest. Our estimate of π_1 is conditional on H_{ijk} , household i 's own spending on religious and social goods, as well as OBJ_{ijk} , the household's decile based on income data. Standard errors η_{ijk} are clustered at the district level. 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. This guards against the possibility that our estimates are driven by districts with a larger sample. Note that expenditure data is missing for 16,268 households in the June-August 2021 round of the CPHS. These missing values are spread evenly across income deciles as shown in Table S6, distributed across all states, religions and

caste categories, and appear in 426 out of 482 districts, suggesting that there is no obvious pattern to the missingness.

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

In Table 2, we present the correlation between district-level spending on social and religious obligations and perceived household decile. The estimates in Column (2) show that as mean spending on religious and social obligation in the district rises, household perceived decile also rises, conditional on the household’s objective decile. Since the estimate is conditional on the household’s own spending on religious and social obligations, it reflects the relationship between perceived decile and a greater supply of religious and social goods from other households in the district. Overall, the evidence is consistent with the interpretation that households perceive themselves as richer in districts with a greater supply of religious and social goods. As a robustness check, shown in Table S6, we estimate Equation (2) dropping all districts that have a sample size of less than 10 in the CPHS and find virtually identical results.

	(1)	(2)
	Perceived HH decile	Perceived HH decile
District: Mean HH spending on religious/social obligations		0.000819** (0.000396)
Objective HH decile	0.239*** (0.0119)	0.238*** (0.0118)
Proportion of HH spending on religious/social obligations	2.455* (1.417)	-0.118 (0.862)
Observations	97,439	97,439

Notes: All specifications include controls for state, religion, caste, and household size. The unit of analysis is the household, and all observations were weighted by the inverse of the district sample size in the CPHS. Robust standard errors clustered at the district level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2. Supply of social/religious goods and perceived household decile

To contextualize the magnitude of this correlation, we estimate margins from an ordered probit model that includes the same battery of controls as Equation (2). Specifically, we plot the predicted probability that perceived decile equals 1 or 2—the likelihood that a respondent identifies with the poorest quintile—against the objective, income-based household decile. Consider first households residing in a district where spending on religious and social obligations is above the median spending. For these households, the relationship between their objective deciles and their perception of being poor (i.e., being in the poorest quintile) is represented by the blue line in Figure 4. This line is, as expected, negatively sloped—the greater a household’s objective decile, the less likely that the household would perceive itself as poor. Now consider the vertical distance between two households which are both on the same objective quintile, the fourth, but one resides in a district with above the median spending on religious and social obligations and the other in a district with below the median spending.

