

**Three Essays on Promoting Trust through Public Policies and its
Consequences for Political Attitudes**

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Political trust is essential for effective policy implementation, yet declining levels of trust create a vicious cycle where diminished public confidence undermines policy responsiveness, leading to further erosion of trust. This dissertation explores how specific public policies can foster political trust and examines how trust itself influences the relationship between governance structures and political attitudes, particularly concerning support for climate policies. In Chapter 2, I examine the impact of self-targeting public policies, where citizens can choose to opt into benefits, on political trust. My empirical analysis reveals that self-targeting enhances confidence in local government compared to pre-targeting approaches, which do not yield significant results. The findings suggest that policy design, particularly the targeting mechanism, plays a critical role in shaping political attitudes. Chapter 3 argues that bottom-up policies that are participatory in nature, like the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), can help mitigate the negative effect of inequalities on political trust. Using a quasi-experimental framework, I find strong evidence in support of this argument, reinforcing the importance of inclusive policy design in enhancing democratic processes. The final chapter shifts focus to governance structures, exploring how exposure to non-state climate actions influences climate policy support in less polarized contexts. My results indicate that while exposure does not directly affect policy support, citizens with higher political trust are less likely to hold governments accountable for climate inaction. This underscores the critical need to understand the nuanced role of political trust as a mediator for climate policy support.

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CHAPTER 1

Introduction

An important puzzle in governance and policy studies is understanding why some policies succeed in fostering political trust while others, despite similar intentions and resources, fall short. Trust is a crucial determinant of democratic engagement and effective governance, yet a myriad of factors influence trust, including policy design, historical legacies, and the involvement of multiple actors in governance. How do we explain why some policy interventions bolster trust in governments, which can lead to increased political participation and compliance, while others fail to achieve these outcomes? Conversely, how can trust itself act as a catalyst for effective policy implementation and democratic resilience?

This dissertation seeks to address these questions by exploring the dual role of trust in governance. It investigates how trust functions both as a dependent variable—shaped by policy design, historical context, and governance frameworks—and as an independent interacting variable—affecting political behavior and policy outcomes. The study is organized into three independent yet interconnected chapters, each focusing on different dimensions of this dual relationship.

The second chapter delves into how different policy targeting mechanisms—self-targeting versus pre-targeting—affect political trust. This chapter posits that policy design choices significantly influence trust in governmental institutions, which in turn affects political engagement and democratic participation. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and the Indira

Awas Yojana (IAY) serve as case studies to test this hypothesis. By comparing these two policies, the chapter explores whether self-targeting, which involves direct beneficiary engagement, fosters greater political trust than pre-targeting, which focuses on predetermined criteria for eligibility.

This analysis examines trust as a dependent variable—where political trust is the outcome affected by policy design—which can then subsequently influence political participation and policy effectiveness. Thus, the chapter reveals how different policy designs can create feedback loops in the governance process, affecting how citizens perceive and interact with their government institutions.

Expanding on the insights from the second chapter, the third chapter explores how historical institutional legacies and inequalities impact rural development policies. It focuses on the Zamindari system in India, a colonial land revenue system that entrenched land ownership patterns and socio-economic inequalities. Despite the abolition of the Zamindari system, its legacy continues to influence land distribution which subsequently influences socio-political outcomes, including political trust.

This chapter examines how bottom-up rural development policies, specifically the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), can address these entrenched inequalities and enhance political trust over time. By focusing on MGNREGA, which operates through a decentralized, participatory approach, the chapter argues that such policies can mitigate the negative effects of historical injustices by fostering local engagement and improving social capital.

The chapter integrates the concept of policy feedback, where the implementation of inclusive and participatory policies not only addresses immediate needs but also reshapes political trust and engagement. By arguing how

MGNREGA's design facilitates local decision-making and resource allocation, the chapter highlights how bottom-up approaches can counteract the enduring effects of historical inequalities. This analysis underscores the potential of rural development policies to transform socio-economic conditions and build trust in local governance over time.

The fourth chapter shifts the focus to climate action within a polycentric governance framework, exploring the role of multiple actors—state institutions, non-state actors, and corporations—in addressing environmental challenges. This chapter builds on the findings from the previous chapters by examining how the involvement of diverse actors can influence public support for climate policies, a crucial component for effective policymaking.

The role of non-state actors in climate governance is gaining prominence, as seen in policy frameworks like the Paris Agreement, which highlight the collaborative efforts of businesses, NGOs, and local governments. These polycentric systems aim to address climate challenges through diverse and decentralized mechanisms, potentially fostering innovation and policy adaptation. However, such approaches can potentially lead to an accountability deficit in polities that do not face political polarization over climate policies.

This study examines whether exposure to non-state climate actions, specifically corporate climate action, influences support for state-led climate policies by making citizens de-prioritize the climate agenda. Despite theoretical expectations, the results indicate no significant effects of non-state actions on public support or on the likelihood of holding governments accountable for climate inaction. This suggests that the presence of non-state climate initiatives does not directly alter public attitudes toward more stringent state policies, nor does it impact the perceived

responsibility of governments to act on climate issues. The role of institutional trust was also explored as a potential moderating factor in this relationship. The study also anticipated that lower political trust would dampen the negative effect of non-state climate action on policy support, and found significant results in support of this hypothesis. The results suggest that higher trust is likely to weaken the likelihood of holding the state accountable in individuals exposed to non-state climate action. This implies that, in the context of this research, trust in government did mediate the effects of non-state climate actions on support for state-led climate policies.

Together, these chapters provide a deeper understanding of how governance mechanisms are characterized by feedback loops, which not only influence political trust, but also policy attitudes. By studying political trust as both a dependent and independent variable, the research reveals how trust can shape and be shaped by governance processes. More specifically, building on existing literature on the importance of trust for democratic processes, it sheds light on how well designed policies can induce positive perceptions around the ability of the state to effectively implement policies that benefit the public. This can in turn lead to more civic participation and contribution to the provisioning of public goods. The research also sheds light on how trust, while beneficial for the democratic process, can, under certain conditions, lead to a lack of vertical accountability. Specifically, it highlights how the presence of non-state action can reduce the likelihood of citizens holding the state accountable for inaction in non-polarised policy arenas. This dissertation, thus, underscores the importance of understanding the feedback loops between policy design, historical context, and governance structures. Effective policy design must account for historical legacies to address underlying inequalities and foster trust. Similarly, polycentric governance frameworks must navigate the complexities of multi-actor collaboration to achieve sustainable development outcomes.

The subsequent chapters will build on these insights, offering a nuanced analysis of how policy interventions, historical legacies, and collaborative governance can collectively enhance democratic processes, address systemic inequalities, and drive effective climate action. The dissertation thus aims to provide valuable lessons for designing and implementing policies that are responsive to both historical contexts and contemporary challenges.

CHAPTER 2

Targeting matters: The effect of self- and pre-targeting on confidence in local government

Confidence in public institutions is crucial for the democratic process. Low confidence in government and its institutions can harm various processes such as elections and policy responsiveness. How can we ensure higher confidence in public institutions if low confidence has such a deleterious effect on political and policy processes? More specifically, what role can policies play in increasing political confidence? In this study, I argue that policies that use a self-targeting mechanism to identify beneficiaries can lead to higher confidence in local governments as opposed to policies with pre-targeting, where beneficiaries are identified beforehand. I argue that this is a direct result of self-targeting shaping beneficiaries' perceptions of the government's effectiveness in responding to the needs of the people. I test this argument using two large rural development programmes that provide income and housing in India through different targeting mechanisms. I use fixed effects, difference-in-differences models, and data from the Indian Human Development Survey (IHDS) to causally test whether these programs increase trust in local government. I find strong evidence in support of my hypothesis.

2.1 Introduction

Can government interventions at the state level enhance trust in governmental institutions? This study addresses this question and investigates the impact of targeting strategies on bolstering political trust. The central focus of this paper is the role of co-benefits associated with state interventions. More precisely, it underscores how state policies aimed at improving social welfare can also yield positive outcomes for the democratic process. The study delves into how the design choices of public policies may shape perceptions of political trust in local institutions among their intended beneficiaries. I posit that policies employing self-targeting mechanisms may be more effective in cultivating political trust compared to those employing pre-targeting methods.

In doing so, I build on the literature on policy design and political trust. First, existing studies on policy design focus on the choice of policy instruments or the implementation. For instance, there is considerable debate on whether cash transfers as a policy instrument to alleviate poverty have a positive effect or not (Parker, Vogl and Hall, 2018; Bastagli et al., 2019; Altındağ and O’Connell, 2023). This paper builds on this research and asks how choices around policy targeting can have broader policy implications. Specifically, I look at how self- or pre-targeting mechanisms can have unintended effects on political trust. I argue that self-targeting policies can improve perceptions of state responsiveness as compared to policies with pre-targeting.

But why look at political trust? Decreasing levels of political trust is detrimental to the larger democratic process and hence has gained attention among scholars (C. D. Anderson, 2009; Hooghe & Marien, 2013; Levi & Stoker, 2000; Marien & Hooghe, 2011). Responsive governments that can address citizen needs, and that

are accountable to their citizens contribute to political trust. However, when citizens perceive that a public institution is not responsive to the local needs and existing socioeconomic cleavages are more likely to determine the social and economic outcomes of individuals, political trust is often low. Low political trust is also associated with low political participation, low voter turnout, and reduced policy compliance (Marien & Hooghe, 2011).

Moreover, low political participation can also perpetuate existing inequalities since the needs of the people are unlikely to be captured within the political process. To address these perils associated with socioeconomic inequalities, governments use a variety of public policies. One of the conclusions of policy research in this area is that policies that promote redistribution and broadening of economic opportunities within societies are crucial for narrowing existing socioeconomic cleavages, thereby dampening the effects of inequalities on factors such as quality of life and political participation (Borchorst & Teigen, 2010; Bryant, 2009).

With this background, I test my argument around how policy targeting design choices influence political trust using the case of India, and two large rural development programs. Using panel data from India, and a quasi-experimental design, I estimate the effect of one of the largest public works schemes in the world, the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) which uses self-targeting, and Indira Awas Yojana (IAY), a flagship program that provided housing assistance which uses pre-targeting, on confidence in local government. Further, moving away from existing studies that predominantly use national or subnational-level political confidence measures, I use political confidence in local government institutions. I find evidence consistent with my argument.

This increased trust can positively impact political participation and have significant implications for the democratic process, as the participation of marginalized communities is often considered essential for inclusive governance. In a broader sense, this study highlights the unintended effects of welfare policies and how small design choices can have substantial implications for the governance process. The following five sections will delve into the literature, theory, context, methods, results, and discussion to further explore this argument.