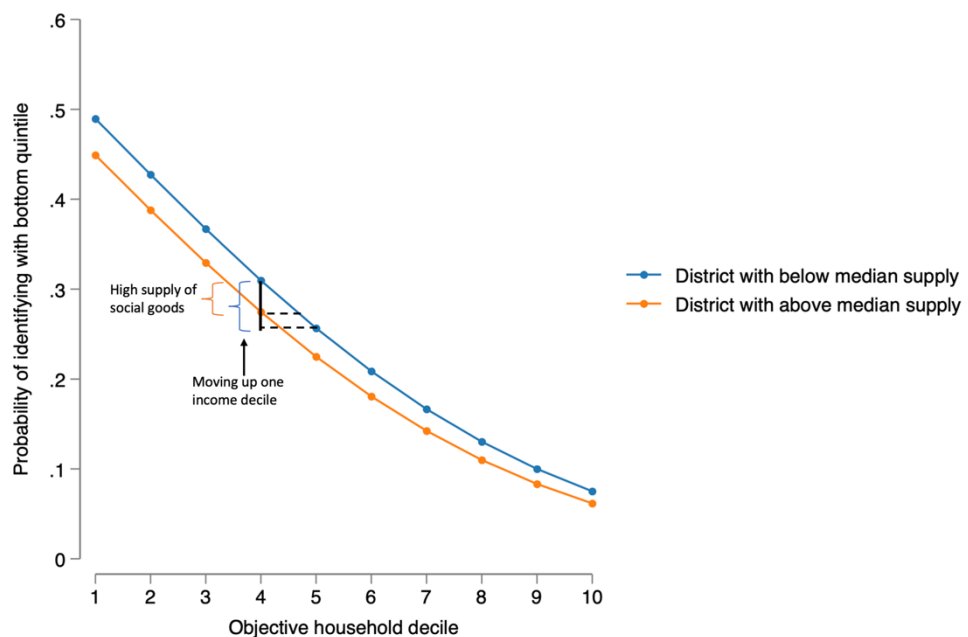


Figure 4. Ordered probit adjusted margins to visualize the relationship between district-level spending on religious and social goods, and objective income deciles vis-à-vis perceived position on the income distribution

This vertical distance, between the blue and the orange lines in Figure 4, is the magnitude of the correlation we are focusing on. And this distance is (almost) equivalent to moving from decile 5 to decile 4 on the blue line. In other words, the loss of income experienced by moving down one decile is how much is ‘worth’, in monetary terms, the loss of non-monetary benefits incurred by moving from a high to a low spending district. They are worth the same because, in this context, both have the same impact on the change in the perception of being poor.⁷

Some caveats are in order. A district-level measure is far from granular given the size of the average district in India. Since the CPHS lumps all social or religious expenditures, the proxy measure does not allow us to describe the specific community-level goods to which households may have contributed, nor does it allow us to distinguish contributions to community-level goods from spending on individual-specific goods. Consequently, our analysis is more exploratory than confirmatory, and the estimate in Column (2) of Table 2 is best regarded as a lower-bound of the relationship between the supply of community-level goods and perceptions of relative income.

5. Discussion

We have documented findings from the first large-scale survey of beliefs about inequality in India, noting the importance of perceptions of relative income in shaping support for reducing inequality. Despite sizeable differences between where people believe their household stands on the income distribution versus its actual position, the average respondent’s support for reducing inequality remained unresponsive to information on their household’s position. Building on Dasgupta and Kanbur (2007), we argue that households may be less likely to respond to information on the income distribution based solely on household income, simply

⁷ In fact, as shown in the figure, the two vertical distances, the one linked to moving down one decile and the other of switching districts, are not exactly the same, but for the sake of the argument the main text dismisses this difference.

because such information ignores the sharing of resources that may be occurring locally within communities in the form of religious and social goods. Indeed, we find that the district-level supply of religious and social goods is positively correlated with individual beliefs about their household's position on the income distribution.

Does the supply of these goods represent a transfer from the rich to the poor? This is a question for future work, ideally with finer data on who derives benefits from community-level goods. We do note that richer households spend more on religious and social obligations, whereas poorer households spend a larger *fraction* of their income on these obligations, as shown in Section F of the supplementary materials. Thus, the distributional effects of community-level public goods are not straightforward and merit further study.

To our knowledge, our findings are the first to suggest an empirical link between community-specific public goods and beliefs about the income distribution. Future research should focus on overcoming the spatial limitations of our data by focusing on the village or neighborhood rather than the district. The challenge of establishing a causal relationship also remains. Examining the precise mechanisms at play is another avenue for further work.

Group-specific mechanisms of resource sharing are prevalent across the developing world (De Weerd 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 beliefs about inequality 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 need for more empirical work on perceptions of inequality that engages with the role of community resource sharing arrangements in shaping citizens' beliefs.

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Supplementary materials

A. Objective income decile, perceived decile, and bias

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

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 S1. Objective income decile and perceived decile by caste category

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

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 S2. Objective income decile and perceived decile by caste category

State	Average objective decile	Average perceived decile	Mean bias	Proportion with positive bias	Average positive bias	Proportion with negative bias	Average negative 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.

Table S3. Objective income decile and perceived decile by state

B. Support for reducing inequality

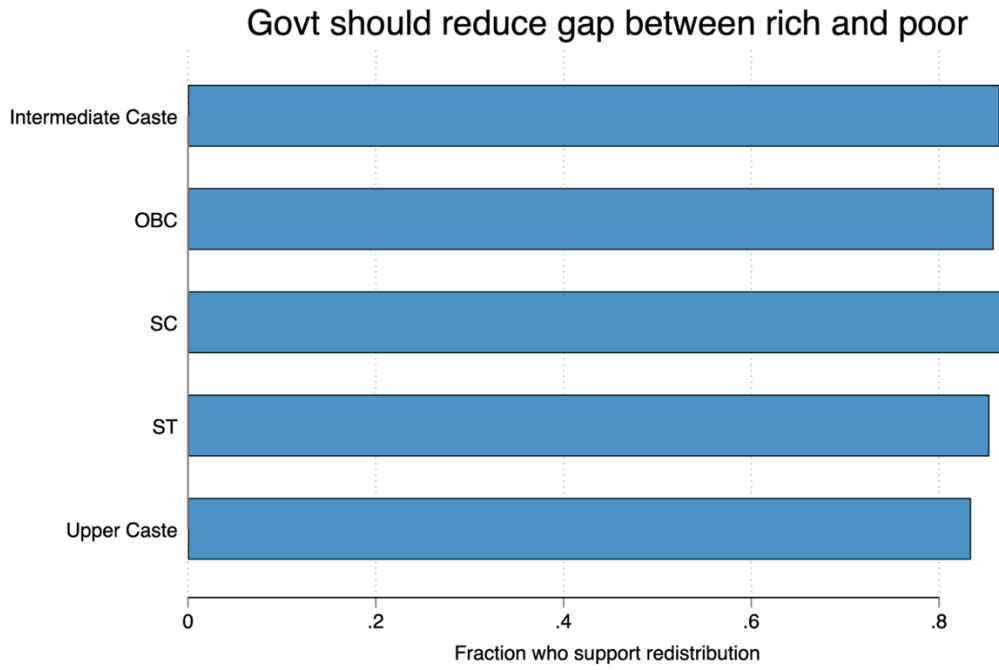


Figure S1. Support for reducing inequality by caste category

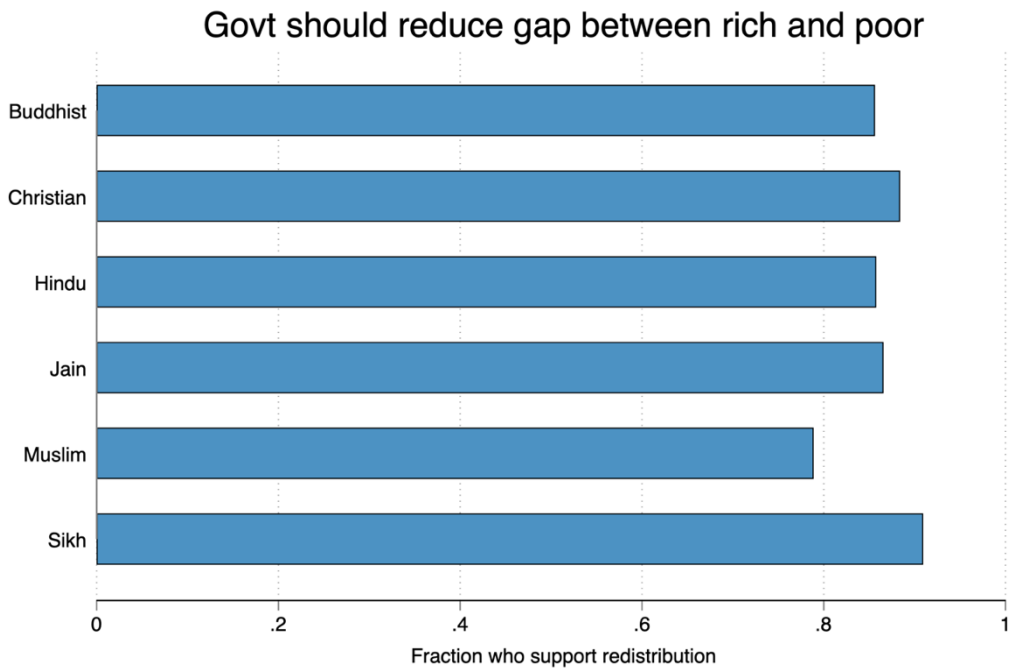


Figure S2. Support for reducing inequality by religion