2.2 Why is political trust important and what influences it?

Political trust plays an important role in civic culture and is integral to the effective functioning of political institutions (Almond and Verba, 1963). It offers a myriad of advantages in the political arena. High levels of political trust are positively linked to formal political participation (Hooghe and Marien, 2013). Nevertheless, the mechanisms through which political trust influences participation are through different pathways. For example, an individual's socio-economic status can moderate the relationship between political trust and participation. Additionally, political trust can act as an intermediary between an individual's health and their political involvement (Mattila, 2020). Mattila's (2020) study delves into how poor health can lead to diminished political trust, subsequently reducing institutionalized political participation such as voting, contacting officials, and party involvement. Conversely, good health can foster increased political trust and heightened participation in these political activities. Trust, therefore, appears to be a contributing factor to heightened political engagement.

Similarly, heightened political trust influences compliance with government policies. This effect was particularly pronounced during the COVID-19 pandemic,

with individuals demonstrating greater adherence to state policies when their political trust was stronger (Bargain and Aminjonov, 2020). Moreover, increased political trust equips governments to formulate more robust policies to address societal threats (Bargain and Aminjonov, 2020). In cases such as severe climate change impacts and pandemics, regions endowed with greater political trust may be better positioned to implement more resilient policy responses. Similarly, high political trust encourages individuals to comply with tax policies, thereby increasing contributions to the collective well-being. Thus, it can be argued that lower political trust fosters greater acceptance of tax evasion and, more broadly, reduced compliance with the law (Dalton, 2004; Marien and Hooghe, 2011).

Higher political trust also leads to a greater legitimization of state actions, even when these actions do not directly benefit individuals. This is especially significant when states introduce redistributive policies to address mounting inequalities. Such policies frequently face substantial resistance since the benefits are distributed while the costs are concentrated. Therefore, higher political trust can contribute to greater support for redistributive policies (Rudolph and Evans, 2005). However, recent research suggests that the impact of political trust on support for redistributive policies may be more intricate than previously theorized (Peyton, 2020). Peyton (2020) uses experiments and the context of US to test if higher trust increases support for redistributive policies and find null effects.

Nevertheless, the positive effects of political trust on a range of other political outcomes do not seem to yield such conflicting evidence. Besley and Dray (2022), for instance, argue that higher political trust enhances state capacities, resulting in more efficient governance systems with reduced compliance and enforcement costs. Additionally, greater trust assists states in implementing more voluntary measures,

as compliance is more likely, further diminishing implementation costs (Besley and Dray, 2022).

While the precise mechanisms through which political trust might influence these outcomes remain a topic of theoretical debate, it is safe to assert that political trust is a pivotal co-determinant of socio-political outcomes. However, what leads to heightened political trust? A multitude of factors influences political trust. As Mattila (2020) suggests, poor health diminishes political trust. The mechanism through which this occurs is that poor health increases interactions with the public health service, leading individuals to form a negative appraisal of government due to the inadequate quality of public services that fail to meet their expectations.

Low levels of political trust can also result from rampant corruption. Higher levels of government corruption lead citizens to believe that state institutions primarily serve the elite rather than the general public, fostering negative perceptions about the functioning of the state (Newton, Stolle, and Zmerli, 2017; Uslaner, 2009). Moreover, high levels of corruption result in state employees prioritizing personal gain over serving the public, potentially stunting economic growth and further eroding trust (Uslaner, 2009).

Additionally, scholars contend that macroeconomic performance, high inequality, and exposure to violence are all associated with reduced levels of political trust. For instance, Kelleher and Wolak (2007) investigate the factors influencing varying levels of political trust across state government branches in the United States and find that better government performance, specifically in terms of economic performance and policy competence, leads to heightened trust. Another study by Wolak and Palus (2010) also highlights that national economic performance

influences perceptions of trust at the subnational level, indicating an interconnectedness and dependency.

Zmerli and Castillo (2015) use the example of Latin America to suggest that income inequality has a negative correlation with political trust. Elevated levels of inequality can lead to social exclusion, resulting in marginalized individuals dissociating themselves from the political process due to the belief that they cannot contribute to civic affairs. This, in turn, diminishes perceptions of political responsiveness (Goubin, 2020; Levi and Stoker, 2000), since these individuals lack the information needed to assess government performance, thereby lowering trust in the government.

Exposure to violence also substantially erodes political trust. De Juan and Pierskalla (2016) utilize the case of Nepal to illustrate how exposure to violence during the onset and conclusion of a conflict period increases political distrust. The type of electoral system also appears to influence trust in local governments. In majoritarian systems, where individuals tend to perceive themselves as having less influence in national politics, trust in local governments tends to be higher (Fitzgerald and Wolak, 2016). Additionally, Fitzgerald and Wolak (2016) reiterate the importance of political performance, as seen in earlier studies, in influencing trust in the government.

In summary, the causes of lower political trust appear to be diverse, encompassing government performance, the quality of public services, health, inequalities, social exclusion, corruption, exposure to violence, and the nature of the electoral system. But more importantly, can institutional interventions, for instance, public policies, improve political trust? And more importantly, what type of public

policies increase political trust? The paper expands on this idea and explores how targeting strategies influence political trust.

2.3 Theory: Public policies and the role of targeting

Considering the perils of low political trust and declining political trust, can institutional trust be created? And if so, how? Low political trust can create a social trap where marginalized households and groups disengage from the political process and leave the democratic process even more vulnerable to the wants of powerful actors and not the needs of the weaker actors. In this paper, I present a central argument suggesting that public policies that exploit self-targeting mechanisms can effectively induce political trust as opposed to policies that use a rules-based pre-targeting mechanism.

Public policies either use self- or pre-targeting to identify beneficiaries. While these strategies have their own benefits, I argue that the unintended effect of the choice of targeting strategies can be seen in political trust. Pre-targeting involves identifying beneficiaries of public policies through established criteria, economic status, or other forms of social identity. Self-targeting, on the other hand, involves letting people to self-select into a public program. While pre-targeting helps in limiting the scope of potential beneficiaries and targeting the most needy, self-targeting reduces the cost of implementation while also ensuring that the most vulnerable have an opportunity to obtain programme benefits.

Self-targeting programmes are passive since the onus of implementation, specifically around actively recruiting individuals into the programme is no longer on the government (Kumar, Madheswaran and Vani, 2021), but rather on the potential beneficiaries themselves. Pre-targeting programmes on the other hand raise the costs

of implementation since the onus is on the government to identify potential beneficiaries. However, evidence also suggests that pre-targeting policies such as indicator-based targeting can substantially reduce leakages and improve programme efficiency (Houssou and Zeller, 2011). These indicators can include proxy means test that predicts household incomes to identify potential beneficiaries who are in need of state support the most.

While existing literature dwells into the benefits and limits of both self- and pre-targeting mechanisms extensively, little is known about how such decisions to design public policies influence political attitudes. More specifically, policies with self-targeting mechanisms usually require a wider knowledge and awareness of such programmes among the public, and the public must have the economic and social resources to access the programme's benefits (Kumar, Madheswaran and Vani, 2021).

I argue that while policies with self-targeting have their limits, such policies provide valuable information about state responsiveness which pre-targeting policies cannot. A citizen asking for government assistance and the state responding with benefits would lead to higher trust in the institution. On the other hand, when individuals receive benefits through pre-targeting mechanisms, it limits beneficiaries' ability to develop evaluative judgements around political responsiveness. Indeed, responsive governments that can address needs, and are accountable to their citizens contribute to political trust (OECD, 2013; Goubin, 2020). Hence, when citizens perceive that the government is not responsive to citizens' needs, political trust is often low. Therefore, self-targeting can improve perceptions of political trust, specifically with local governments, with whom citizens interacts to avail benefits, by improving perceptions of political responsiveness. With this, I hypothesize the following.

H1: Public policies with self-targeting will lead to higher trust in local government among beneficiaries.

I also hypothesise that pre-targeting policies will lead to higher trust, and if I am unable to reject the null hypothesis in this case, it would support my above theory of self-targeting policies being able to trigger perceptions of political responsiveness.

H2: Public policies with pre-targeting will lead to higher trust in local government among beneficiaries.

2.4 Context: Mahatma Gandhi National Rural Employment Guarantee Act and Indira Awas Yojana

To test my hypotheses, I use the case of two different developmental policies that were implemented in India. Specifically, I focus on the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and the Indira Awas Yojana (IAY, the now Pradhan Mantri Awas Yojana). Using the case of India helps keep the larger political and administrative context under which these policies were implemented constant. I expand on the context and the policies below.

India presents a useful case to study the above-mentioned relationships for multiple reasons. The 1993 amendment to the Indian constitution led to the emergence of a vibrant local self-governance institution in the Panchayats, which are regarded as grounds for deliberative democracy (Parthasarathy et al., 2019). They are characterized by a democratically elected village president and play a crucial role in the implementation of policies and programs of both the state and central governments.

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is a central government policy that was enacted by the Indian parliament in 2005. It is arguably the largest cash transfer scheme with roughly 48 million households as beneficiaries (Department for International Development, 2011). It takes a rights-based demand-driven approach to rural employment and promises 100 days of guaranteed work for all individuals. In doing so, any person in need of work and additional income could petition the local government (panchayat) directly, and they are required to process the request and enrol them into the program. This embodies the idea of self-targeting. This approach contrasts policies that are pre-targeted, wherein one must meet certain prerequisites, such as belonging to a certain class, ethnic group, or other group to be eligible for benefits. MGNREGA is based on the idea of self-targeting rather than pre-targeting.

The policy was implemented in three phases, with the first phase starting in 2006, and the last in 2008, when all districts in India had been covered. However, actual work on the ground varied. While multiple levels of government are involved in the implementation of MGNREGA, the Panchayat Raj institutions have played a crucial role. As a rights-based initiative, the Gram Sabha, or village assembly, invites individuals needing additional work to register during a public meeting (Desai et al., 2015). The Gram Panchayat then compiles this list and forwards it to higher levels of government. Therefore, the Panchayat plays a crucial role in the program's implementation, serving as both a contact point for potential beneficiaries and a facilitator in compiling lists of individuals in need of work, ultimately overseeing the sanctioning of these requests.

The Indira Awas Yojana (IAY) is also a central government welfare policy that aimed at providing assistance for building a house for the poor. The policy, in contrast to MGNREGA, adopts a pre-targeting mechanism, where beneficiaries belong to

households below the poverty line. The policy also specifically targeted Scheduled Tribes (ST) and Schedule Caste (SC) households below the poverty line. The policy however allowed up to 40% of the households to be from non-SC/ST households. The programme provided INR 75,000 as assistance towards building homes.

The targeting of beneficiaries is through a multi-stage process. First, based on the allocation of state funds, the district rural development agencies or Zilla Parishads will determine the number of beneficiaries in each Panchayat. The gram sabha subsequently selects the beneficiaries limiting it to the number of allotted beneficiaries using a predetermined priority list. Thus, the local level panchayats still play a role in the implementation of the policy.