Govt should reduce gap between rich and poor

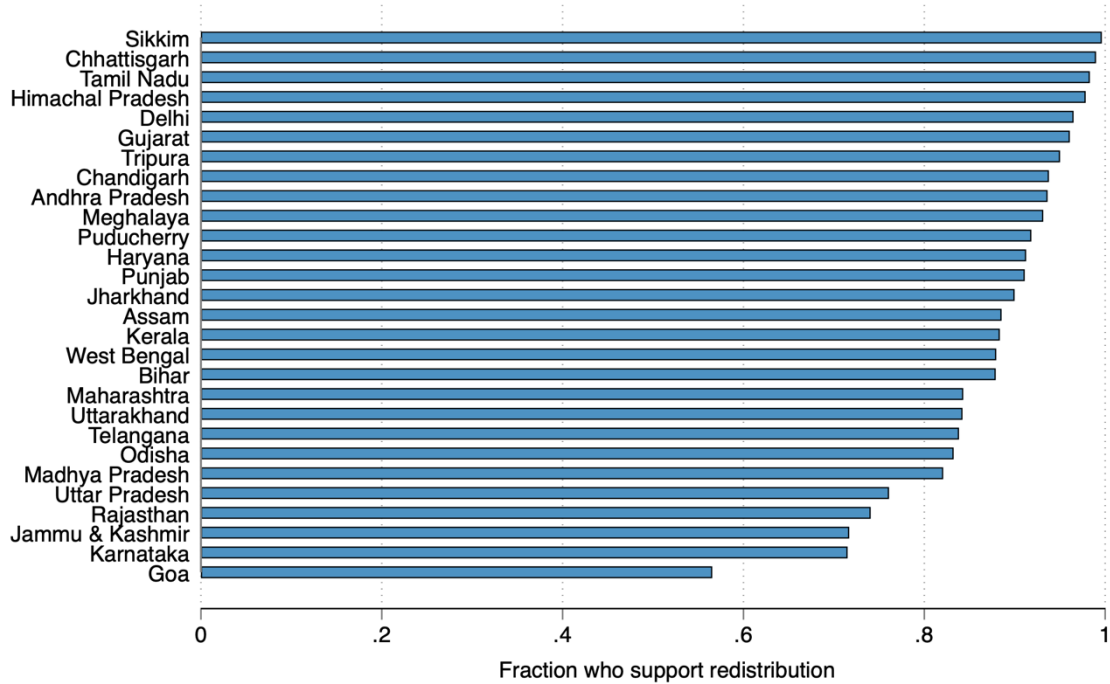


Figure S3. Support for reducing inequality by state

C. Randomization check

	Variable	Treatment group	Control group	Difference	p-value
(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

Table S4. Checking for differences between the treatment and control groups

D. Treatment effects among sub-samples with larger differences between perceived and objective decile

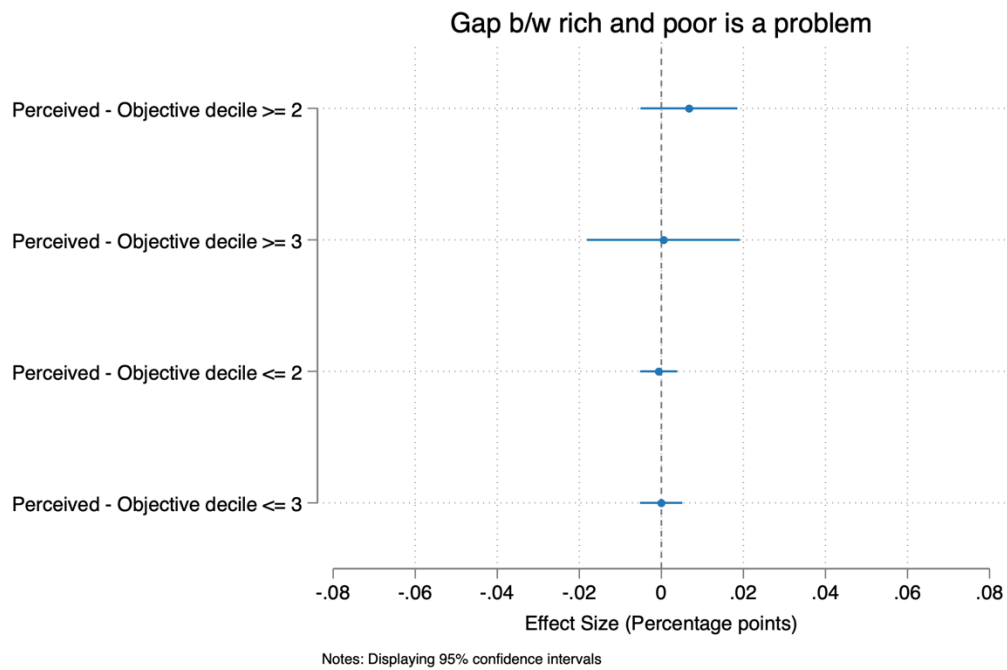


Figure S4. Effect on the belief that inequality is a problem for society

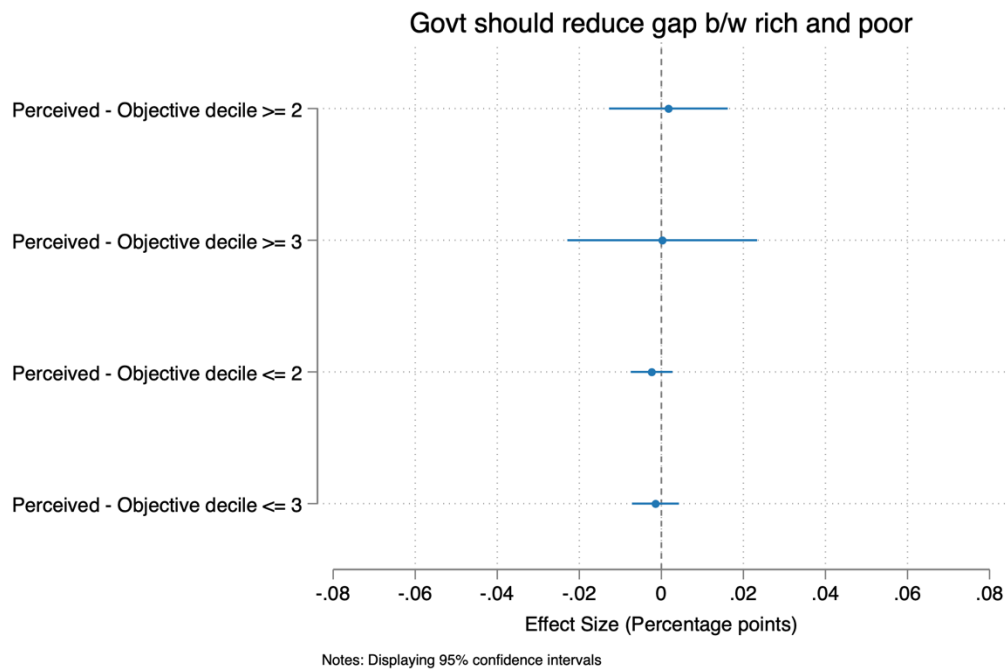


Figure S5. Effect on support for reducing inequality

E. Questions in the CPHS module on inequality

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].