2.5 Data and Methods

I use data from the Indian Human Development Survey (IHDS) panel to measure both dependent and independent variables, including my treatment variables. The IHDS panel surveys were conducted in two waves, one between 2004-05 and the other between 2011-12, at the household level. Post attrition, the panel data has a sample size of 40,018 households. Based on my theory and the policy's focus, I subsequently subset the data to include households located in rural villages (since the policy's focus is mainly rural regions) and omit the ones from urban regions, resulting in a sample size of 27,500 households across 1,407 rural villages in 19 states.

I use this data to measure my dependent variables and independent variables. The dependent variable measures citizens' confidence in local government, the Panchayat, a democratically elected local governance body in India. This variable is ordered and coded as hardly any confidence, only some confidence, and a great deal

of confidence. My other control variables such as income, poverty, and education level, also come from the IHDS dataset.

The identification strategy for Indira Awas Yojana (IAY) relies on a question that asks if the household was a beneficiary of the policy. I then use a model with time fixed effects to estimate the effect of the INR 75,000 housing assistance on trust in local government. The unit fixed effects will alleviate concerns around exogenous variables driving the observed treatment effects. District fixed effects thus control for time-invariant factors such as administrative capacity, district specific socio-economic trends, and other socio-political factors that might influence the outcome. The model is expressed in the below equation:

$$y_{it} = \alpha + \beta Treatment_{it} + \gamma Year_t + \delta_i + \omega X_i + \epsilon_{it}$$

where y_{it} is reported household level political confidence in time-period t , $Treatment_{it}$ is a dummy variable that is coded as 1 for IAY-treated households, $Year_t$ is a dummy variable that is coded as 1 for the second wave and 0 otherwise, δ_i are district-fixed effects, X_i is a vector of control variables. The estimate of interest in this model is the dummy $Treatment_{it}$ variable.

On the other hand, the identification strategy for Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) relies on a survey question that measures the income from MGNREGA. I use this question to construct a binary treatment variable that captures if the household was a beneficiary of the policy. I subsequently use a difference-in-differences (DiD) design to estimate the treatment effect of the policy on trust in local government. An assumption that difference-in-differences make is of parallel trends, wherein the treated households would be similar to the untreated households in the absence of the treatment effect. Given that the data contains only two time periods, I am unable to test (see Angrist &

Pischke, 2008; Kahn-lang & Lang, 2019) for any violations of these assumptions. The DiD model is expressed in the below equation:

$$y_{it} = \alpha + \beta Treatment_{it} + \gamma Year_t + \theta (Treatment_i \times Year_t) + \omega X_i + \epsilon_{it}$$

where y_{it} is reported household level political confidence in time-period t , $Year_t$ is a dummy variable that is coded as 1 for the second wave and 0 otherwise, $Treatment_{it}$ is a dummy variable that is coded as 1 for MGNREGA-treated households, θ ($Treatment_i \times Year_t$) represents the difference-in-differences estimator, capturing the interaction between the treatment and year dummies. This term is the main coefficient of interest in the analysis. X_i is a vector of control variable.

The key dependent variable in both models—political confidence in local government—is coded as an ordered variable with three levels—low, medium, and high. A vector of controls include inequality at the village level, income and education levels. I construct a land-holding inequality index (discussed in detail in Chapter 3), that measures jati-based land concentration at the village level. Household income is a continuous measure that measures the sum of income of all members of the household. Similarly, education measures the highest education of the respondent.

2.6 Results and Discussion

I use an ordered logistic regression model to estimate the effect of MGNREGA on confidence in the panchayat, and the findings are presented in Table 1. In addition to this, I have accounted for household income and other household-level variables. The results indicate that the Difference-in-Differences (DiD) estimate, which assesses the influence of the MGNREGA policy on confidence in local government, is both positive and statistically significant ($p < 0.001$). To understand the magnitude of

the effect, I exponentiate the interaction coefficient to obtain an odds ratio. This indicates that the odds of having higher trust after the MGNREGA implementation (post-policy) are 17% higher compared to before the policy (pre-policy) for the households affected by the policy. This aligns with the hypothesis that MGNREGA has indeed fostered trust among its beneficiaries. In addition to this, I also introduce district fixed effects in the model to control for time-invariant unit-specific trends (see Appendix section A1.1). The results remain robust even with this additional specification, as detailed in the Appendix.

These results contrast the effects we see for the association between IAY and confidence in local government. The estimates from an ordered panel regression model suggest that IAY does not influence trust in local government (see Table 2.2). The substantial results do not change even when accounting for the caste of the respondents (see Appendix Section A1.2). To alleviate concerns around other missing control variables, I also include village-level factors that might influence trust (see Appendix Section A1.3). Specifically, I control for whether villages have a health center, population (measured as a categorical variable from low to high), and the type of road. I believe these variables capture the level and quality of public services in the village which might then influence trust.

	<i>Dependent variable:</i>
	Confidence in local government
	(1)
MGNREGA	−0.131* (0.067)
Year	−0.246*** (0.019)
Poor	−0.066** (0.021)
Income	9.3243e-07*** (1.4257e-07)
Inequality	−0.0004 (0.0002)
Education	0.002 (0.002)
MGNREGA:Times	0.157*** (0.041)
District Fixed effects	No
Observations	47,056

Notes: All households with income from MGNREGA are considered as treated.*p<0.05; **p<0.01; ***p<0.001.

Table 2.1:Effect of MGNREGA on confidence in local government

	<i>Dependent variable:</i>
	Confidence in local government
	(1)
IAY	0.0455 (0.0307)
Year	-0.237*** (0.019)
Poor	-0.0858*** (0.021)
Income	3.79e-07*** (7.40e-08)
Education	-0.00318 (0.002)
Inequality	0.000993*** (0.002)
District Fixed effects	Yes
Observations	46,533

Notes: *p<0.1; **p<0.05; ***p<0.01.

Table 2.2: Effect of IAY on confidence in local government

These findings suggest that MGNREGA contributes to increased trust among its beneficiaries, in contrast to the Indira Awas Yojana (IAY), which does not yield the same effect. I argue that these differing outcomes can be attributed to the distinct targeting mechanisms employed by these policies. However, it is important to address concerns that the observed effects might be driven by the varying benefits offered by these policies. To address these concerns, I have used a sub-sample of the population treated with MGNREGA to test if the effects continue to persist. Specifically, I subset the MGNREGA beneficiary sample to those individuals who have received benefits amounting to INR 20,000 or less from MGNREGA. This represents less than

one-third of the total benefits that IAY beneficiaries received (INR 75,000). The estimates remain robust to these alternative identification strategies, as presented in the Appendix section A1.4.

I also perform bootstrapping with replacement to assess the reliability of the estimates. This method allows for the estimation of the sampling distribution of a statistic, such as a regression coefficient or p-value, without relying on parametric assumptions about the underlying data distribution. I sample half of the total sample a 1000 times, while preserving the original treatment and control unit proportions. I also sample entities instead of individual observations given the panel structure, thereby maintaining independence across bootstrap iterations. The bootstrap analysis for MGNREGA reveals that the interaction effect is statistically significant in 670 out of 1000 bootstrap samples, which corresponds to 67% of the samples (see Appendix Section A1.5). This high proportion of significant results strongly suggests that the interaction effect is robust and not due to random variation. I also compute the standard deviation of estimates of the interaction between *treatment*time* across the 1000 samples to generate a bootstrapped standard error. I use this standard error, along with the point estimate from my original MGNREGA model, and perform a two-sided t-test to generate a bootstrapped p-value. The p-value from this test was 0.001, indicating that given the variability of the estimates from the 1000 bootstrap samples, the observed effect size of the DiD estimate from the original MGNREGA model is statistically significant. The consistent significance across the bootstrap samples provides substantial evidence that the observed interaction effect is likely not-by-chance and meaningful. This result reinforces the reliability of the interaction term's impact in my model and supports the validity of the findings.

In the bootstrap analysis for IAY, the treatment term was found to be statistically significant in 309 out of 1000 bootstrap samples, corresponding to a

significance rate of 30.9%. This relatively low percentage suggests that the interaction effect may not be robust across different subsets of the data (see Appendix Section A1.5). While there is some evidence of an effect, its variability across resamples indicates that it may not be consistently present or strong. I also generate a bootstrapped standard error using the estimates from the *treatment* coefficient across the 1000 samples. I used this information along with the point estimate from my original IAY model. The resulting p-value was 0.107, indicating that IAY does not have a significant effect on trust, even when considering the bootstrapped models at a 95% confidence interval.

However, given how the effect of IAY was modelled, it is important to ensure that estimates are not biased by differences between treatment and control groups. To mitigate this concern, I use Propensity Score Matching (PSM) to also generate the probability of receiving IAY treatment given certain covariates. These probabilities are then used to calculate inverse probability weights. This approach reweights the sample so that the distribution of covariates in the treatment group approximates that of the control group, thereby creating a more balanced comparison. The estimates for the effect of IAY on the trust are null and robust to this specification that uses weights from propensity score matching models (see Appendix Section A1.6). Nevertheless, I acknowledge that while PSM addresses observed differences between groups, it does not account for unobserved factors that may still influence treatment assignment and outcomes. I also test to see if other policies that mimic the idea of self-targeting also induce higher trust perceptions, and I find initial evidence in support of this (see Appendix Section A1.7).

Another concern is that the results are due to gatekeeping rather than program design. Specifically, pre-targeted policies that have established criteria to identify program beneficiaries could still fall into the trap of gatekeeping, wherein powerful

local actors can limit the ability of means-tested individuals to receive benefits from the program. To account for this, I include an inequality measure as a control variable in my model. The inequality measure captures land concentration across various jatis at the village level. Land ownership often correlates with local influence, especially where economic and social hierarchies are deeply entrenched, which makes this measure valuable in adjusting for broad inequalities. However, I acknowledge that this measure has limitations as it may not fully capture the influence of social networks, favoritism, or political connections, which are also critical factors in gatekeeping dynamics.

While these findings suggest that the choice of targeting mechanism may impact political trust, I refrain from making claims about establishing a causal relationship between them. One reason for my cautious approach, despite the subset analysis discussed earlier indicating that beneficiaries who received only one-third of the benefits from MGNREGA in comparison to IAY still exhibit an increase in political trust, is that the nature of services provided by these policies differ. While my results are based on the assumption that beneficiaries treat these benefits as same, they are materially different which could be driving the results I see.

To establish a causal link, a comparison of the same service with different targeting strategies would be necessary, a comparison that isn't feasible in the current context. Furthermore, my ability to draw firm conclusions is constrained by data limitations. I cannot include several other potential variables that might have influenced the intervention's impact, potentially introducing selection bias. Bearing these limitations in mind, my intention is to expand upon this study and investigate these relationships experimentally. In addition to this, I also acknowledge that knowledge (of public programs) and networks (social and political) might influence one's ability to access state support. In the absence of these factors, individuals might

not be able to access state support and policies that use self-targeting might fail at helping the most needy. Hence, self-targeting cannot be seen as a panacea, and states have to determine when significant pre-existing barriers might limit the ability of individuals to seek state support.