F. Household spending on religious and social obligations

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

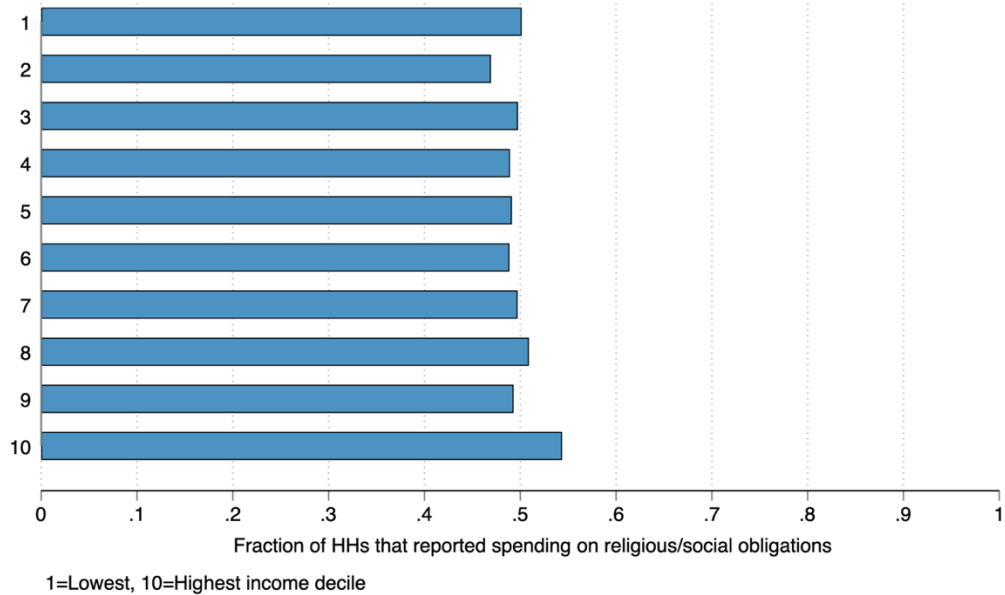


Figure S6. Whether households reported spending on religious/social obligations

By income decile: Spending on religious/social obligations

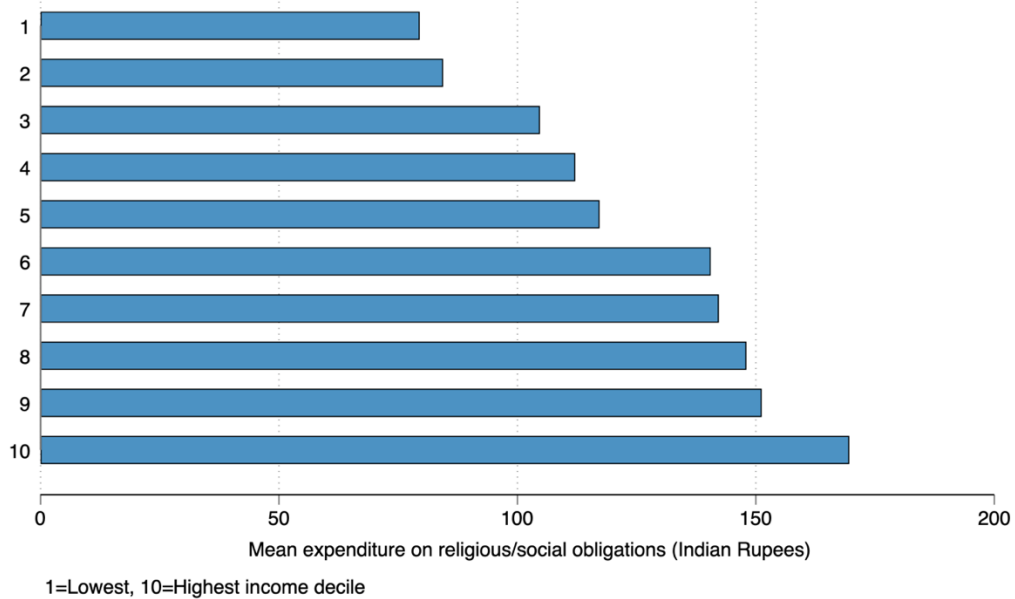


Figure S7. Mean spending on religious/social obligations, by income decile

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

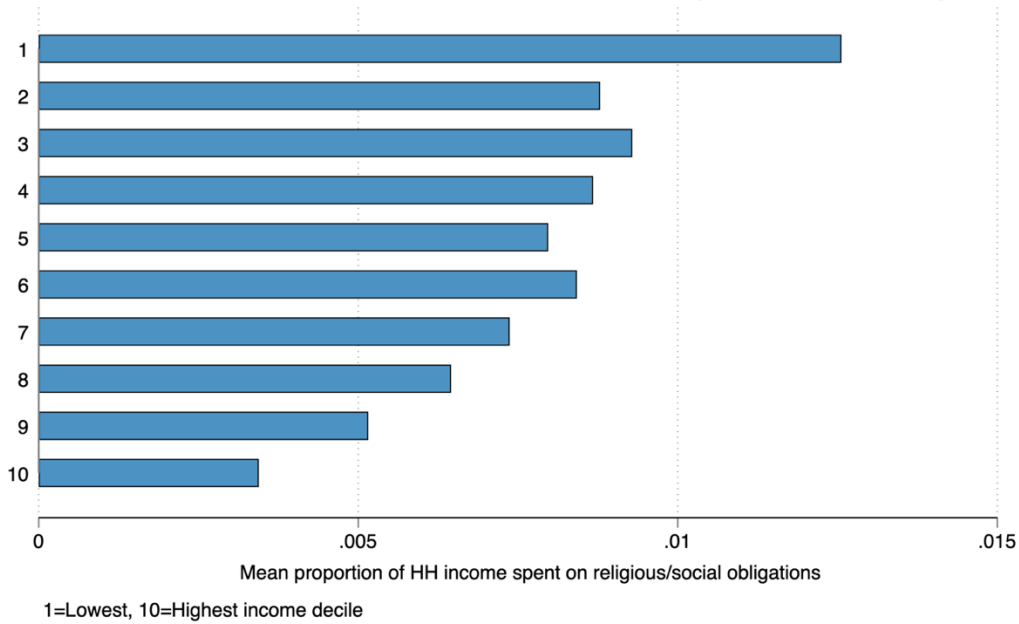


Figure S8. Fraction of household spending on religious/social obligations

G. Missing values of household expenditure

Objective HH decile	Proportion of observations missing data on expenditure
1	0.18
2	0.15
3	0.14
4	0.14
5	0.14
6	0.14
7	0.13
8	0.14
9	0.14
10	0.13

Table S5. Proportion of households missing expenditure data in the Jun-Aug 2021 CPHS

H. Robustness check for analysis of religious and social goods

	(1)	(2)
	Perceived HH decile	Perceived HH decile
District: Mean HH spending on religious/social obligations		0.000817**
		(0.000396)
Objective HH decile	0.240***	0.239***
	(0.0118)	(0.0118)

Proportion of HH spending on religious/social obligations	2.414*	-0.151
	(1.419)	(0.862)
Observations	97,417	97,417

Table S6. Correlation with perceived household decile, excluding districts with n<10

I. Sample details

Deciles of population income	Mean monthly household income (Rs.)	Standard deviation (monthly income)
Lowest	7145.35	1311.43
Second	9605.78	488.78
Third	11278.24	475.26
Fourth	12935.98	492.60
Fifth	14690.29	531.23
Sixth	16711.76	649.59
Seventh	19298.80	868.16
Eighth	23043.70	1346.28
Ninth	29619.34	2624.55
Highest	53203.41	20762.34