CHAPTER 3

Inequalities, trust, and rural development programmes: Evidence from India¹

Deeply entrenched socioeconomic inequalities complicate public service delivery, especially for local governments in developing countries. In jurisdictions characterized by deep economic cleavages, it can be exceedingly difficult for local governments to fund and deliver public goods that satisfy most citizens' needs in a timely and efficient manner. One of the tragic consequences of extreme inequality is that it reduces people's trust in their government. Some scholars suggest that national-level welfare policies have the potential to dampen the persistent negative effect of socioeconomic inequalities on trust in government. Here, we hypothesize that policy interventions that encourage the co-production of local public goods, such as bottom-up demand-driven public-works programs, help neutralize the negative effect of inequalities on trust in local governance institutions. Using quasi-experimental methods, large-N panel data, and the case of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)– the world's largest rural employment guarantee initiative – our analysis finds support for these expectations.

¹ I am leading this paper, and a version of it is currently under review with co-authors Nathan Cook and Krister Andersson.

3.1 Introduction

Historical institutions have a long-lasting effect on developmental outcomes. For instance, in India, the Zamindari system, a colonial land revenue system, vested the rights of land ownership in the Zamindars. The Zamindars were allowed to collect tax from the oppressed. While the practice was abolished post-independence, the skewed land holding patterns continue to persist, with roughly 65% of farmers in India holding less than half a hectare of land (Census, 2011).

Such skewed land-holding patterns widen the social divide (Misra, 2019b) and can produce worse social outcomes (Pickett & Wilkinson, 2010). Higher crime rates, lower life expectancy and social mobility, low satisfaction with institutions, low social and political trust, and corruption are public “bads” that researchers have linked to patterns of high inequalities (C. J. Anderson & Singer, 2008; Pickett & Wilkinson, 2010; Rothstein & Teorell, 2009; Rothstein & Uslaner, 2005; Rowlingson, 2011; Uslaner, 2009; Uslaner & Brown, 2005).

While these social issues are in themselves concerning, lower levels of political trust² may be particularly problematic in the long run. Decreasing levels of political trust is detrimental to the larger democratic process and hence has gained attention among scholars (C. D. Anderson, 2009; Hooghe & Marien, 2013; Levi & Stoker, 2000; Marien & Hooghe, 2011). Responsive governments that are able to address needs, and is accountable to its citizens contribute to political trust. However, when citizens perceive that a public institution is not responsive to the local needs and existing socioeconomic cleavages are more likely to determine the social and economic outcomes of individuals, political trust is often low. Low political trust is

² Based on existing literature on political trust, we use the terms trust and confidence interchangeably. For instance, Levi and Stoker (2000) note how questions in the World Values Survey use confidence in public institutions to measure political trust. See also Zwerli (2014).

also associated with low political participation, low voter turnout, and reduced policy compliance (Marien & Hooghe, 2011).

Moreover, low political participation can also perpetuate existing inequalities since the needs of the people are unlikely to be captured within the political process. To address these perils associated with socioeconomic inequalities, governments use a variety of public policies. One of the conclusions of policy research in this area is that policies that promote redistribution and broadening of economic opportunities within societies are crucial for narrowing existing socioeconomic cleavages, and thereby dampening the effects of inequalities on factors such as quality of life and political participation (Borchorst & Teigen, 2010; Bryant, 2009).

But patterns of inequalities, despite public policy interventions, change very slowly, and it often takes a long time to address systemic socioeconomic cleavages, deeply rooted within a society's institutional and social structures. If inequalities are a generational and slow-resolving problem, is there a way for public policies to dampen the negative effect of inequalities on confidence in government in the near term? More importantly, what type of public policies can accomplish such immediate moderation while social welfare and poverty alleviation programs seek to ameliorate systemic socioeconomic cleavages?

We argue that policy interventions that encourage the co-production of collective goods among local government representatives and citizen beneficiaries can dampen the negative association between inequalities and political confidence overtime. Such processes can improve perceptions around political responsiveness, and enhance both bonding and bridging social capital. Together these processes can improve confidence in local-level public institution.

We test this argument using the case of India, and one of its rural development and livelihood enhancement programs. Using panel data from India, and a quasi-experimental design, we estimate the effect of one of the largest public-works schemes in the world, the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), a flagship program first introduced in 2006 by the national government, on the inequality-confidence relationship. Further, moving away from existing studies which predominantly use national or subnational-level political confidence measures, we use political confidence in local level public institutions. We find evidence that Mahatma Gandhi National Rural Employment Guarantee Scheme has a neutralizing effect on the negative association between inequality and confidence in local public institutions in India.

3.2 Why study confidence in public institutions?

Trust in public institutions is crucial for the democratic process (Sims, 2001). On one hand, higher trust increases active participation in democratic processes (Hooghe, 2017), such as elections, thereby strengthening democratic institutions and reducing the risk of governance failure. On the other, higher confidence in governance structures can positively influence policy experimentation, innovation (Wolak & Palus, 2010), and policy acceptance and compliance (Kollmann & Reichl, 2016).

Likewise, low trust in government and its institutions can have a detrimental impact on various processes such as elections. For instance, low trust in government can result in lower voter turnout (Grönlund & Setälä, 2007). Similarly, high trust in local governments to manage disasters has a positive effect on an individuals' disaster preparedness (Basolo et al., 2009). Putnam (1993) argues that the lack of trust can in fact perpetuate concerns around development and impede government functioning.

Levi (1998) argues that democracies have increased trust in governments by making them more trustworthy through various democratic processes such as safeguarding individual rights, and by providing citizens with the opportunity to monitor and sanction governmental action. High trust is also argued to lead to efficient governments that can work towards addressing policy problems (Aitalieva, 2018).

However, trust in democratic governments over the past few decades has been declining, and this pattern is not just limited to a few countries but can rather be witnessed in almost all advanced democracies (Aitalieva, 2018; Blind, 2007). With an increasing emphasis on democratic backsliding and its causes, it becomes pertinent to understand how lower trust as an artefact of the political culture and institutions (Waldner & Lust, 2018) can further lower democratic norms. Corruption, economic trajectories, and inequalities are among the factors that help determine the levels of political trust.

For instance, (Bowler & Karp, 2004) argue that scandals influence trust in political institutions and processes. Wolak & Palus (2010) show, using the case of US, that national level economic trends influence both confidence in national and subnational governments. Both corruption and low economic growth can be addressed by policy decisions and institutions in the near term. Elections that are free and fair often take care of corruption, and voters often punish corrupt governments during elections. Similarly, low growth can be addressed by liberal economic policies, privatization, and other means. However, inequalities are the most challenging to solve because it creates a vicious cycle that often perpetuates existing socioeconomic divides and worsens the conditions of deprivation. Using the case of the EU, Dotti Sani & Magistro (2016) show that social inequalities reduce trust in the European Parliament. Similarly, Gustavsson & Jordahl, 2008 using the case of Sweden, show that disparities in disposable income negatively influences trust in government. Next,

we discuss, the possible reasons for why socioeconomic inequalities cause citizens' trust in government to decline.

3.3 The association between inequality and confidence in public institutions

Citizens trust governmental organizations when they provision public goods effectively and help improve their economic wellbeing. However, persisting inequalities can influence this trust in many ways. First, conditions of economic inequality often cause social exclusion. Such patterns of social exclusion can lower political engagement and make the underprivileged believe that they are not capable of contributing to the civic process (Loveless, 2013). This pullback from active political engagement leads to lower perceptions of political responsiveness (Goubin, 2020; Levi & Stoker, 2000) because citizens have far lesser information to assess government's functioning (and government has less information from citizens to know their needs and preferences). For these reasons, the effects of any additional welfare spending — on things that may or may not be considered important by many citizens — are likely to have a limited effect on citizens' trust in governmental organizations (Goubin, 2020).

Moreover, lack of employment opportunities that can help meet immediate needs and assist in future class mobility can breed general distrust (Lee et al., 2020; Zmerli & Castillo, 2015) and erode social capital. This leads to a social trap where existing inequalities are perpetuated (Rothstein & Uslaner, 2005; Zmerli & Castillo, 2015). In this vein, Morgan & Kelly (2017) argue that social inequalities can perpetuate beliefs around government's inability to address social hierarchies and hence negatively affect citizens' perceptions of governmental organizations'

credibility. Public policies that effectively expand economic opportunities, including employment, could therefore potentially ameliorate these negative trends in confidence in government (Uslaner, 2003).

Similarly, socio-economic inequalities can lower access to public goods and also reduce contributions towards generating these public goods. For instance, experimental evidence suggests that when information of group standing is publicly available, individuals are less likely to contribute to public goods (L. R. Anderson et al., 2008). Existing status hierarchies within societies can therefore not only deprive the underprivileged from being able to access resources, but also perpetuate conditions that lead to poor production of public goods and can further widen the inequality gap. Indeed, evidence from India suggests that the historically socially excluded groups are made worse off by poor service delivery (Demirguc-Kunt et al., n.d.).

Existing literature focuses mainly on confidence in national or subnational governments to a large extent but less so on local level institutions (Wolak & Palus, 2010 is an exception). This is a significant limitation since most citizens are not just more likely to be directly affected by local government decision making, but they are also more likely to have direct contacts with local administrations and the public goods and services they produce (Loveless, 2013; Marien & Hooghe, 2011). Depending on local variations in mandates, local governments are responsible for many local public goods and services, including the upkeep of physical infrastructure, water and energy services, schools, health clinics, and land use planning and permitting. Local governmental organizations are often the first point of contact for the citizens with other governmental organizations operating at the regional and national levels. If we expect public policies to change citizens' trust in governmental organizations, it is at this level that we are likely to witness any substantive changes. If a policy changes

the relationship between citizens and their public servants in governmental organizations, it is at the local level where we are more likely to capture such changes.

Another limitation in the extant studies on inequalities and trust in government is that few focus on how public policies might affect this relationship in the short term. Several studies look at policies' longer-term impact on economic inequality (da Silveira Neto & Azzoni, 2011; Wu et al., 2006) but few consider how specific policies can dampen the corrosive force of socioeconomic inequality on trust in local government in the near term. Even the most effective government policies take years or even generations to change the social structures that produce unequal opportunities for social mobility.

The slow-moving nature of structural inequality, raises questions about the ability of public policies to change the near-term perceptions of citizens' confidence in governmental organizations. Doing so would be an early indication that the public policies are helping to reduce the potency of the vicious circles described above. Here, we develop and test the theoretical proposition that there are some public policies that can, under some circumstances, dampen the negative association between severe and systemic inequalities and trust in local governments.

3.4 Theory

We argue that rural development programs that use a bottom-up demand-driven design will be able to dampen the negative association between inequality and confidence in local-level public institutions. We hypothesize that

H1: Rural development programs that engage citizen and local government officials in the co-production of public goods that also provide individual employment

opportunities will dampen the negative association between inequalities and confidence in local governments overtime.

Bottom-up demand-driven rural development programs can alter the association between inequality and confidence in government through the following ways. First, inequalities, by reducing political engagement, also lower the amount of information that citizens have to develop evaluative judgements on government. And since these evaluative judgements are crucial for building trust, confidence in political institutions declines along with political engagement.

Programs, like MGNREGA, that are designed to capture local level needs through a bottom-up participatory process have the potential to change citizens' confidence in government organizations since they give citizens and government workers opportunities to interact and work together. These opportunities for repeated interactions allow participants to calibrate and re-assess their evaluative judgements on trustworthiness of institutions.

Bottom-up demand-driven policies are thus capable of improving bridging and bonding social capital in communities. The literature on social capital theory suggests that pro-social, cooperative behaviour among individuals promoted through social networks will lead to social trust and thereby political trust (Zmerli & Newton, 2008). This is because political trust partly hinges upon the benefits that are derived from social capital which in turn promotes democratic norms and political participation (Kim, 2005; Putnam, 1993, 2000).

When policy interventions use bottom-up participatory planning processes, participants build stronger and more trusting relationships with one another through repeated interactions (Freitag, 2009; Andersson 2013). We argue that the bottom-up process aimed at co-production of public goods brings together villagers and local

government representatives in more frequent interactions with one another than would otherwise be the case. This increased frequency of personal interactions serves to strengthen bridging social capital between governmental civil servants and local villagers.

In the case of India, the Mahatma Gandhi National Rural Employment Guarantee Act represents a large-scale rural development program that embraces a bottom-up participatory planning processes to generate increased employment opportunities and the creation of local public goods in rural areas throughout the country. The gram sabha or the electorate of the lowest local level institution (Panchayat) collectively determines local level priorities. Subsequently, individuals who require additional pay petition the Panchayat for work, which increases interactions with the governmental organization/agency. Hence, such policies are able to co-produce public goods and increase supportive interactions between the state and its people on one level, and between people on another level. The proposed causal mechanism is described in the below figure (see Figure 3.1).

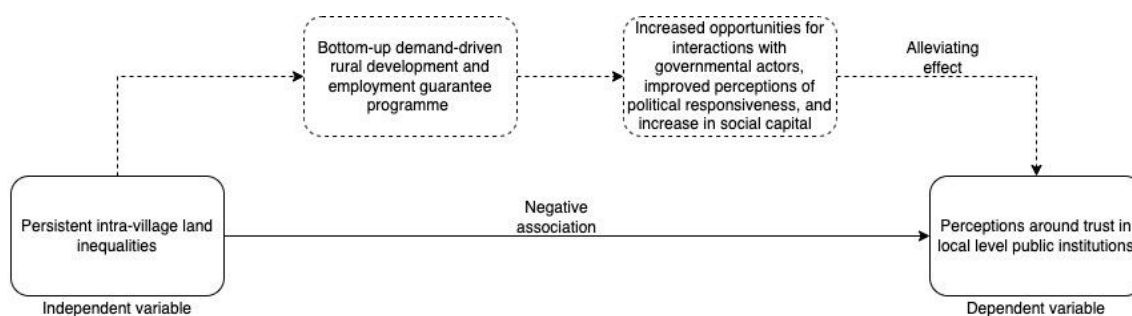


Figure 3.1: Plausible causal process in across villages in which MGNREGA was and was not implemented

3.5 India, local governments, and MGNREGA

India presents a useful case to study the above-mentioned relationships for multiple reasons. The 1993 amendment to the Indian constitution led to the emergence of a vibrant local self-governance institution in the Panchayats, which are regarded as grounds for deliberative democracy (Parthasarathy et al., 2019). They are characterized by a democratically elected village president and play a crucial role in the implementation of policies and programs of both the state and central governments. Moreover, over the past many decades India has also embarked on a long and tedious journey of cultural democratization. Historically, justice at the local levels, in the small hamlets and villages across India, was largely delivered by the village courts (“Nyaya” Panchayats)³. These are cultural institutions that promoted caste-based divisions, and often are headed by the privileged caste groups, emblematic of the underlying inequalities. However, overtime, with cultural development and policy changes, the role of village courts has been slowly decreasing.

Hence, the Panchayats are arguably the most prominent village level institution in India. Not only is the presence of such vibrant local level institution beneficial for the purpose of the study, but the presence of one of the largest public-works oriented rural development employment guarantee scheme, MGNREGA, makes India an ideal case. There is also variation in both the targeted villages and the inequality levels further strengthening the choice of India as a case. Moreover, by employing a within-country analysis, we also hold many institutional structures constant, thereby strengthening the choice of the case.

³ These are different from the Panchayats that were established through the 1993 Constitutional Amendment. The latter are characterized by democratically bodies, while the village courts are often caste/family based and have not constitutional legitimacy.

The MGNREGA is a central government policy that was enacted by the Indian parliament in 2005. It is arguably the largest cash transfer scheme with roughly 48 million households as beneficiaries (Department for International Development, 2011). It takes a rights-based bottom-up approach to rural employment and development and promises 100 days of guaranteed work for all individuals. This work is directly related to projects that promote rural development. The policy was implemented in three phases, with the first phase starting in 2006, and the last in 2008, when all districts in India had been covered. However, actual work on the ground varied. While multiple levels of government are involved in the implementation of MGNREGA, the Panchayat Raj institutions have played a crucial role.

As a bottom-up policy initiative, the Gram Sabha or the village assembly in a public meeting asks individuals who need additional work to register themselves (Desai et al., 2015). Subsequently, the Gram Panchayat consolidates this list along with a list of potential public works projects based on village level needs, which is determined collectively. This is then conveyed to the Panchayat Samiti at the Block (intermediate) level and subsequently the Zila Parishad or the district level Panchayat, which then sanctions the projects (Desai et al., 2015). Hence, the role of the Panchayat is central to the implementation of the program, right from the stage of consolidating lists of interested individuals to the stage of potential project review and sanctioning. Thus, the projects that the MGNREGA program are collectively determined and embody the principle of deliberative democracy, where citizens are given a voice to identify needs collectively.

Literature on MGNREGA suggests that the program has had mixed success. Studies have shown that though MGNREGA has led to improved household incomes, this change was not substantial enough to make long-term changes to inequality

patterns (Breitkreuz et al., 2017). Similarly, it has also been argued that the program has been extremely successful in increasing wages by providing new avenues for employment and increasing competition in the labor market (Misra, 2019b) and has helped reduce malnourishment rates and wastage (Nair et al., 2013). Similarly, Klonner & Oldiges (2014) suggests that the program had positive effects for poverty alleviation on the marginalized communities, mainly the SC and ST population. With this understanding, we argue that the MGNREGA could still have a positive effect on confidence in local institutions through the above discussed two-pronged effect of individual and collective wellbeing.

3.6 Data and Measurement

We use data from the Indian Human Development Survey (IHDS) panel data. The surveys were conducted in two waves, one between 2004-05 and the other between 2011-12, at the household level. Post attrition, the panel data has a sample size of 40,018 households. We subsequently subset the data to include households located in rural villages (since the policy's focus is rural regions) and omit the ones from urban regions, resulting in a sample size of 27,500 households across 1,407 rural villages in 19 states.

Existing literature on inequalities use either land-based, income-based, or consumption-based inequalities as the choice of measurement (Ansell & Samuels, 2015). While data availability often drives this choice, asset, land, and consumption inequalities capture more variation than just an income-based inequality measure. The latter might not capture governmental assistance or actual disposable income. Moreover, in developing countries which are predominantly agrarian, land-based inequalities might be a preferred choice of measurement (Andersson et al 2018). This

is especially true when landed elites often belong to a certain class and/or caste group, thereby skewing inequality patterns. This is very evident in the Indian case. India has had a history of caste-based discrimination, with downstream effect on various socio-economic and political outcomes (Jayaraman & Lanjouw, 1999; Misra, 2019a). Moreover, evidence suggests that more than half of the income inequalities witnessed in India are linked to income differences from cultivation which is inherently linked to land ownership (Chakravorty et al., 2019). Hence, we decided to use a group-based land inequality measure in this study which is held constant across the two time periods.

The traditional approach to measure group-based inequalities in India has been to exploit government defined categories such as caste divisions to understand inequality patterns. Such approaches make use of the four large social groups – Scheduled Tribes, Scheduled Castes, Other Backward Castes, and Other Castes. However, emerging evidence suggests that there are large variations even within these groups. Joshi et al., (2018a) (2018b) suggest that we need to focus on more granular social groupings such as “Jati”, a system that defines local-level stratification within these larger social groups. Using multiple cases, they suggest that jati-based inequality measures capture a lot more variation and can help discern the true inequality patterns and the interactions between inequality and gender.

Nevertheless, data on such micro-level social groupings is often difficult to obtain. The villages level surveys from IHDS, however, capture this granular data through a measure that identifies the percentage land a jati holds at the village level, thus allowing us to measure micro-level inequalities. To construct the inequality index, we first measure jati specific land holding within the village using the data from 2005. This is done by calculating a ratio of percent population within a jati and the percent land they hold within the village. We subsequently measure the mean

squared deviation of the land holding across various jatis in the village. This gives a granular measure of jati-based land concentration index at the village level. Higher values indicate high land inequalities, while lower values on this index indicate lower land inequalities. To ensure that there is no post-treatment bias (Montgomery et al., 2018), we estimate the inequality index based on group-based land holdings in 2005 and use this as the independent variable across the two time periods.

The other independent variable, MGNREGA, is a dummy variable indicating whether there was any work done under the MGNREGA scheme in a village at the time of the survey (1099 villages out of 1138 villages had work under MGNREGA carried out in the past year). We interact both inequality and MGNREGA with the dummy variable “Year”, which indicates the year of the survey (2005 and 2011). This is to ensure that we can capture the changes in confidence over the 2005-2011 period, conditional on MGNREGA and inequality. The dependent variable measure citizens’ confidence in a local government organization, the Panchayat, a democratically elected local governance body in India. This variable is ordered and is coded as hardly any confidence, only some confidence, and a great deal of confidence.

3.7 Research Design

We use a quasi-experimental design based on coarsened exact matching and difference-in-differences to estimate the above hypothesized effects. We first preprocess the data using coarsened exact matching (CEM) at the village level to balance the sample of surveyed villages. We use CEM based on recent literature which suggests that it can achieve the best covariate balance as opposed to other matching techniques (Ripollone et al., 2020).

In the current research design, we match on five covariates measured in 2005 that account for village-level socioeconomic and biophysical conditions that can

explain confidence in panchayats. For confidence in panchayat, we first use a variable that measures the type of road in the village. This is measured as a categorical variable indicating whether the road is built (“pucca”), partially built (“kutchra”), or has no built road. We argue that the road type can be a proxy measure for the larger availability of government resources to the villages. Villages with no built road access are likely to have less market access, government assistance, and public goods overall. We use two more binary variables that measure if the village has healthcare centres and Self-Help Groups (SHG). Access to healthcare in rural India is a big concern, often characterized by poor access to care centers, lack of doctors, and medical equipment (Sharma, 2015). Hence, villages with access to healthcare centers are likely to have better health outcomes, which could potentially positively influence confidence, especially since a large portion of rural India relies on government healthcare centers.