Table S7. Sample income by decile

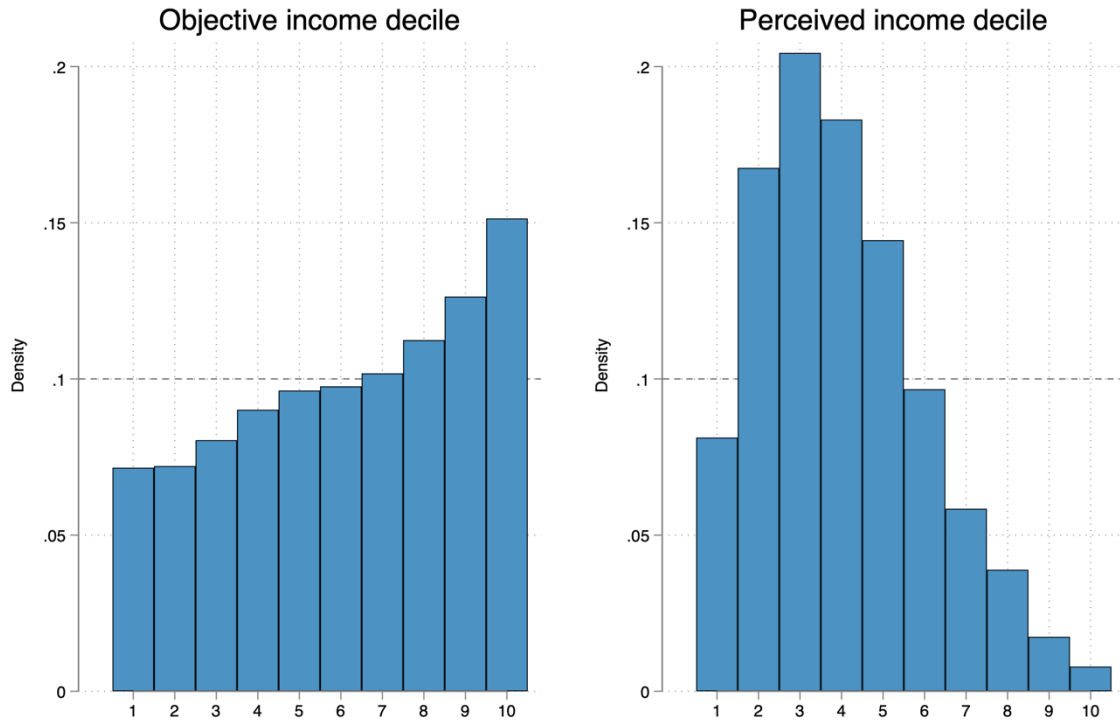


Figure S9. Histogram of perceived vs. objective household deciles

J. Robustness check: Estimating treatment effects with and without controls

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Sub-group</i>	<i>Perceived > Objective decile</i>		<i>Perceived = Objective decile</i>		<i>Perceived < Objective decile</i>	
	Gap b/w rich & poor is a problem	Gap b/w rich & poor is a problem	Gap b/w rich & poor is a problem	Gap b/w rich & poor is a problem	Gap b/w rich & poor is a problem	Gap b/w rich & poor is a problem
Treatment	0.00162	0.00330	0.00273	0.00463	-8.32e-05	-0.000225
	(0.00449)	(0.00412)	(0.00502)	(0.00462)	(0.00213)	(0.00208)
Observations	19,744	19,416	14,154	13,937	81,027	79,841
Controls	N	Y	N	Y	N	Y

Notes: The specification used in Columns (2), (4) and (6) includes controls for state, religion, caste, and household size, whereas no controls are included in Columns (1), (3) and (5). The unit of analysis is the household. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table S8. Treatment effect on the belief that inequality is a problem for society

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Sub-group</i>	<i>Perceived > Objective decile</i>		<i>Perceived = Objective decile</i>		<i>Perceived < Objective decile</i>	
	Govt should reduce gap	Govt should reduce gap	Govt should reduce gap	Govt should reduce gap	Govt should reduce gap	Govt should reduce gap
Treatment	-0.00263	-0.00257	-0.00338	-0.00263	-0.00184	-0.00189
	(0.00529)	(0.00509)	(0.00601)	(0.00584)	(0.00243)	(0.00238)
Observations	19,744	19,416	14,154	13,937	81,027	79,841
Controls	N	Y	N	Y	N	Y

Notes: The specification used in Columns (2), (4) and (6) includes controls for state, religion, caste, and household size, whereas no controls are included in Columns (1), (3) and (5). The unit of analysis is the household. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table S9. Treatment effect on support for reducing inequality