Similarly, villages with SHGs are likely to have higher social capital given the associational benefits that civil society organizations have, which can inherently influence confidence in local institutions. Further, a population variable measures if the village has low, medium, or high population to match the data at the village level. Finally, we also use a variable that measures the distance to the nearest police station in kilometers. Access to a police station is likely to positively benefit crime rates within the village. Post matching, we obtain a sample of 1128 villages for confidence in panchayat, with 1099 belonging to villages in which MGNREGA work was carried out, and 29 belonging to villages in which no work under MGNREGA was carried out. Summary covariate balance plots from the matching are available in the Appendix (see Appendix Section A2.2).

Since MGNREGA was implemented between the two time periods (2004-05 and 2011-12), we use a difference-in-differences (DiD) design. However, since we are

interested in the association between inequality and confidence in local public organizations, we modify the difference-in-differences design, and interact the DiD estimator with inequality. This helps us understand the pre-post difference in the association between inequality and confidence in public institutions across villages in which work under MGNREGA was and was not carried out.

An assumption that difference-in-differences makes is of parallel trends, wherein the treated villages would be similar to the untreated villages in the absence of the treatment effect. Given that the data contains only two time periods, we are unable to test (see (Angrist & Pischke, 2008; Kahn-lang & Lang, 2019) for any violations of these assumptions. Finally, in the design, intervention spillover effects might bias the estimated effects. In the sample, the most prevalent work carried out under MGNREGA was road-building activities. The second most prevalent activity was work-related to ponds. We argue that both these activities are to a very large extent likely to benefit only the residents of the treated village. For instance, village ponds are used for various purposes, including but not limited to irrigation, groundwater recharge, bathing, and water collection, all of which are likely to only have a localized impact. Given the dependent variable, we estimate the effects through an ordered logistic regression

3.8 Results

We estimate an Ordered Logistic regression model. The table below (see Table 1) captures the effect of MGNREGA on the inequality–confidence in panchayat relationship. As noted above, this regression also controls for household income along with the covariates used for the matching, which include presence of self-help groups and health centres at the village level.

The results from the table suggest that the triple interaction between MGNREGA, Year, and Intra-village inequality is significant ($p < 0.01$). For ease of interpretation, we first estimate the average predicted values of confidence in panchayat in villages where MGNREGA was not implemented in year 2005, and difference this with the average predicted values of confidence in panchayat from year 2011 in the same group. We repeat this for the villages where work related to MGNREGA was carried out as well. While calculating these values, we hold all other variables constant at their means. This helps us simplify the estimates which are captured in Figure 3.2

As hypothesized, the change in average predicted values for confidence in panchayat in the villages where MGNREGA was not implemented across the two time periods shows a strong negative trend. At higher levels of inequality, the change in predicted values of confidence in panchayat across 2005 and 2011 is more negative. This contrasts the villages where MGNREGA work was carried out, where the effect of inequality on the change in confidence in panchayat between the two time periods is near zero and virtually constant across varying levels of inequality. This suggests that MGNREGA, as hypothesized, has been able to neutralize the negative relationship of inequality on confidence in local-level public organizations. Figure 2 also captures the frequency distribution for inequalities on the Z axis.

In an alternate specification, caste, and education of the head of the household (all measured in 2005) are also controlled for in the DiD design, especially since confidence could vary according to household income, caste, and education levels. The results are robust to these alternate specifications as well (see Appendix Section A2.3).

3.9 Discussion

Using quasi-experimental methods and the case of India we show that bottom-up demand-drive rural development programs such as the Mahatma Gandhi National Rural Employment Guarantee Act can dampen the negative association between inequalities and confidence in local-level public institutions over time. We argue that improved perceptions of political responsiveness, higher bonding and bridging social capital as the reasons for the dampening effect.

To further this claim, we exploit a survey question to test if social capital is indeed higher after program intervention. Using a survey question that asks the respondents' perceptions on how the community would solve local problems, either collectively (measured as 1) or each family solving them individually (measured as 0) we measure bonding social capital. We then estimate the direct association of MGNREGA on this dependent variable while controlling for inequality, caste, education, and income of the respondents using logistic regression. The results indicate that MGNREGA had a positive effect on bonding social capital (see Appendix Section A2.4). This is suggestive of the program contributing to stronger bonding social capital, which is consistent with our theory.

One potential objection to our result is that the dampening effect of MGNREGA on the association between inequality and citizens' trust in the Panchayat might be a result of an inherent selection bias across the two sets of villages where the MGNREGA was and was not carried out. Some might argue that the degenerative effect that we observe in the results is an artefact of the underlying developmental issues within the villages where work was not carried out which might have influenced the policy's effect.

For example, perhaps the MGNREGA avoided selecting villages that were conflictive, violent, or otherwise problematic. If MGNREGA strategically selected villages that showed higher likelihood of success, we would expect to see significant differences between the two sets of villages with regards to several socioeconomic conditions before the intervention, but we see no evidence of such selection bias. Our comparisons of villages show no significant differences for a variety of measures of village conflicts and violence. Specifically, we test if the percent population reporting conflict among jatis and percent population reporting physical violence (or the threat of it) is significantly different between villages where MGNREGA was and was not implemented in the year 2005. Appendix Section A2.5 captures these results, and we find no significant difference between these two sets of villages. Nevertheless, we are bound by data limitations and cannot include several other potential variables that might have influenced the intervention's effect and hence induced a selection bias. For instance, the villages where MGNREGA work was not carried out might all be remote, in treacherous terrains, or affected by insurgency which we are unable to observe in the current data.

One might also argue that MGNREGA leads to a reduction in income inequality, and this change could be driving the observed increase in trust. However, it is important to note that income inequality would be considered a post-treatment measure in this context, as MGNREGA could directly impact income levels through its employment provisions. This means that any changes in income inequality following the program's implementation are influenced by the treatment itself, which could introduce post-treatment bias if included in the analysis. By measuring land inequality only in the first period (pre-treatment), we can isolate its effect on trust without the confounding influence of income changes resulting from MGNREGA.

<i>Dependent variable: Confidence in panchayat</i>	
MGNREGA	0.015 (0.119)
Year	−0.365** (0.182)
Inequality 2005	0.120* (0.062)
Medium population	−0.036 (0.023)
High population	−0.146*** (0.036)
SHG	−0.032 (0.021)
Partially built road	−0.098*** (0.023)
Built road	−0.136** (0.054)
Health centre	0.062 (0.047)
Income	0.009*** (0.002)
MGNREGA:Year	0.146 (0.183)
MGNREGA:Inequality 2005	−0.120* (0.062)
Year:Inequality 2005	−0.450*** (0.092)
MGNREGA:Year:Inequality 2005	0.450*** (0.092)
1 2	−1.619*** (0.119)
2 3	0.484*** (0.007)
<i>Note:</i>	
*p<0.1; **p<0.05; ***p<0.01	

Table 3.1: MGNREGA's effect on the relationship between inequality and confidence in panchayat. Estimates are based on a logistic regression on a matched sample

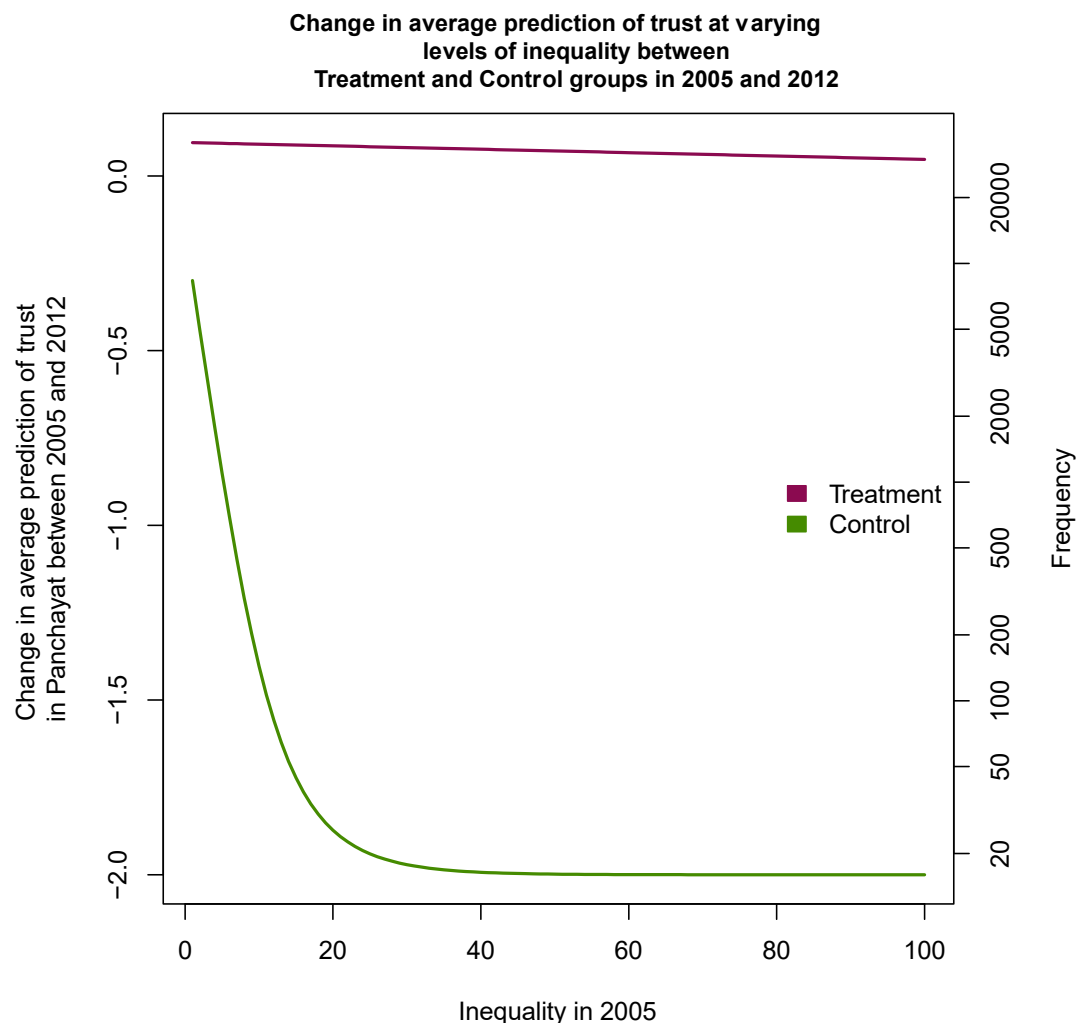


Figure 3.2: Change in average prediction of confidence in panchayat

We consider the degree to which the estimated effects are limited to panchayats. To answer this question, we also estimate the effect of MGNREGA on confidence in police and state government using a matched sample. The outcome variable is ordered, with 1 indicating low confidence and 3 indicating high confidence. We find evidence that MGNREGA has had a neutralizing effect on the change in confidence in state government in the villages where MGNREGA was implemented. This is robust to alternate specifications accounting for caste and education. While

the effect on state governments could be hypothesized to be a spillover effect, we are unsure of the specific mechanisms through which MGNREGA can influence trust in police. One plausible mechanism is high social trust leading to lower crimes and thereby influencing trust in police. Future research could explore this in-depth.

Overall, these results have implications for public policy design and local governance. Local institutions play a crucial role in service delivery. They act as the first point of contact with the state for citizens. Hence, when inequality leads to lower confidence in public institutions over time, they can negatively affect service delivery, and have a negative spill over effect on confidence in higher levels of government and the larger democratic process. The theory that we posit here emphasizes on the uniqueness of MGNREGA, as a bottom-up demand-driven, differentiating it from other welfare and rural development programs. We show that policy design can help alleviate the negative association between inequalities and confidence in public institutions overtime. Embedding a bottom-up, deliberative process for decision making within the policy can also have large implications and enhance the perceptions around public organizations.

This research proposes a few causal pathways through which inclusive public policies can shape political outcomes. Future research can make use of experiments to test if these causal pathways do in fact determine outcomes. Moreover, future research can also explore if these positive effects on trust are persistent overtime. It might be possible that the positive effects we witness are only in the near-term, and might wane over time.

In this study, we focus on a few policy design aspects, such as bottom-up deliberation, emphasis on public-works and community asset building, of welfare policies to understand their effect on the inequality-confidence in local institutions

relationship. There is scope for understanding the implications of other policy design aspects, such as self- and pre-targeting, and future research could capitalize on such variations. Further, they can also widen the analysis to understand the impact of policy design on other outcome variables, including but not limited to governance, health, and socio-economic indices, and whether such positive effects persist over time.

CHAPTER 4

How does exposure to non-state climate action alter climate policy attitudes?

The role of non-state climate actors often raises questions about accountability and legitimacy. One concern is that non-state actors could potentially undermine the role of the state, reducing the likelihood of state-led climate action. In many cases, non-state actors hold governments accountable for their climate promises and actions by acting as watchdogs during international meetings or increasing transparency on the effectiveness of state initiatives. However, the impact of non-state climate action on political attitudes is less well understood. In this study, I argue that in a Global South context, exposure to non-state climate action can lower the priority of climate issues on individuals' policy agendas, particularly in political environments that do not experience polarization over climate policies. Given the multiple development challenges in the Global South, individuals often prioritize policies addressing basic needs. When they see other actors addressing climate change, it may lead to a deprioritization of climate concerns. Additionally, in the absence of political polarization on climate issues, individuals lack partisan cues to shape their policy preferences, further pushing climate action down their list of priorities. I test these assumptions using a survey experiment and find no evidence of such an association. I additionally test if these effects are moderated by political trust and find evidence in support of this.

4.1 Introduction

What influences climate action? While the role of public support has long been argued to influence public (and climate) policies, an emerging narrative in the study of climate policy is the role of multiple actors across scales working together to create a set of rules and processes to address local and global challenges. This idea is also strongly embedded in the evolving discourse of earth system governance (Biermann, 2014), which is characterized by highly embedded actor networks that work towards addressing environmental challenges and ensuring societal transformations (Biermann et al., 2010). Such arguments in favour of multiple actors not only are specific to research on climate policy, but can also be seen in real world policy contexts. For instance, the Paris Climate Change Agreement, which, while building on voluntary and bottom-up national commitments to reducing emissions and improving adaptation measures, also emphasizes the role of non-state actors in meeting the 2-degree goal that the Agreements furthers (Kuyper et al., 2018).

This emphasis on the role of various (climate) actors within the Paris Agreement is not, however, new. Literature on the governance of climate change has increasingly emphasized the role of non-governmental organizations, businesses, and citizen groups amongst other actors that go beyond the traditional hierarchical forms of governance that emphasize the role of the state in dealing with climate challenges. Such notions of multiplicity are strongly embedded in the literature on polycentric governance systems which are characterized by interlinked actors working towards an issue who are not accountable to each other (Moser & Ekstrom, 2010). The emerging climate governance systems are thus highly polycentric in nature and are characterized by multiple actors across scales.

Such a polycentric approach has two main advantages: 1.) it leads to more experimentation and thereby policy innovation, and 2.) it accommodates and encourages actions by not just state but also nonstate actors (Cole, 2015). For instance, a growing literature argues about the importance of transnational networks, characterised by partnerships between various local governments, NGOs, and donor agencies, in effective climate action (see (Bulkeley et al., 2003; Pattberg and Stripple, 2008; Andonova, Betsill and Bulkeley, 2009)). Scholars have also argued that polycentric systems, systems characterized by interlinked actors working towards an issue (Moser and Ekstrom, 2010), could lead to greater action, especially in the context of climate change. Moreover, the multiplicity of actors that polycentric systems are embedded with leads to greater adoption of new norms through processes that promote learning between the actors (Andersson and Ostrom, 2008).

Similarly, scholars have argued for designing effective governance methods that promote multistakeholder processes (Sparrevik, Barton, Oen, Sehkar, & Linkov, 2011) which could lead to the accommodation of normative judgments on one hand and, on the other, incorporating technical expertise (Trærup & Bakkegaard, 2015), and thereby aide in assimilating multiple points of views (Morrissey & Browne, 2004). It has been noted that participatory governance methods have a great potential to effect “genuine transformation” (Hickey & Mohan, 2004). Johnson & Wilson (2000) note that for a greater coherence of action, inclusion is a necessity, and such collaborations and multi-party interactions are examples of social learning (Gall, Cutter, & Nguyen, 2014) that could, in turn, facilitate transformation.

Moreover, polycentric governance mechanisms are not bound by a central authority, act across scales, and can cater to specific groups or issues. This targeted approach, where institutions (state or non-state) could cater to only a specific subset of the populations or issues could also increase the possibility of experimentation,

induce co-learning, and thereby result in better governance outcomes. The lack of a central authority also furthers the prospects of information sharing and cross-learning (Carlisle and Gruby, 2017), thereby enabling greater policy learning and diffusion.

However, the nature of polycentric systems characterised by fragmentation and interdependence can lead to governance challenges, especially with respect to legitimacy and accountability (Bäckstrand, Zelli and Schleifer, 2018). Accountability, as Arceneaux (2006) argues, is far less understood within such frameworks, and is a necessary precondition for devolution of powers to see a positive effect. They further argue that institutions would be more equitable only if they can be held accountable. More specifically, given that these systems often involve many public and private actors, conceptualising accountability is often difficult. For instance, how can citizens/state institutions hold a non-governmental organization working on improving the adaptive capacities of a community accountable? Or how can the state hold companies accountable for their voluntary commitments to mitigate carbon emissions? Similarly, a reliance on nonstate actors for implementation of climate action can lead to uneven implementation and outcomes that can lead to political contention (Chan et al., 2019). While these are some challenges that polycentric systems pose for accountability, in this study, I focus on the implications of non-state climate action and what it means to hold the state accountable for inaction.

More specifically, I argue that non-state climate action can potentially reduce support for state-led climate policies in polities that do not see climate and environmental policies as politically salient. This is because citizens push climate policies lower down the policy priority list. Thus, I aim to uncover how two streams that co-determine policy outcomes—actors and public support—can influence each other to only dampen support for stronger climate policies. This is particularly

important given that current policies are only likely to limit global temperatures to 2.7 degree Celsius compared to pre-industrial levels, while future policies can potentially limit temperatures to 2.5 degree Celsius compared to pre-industrial levels. This highlights a large gap between the commitment to limit global temperatures to 1.5 degree Celsius and the current levels of climate action.

In this light, states must implement strong and transformative climate policies to enable more effective action across all levels of governance. However, in the absence of strong political and more importantly public will, such policy action is unlikely. In this study, I test whether exposure to information on non-state climate action alters support for climate policies. I use a pre-registered experiment to test these assumptions. The experiment randomly assigned a message on climate action undertaken by non-state actors, specifically companies. This should result in lower support for climate policies per my pre-registered assumptions through two outcomes – by lowering their support for stronger climate policies that have higher personal costs and by reducing their likelihood of using their vote to hold the state accountable for climate policy inaction.

My results provide no evidence that the exposure to the vignette on non-state climate action reduces (or increases) support for climate policies through the above means. This suggests that the theorized mechanism through which non-state actors influence public support for climate policies is not evident in my sample. While this presents a hopeful case, additional analysis shows that the treatment has heterogenous effects. Specifically, my results show that political trust mediates the effect of the treatment on intention to hold the government accountable for climate inaction by using their vote. These supplementary results validate some theoretical assumptions about how non-state climate action can potentially alter public support, but the conditions under which this happens is more nuanced. In the

subsequent sections, I first present a broad overview of the current literature on what influences public policies, and then delve into the relationship between actors and public support in the theory section. I then describe the data and methods I use to collect and analyze the data. I finally present the results from my study and discuss its implications.

4.2 What influences policies?

Many policy problems exist globally, but governments address only a few through state policies. Why is this? Scholars offer several explanations. Some argue that windows of opportunity are crucial for policy outcomes, while others suggest that actors implement policies by learning from each other. I will discuss key theories and frameworks below, along with examples that illustrate their relevance to climate policymaking.

John Kingdon's Multiple Streams Approach (MSA) identifies three independent streams—policy, politics, and problems—that run in parallel. During critical windows of opportunity, these streams converge, creating opportunities for change (Kingdon, 1995). Policy entrepreneurs—individuals who link the policy and politics streams—facilitate this process. Initially developed to explain U.S. policymaking, scholars have since applied the MSA to other fields, such as education and health (Kusi-Ampofo et al., 2015; Lieberman, 2002), and across different scales, including local levels (Ridde, 2009). The concept of policy entrepreneurs also aligns with policy orchestration, where individuals use intermediaries to co-manage issues (Abbott et al., 2016). In climate policy, researchers have used the MSA to study emissions trading schemes in Germany (Brunner, 2008), sea level rise policies in the U.S. (Yusuf et al., 2016), and energy conservation policies in India (Goyal, 2022).

In addition to the multiple streams approach, other frameworks make use of social norms to help shed light on why certain policy issues are addressed while others are not. For instance, the social construction policy framework argues that the perception of others shapes policy choices and outcomes (Sabatier, 2014). More broadly, social construction framework deals with aspects of how target populations are characterized and viewed which then has implications for policy processes (Schneider and Ingram, 1993). For instance, in the climate policy sphere, the characterization of certain socio-economic groups positively can result in more public support for targeted policies that might benefit the target population in the face of climate change. The framework has broader implications, as seen in criminal law, where punitive policies often remain entrenched because prevailing social norms dictate what is considered “right” (Sabatier et al., 2014).

Policy diffusion theory explores how and why governments adopt innovative measures. It highlights internal determinants—social, political, and economic factors specific to a location—and diffusion mechanisms like coercion, imitation, and learning (Shipan and Volden, 2008; Berry and Berry, 2014) that can determine policy innovation and experimentation. Researchers have used policy diffusion extensively to study climate policies. For example, Massey et al. (2014) explore how climate adaptation policies spread across Europe, while Kammerer and Namhata (2018) study policies aimed at reducing greenhouse gas emissions.

Lastly, policy feedback theory shows how policy outcomes can reshape political processes. The theory suggests that policy outcomes can reshape the political process, which can then impact future policy outcomes (Mettler and Sorrelle, 2018). Thus, the policy feedback theory heavily relies on the interlinkages between the policy and political processes, and how they are intertwined and result in feedback loops that can reshape future policy developments (Moynihan and Soss, 2014). Such policy

feedbacks has been acknowledged by political scientists, for instance, while studying how welfare policies can improve political participation which can in-turn change future welfare policy development.

All these theories share a common theme: they explore the relationships between institutional venues, coalition structures, and contextual variables that shape policy outcomes. For example, the MSA demonstrates how public opinion interacts with the political process to drive policy change, while policy feedback theory highlights the reciprocal effect between policy and public opinion.

Building on this literature, I argue that understanding the impact of polycentric governance systems on policy outcomes requires a deeper understanding of polycentric climate governance. We must look beyond positive feedback loops to consider the broader implications of emerging governance systems for future policy processes, which I will discuss further in the Theory section.

4.3 Theory: The relationship between actors and public support

Support for climate policies can be driven by various factors. First, a bottom-up push from citizens demanding change can lead the state to experiment with new policies. This aligns with agenda-setting literature, which explores how political parties and policies respond to public opinion (Adams et al., 2004; Page & Shapiro, 1983). More specifically, Klüver and Spoon (2014) examine how party manifestos in European democracies adapt to citizens' policy priorities. In the U.S., Jones and Baumgartner (2005) highlight the significant correlation between citizens' policy concerns and congressional hearings. Together, this research suggests a flow of information between citizens and representatives that influences policy outcomes.

On the other hand, citizens may also take cues from political parties, which can shape public support and further drive political action. For example, de Vries, Hakhverdian, and Lancee (2013) examine how voters in the Netherlands align with certain political identities, which in turn shapes their vote choices. They argue that voters use parties as signals to build their preferences, drawing on bounded rationality in decision-making. The study illustrates how new policy areas, such as immigration, can dominate the political agenda, pushing older issues like economic redistribution to the background. Similarly, Slothuus and Bisgaard (2021), using a quasi-experimental design, find that citizens' policy opinions shift significantly when political parties change their policy stances. This body of research supports the notion that political parties play a key role in cueing citizens' policy opinions.

Additionally, citizens often grapple with potential trade-offs when forming opinions on public policies. The existing literature suggests that development priorities may overshadow environmental concerns (Feiock & Stream, 2004; Zhang, 2021). A recent study from India (Singh & Thachil, 2024) finds that while respondents believe pollution control could hinder development, this does not necessarily diminish support for clean-air policies.

In this research, I argue that when citizens are exposed to information about non-state climate action in polities without political polarization on climate issues, they may deprioritize climate policies on the state's agenda due to a perceived sufficiency of these non-state efforts. This shift occurs because citizens often perceive a trade-off between development and environmental policies. In developing countries, where numerous material, social, and economic challenges exist—and importantly, where non-state actors are already addressing climate issues—citizens are even more likely to view these non-state initiatives as sufficient, leading them to discount policies with long-term implications, such as climate initiatives. This phenomenon

aligns with research that links uncertainty about the future to a preference for short-term benefits. Thus, in the developing world, citizens are more inclined to prioritize policies that enhance immediate well-being over those addressing long-term challenges. These dynamics, when coupled with exposure to non-state climate action, foster the perception that the issue is being adequately addressed by other actors, resulting in a further de-prioritization of state-led climate policies. In this study, I measure support for climate policies through two main indicators: (1) support for climate policies with higher personal costs and (2) the intention to use votes to hold the state accountable for climate inaction. Therefore, I propose the following hypotheses:

H1: Exposure to nonstate climate action decreases support for state-led climate policies that have higher personal costs.

H2: Individuals exposed to nonstate climate action are less likely to exercise their vote to hold the government more accountable for not acting on climate change than individuals who are not exposed to such information.

In addition to the direct effect of exposure to nonstate climate action, I argue that this effect is moderated by levels of political trust. Existing literature identifies trust as a crucial determinant of climate policy support. For instance, Kitt et al. (2021) show that trust in the national government is positively associated with support for climate policies in Canada. Similarly, Cologna and Siegrist (2020), in a meta-analysis, show that institutional trust correlates with support for climate policies, while lower trust leads to lower support. Therefore, I argue that the reduction in support for climate policies is less pronounced in individuals with higher institutional (political) trust. This leads to the following hypotheses:

H3: The effect of exposure to nonstate climate action on support for state-led climate policies that have higher personal costs will vary depending on the level of trust in institutions. Specifically, individuals with higher political trust will exhibit a less pronounced reduction in support compared to individuals with lower political trust, who will exhibit a more pronounced reduction in support.

H4: The effect of exposure to nonstate climate action on support for using voting to hold the government accountable for climate inaction will differ by political trust. Individuals with higher trust will be less likely to use their vote for this purpose compared to those with lower trust.

Finally, existing research on the impact of risk exposure on support for climate policies suggests that risk exposure has either a moderate or no effect (Mayer et al., 2017; Ray et al., 2017; Zahran et al., 2006). Despite this, I hypothesize that risk perceptions may interact with exposure to nonstate climate action to shape support for climate policies. Specifically, individuals with higher risk perceptions may view the costs of inaction as more significant, leading to a smaller reduction in support for climate policies across treatment and control groups. Thus, I hypothesize the following:

H5: The effect of exposure to nonstate climate action on support for state-led climate policies that have higher personal costs will vary depending on the personal experience with climate risks. Specifically, individuals with higher exposure to climate risks will exhibit a less pronounced reduction in support compared to individuals with lower exposure to climate risks, who will exhibit a more pronounced reduction in support.

H6: The effect of exposure to nonstate climate action on support for using voting to hold the government accountable for climate inaction will differ by exposure to

climate risks. Individuals with higher exposure to climate risks will be more likely to use their vote for this purpose compared to those with lower exposure to climate risks.

4.4 Research and Methods

To recruit participants, I used the services of Dynata, an online market research firm. Dynata has close to 70 million (Dynata, 2024) opt-in individuals who are recruited by the firm through various means including social media and direct email messages. For this survey, I requested Dynata for a sample of individuals from India⁴ who are above the age of 18 and read English fluently. The survey was open to the sample frame on Dynata only, and no other platforms were used to recruit participants. India is a good case to study these effects because political parties do not have polarized opinions about climate policies. In fact, both the left-leaning United Progressive Alliance and the right-leaning National Democratic Alliance governments have enacted crucial policies that promote sustainable development, energy conservation, and renewable energy capacities amongst measures. Moreover, election manifestos of two major parties, the Bhartiya Janata Party and the Indian National Congress, refer to various climate policies, and none of them oppose such policies.

The survey respondents received incentives per Dynata's agreement with the participant. The incentives are in the form of reward points that can be redeemed for cash, gift cards, and loyalty points. Regardless of the way these points are redeemed all participants are given the same points for completing the survey. Dynata's sample

⁴ While Dynata was asked to limit the sample to residents of India, there is still a risk of non-residents participating in the study through other means. To ensure that the final sample is restricted to residents of India only, I also collected location information from the respondents. Any respondents who answered "I do not live in India" to the location question were not allowed to complete the survey. This is especially important given that the theory relies on the fact that climate policies are not politically salient nor are they an electoral issue in India and including non-residents in the survey might lead to biased estimates.

has an identical number of male and female respondents, and a majority of them have an Undergraduate degree or above. A majority of the respondents on Dynata's India panel are between 26-34 years. Qualtrics was used to program and administer the survey.

The pre-registered survey was administered between August 1st and August 3rd. During the open-enrollment, 1754 participants clicked on the link and accessed the survey. The survey included consent, a screener (location) and one instructional manipulation check. Failing to consent to the study automatically terminated the survey. Similarly, if participants responded to the question on location with "I do not live in India", the survey was terminated. This was essential to ensure that respondents are residents of India, where climate policies are not politically salient. Finally, the survey was also terminated for respondents who failed to pass the instructional manipulation check. The IMC required respondents to select a particular response after collecting some basic demographic information from the respondents. After excluding these respondents, a total of 522 responses subsequently qualified for the study.⁵ The mean duration to complete the study among these 522 responses was 506 seconds (or roughly 7.5 minutes).

In addition to the question on location, which was used as a screener, participants were also prompted to respond to demographic questions on sex, age, education, income level, and political leaning. The study makes use of a post-test experimental design. This approach was deemed appropriate to avoid the potential priming effects that could arise from asking participants about their climate policy

⁵ This is a new area of research and there are not many published studies on the subject from which I can estimate a potential effect size. But assuming a medium effect (0.5) and an alpha of 0.05 and a power of 0.95, I estimate that I will need 52 respondents per group for the study to be adequately powered. Power analysis was conducted using Cohen's measure of effect size, obtained through the pwr package in R (Champely, 2020).

preferences before exposure to the vignette. Priming could lead participants to focus on specific aspects of the treatment, thus influencing their responses in ways that do not accurately reflect the treatment's impact. With a sample size of 500, random assignment ensures that both the treatment and control groups are equivalent on key variables. This design allows for a clear and direct assessment of the treatment effect, ensuring that any differences in post-test outcomes can be attributed to the treatment itself rather than to pre-existing biases or influences introduced by a pre-test.

Therefore, the survey does not measure the dependent variable before the treatment. Thus, after recording basic demographic data, participants were subsequently randomly assigned to treatment and control conditions. The treatment condition contained a short informational text on how various (fictional) Indian companies were adopting practices and policies to reduce carbon emissions and protect the environment. The control group received an innocuous message that did not make any reference to climate action and only spoke about the (fictional) companies. The messages that the control and the treatment groups were exposed to are detailed in the table below. One of the reasons for choosing fictional companies instead of companies that already operate in India is to mitigate the potential risk of inducing responses that might be politically motivated.

Table 4.1: Survey experiment design for information on climate action
<u>Random assignment of treatment conditions</u>
Information on nonstate climate action

	Vignette
Treatment	Please read the following text before proceeding with the survey. Across India, a diverse group of corporations/companies are taking bold and voluntary steps to combat climate change: ModernTech Construction: ModernTech's new office buildings are powered by solar energy and use advanced water recycling systems. By adopting sustainable materials and reducing carbon emissions, ModernTech is leading from the front. FreshFoods: This food manufacturing company is using renewable energy sources in all its factories, and has drastically reduced its carbon footprint. FreshFoods also sources ingredients from sustainable farms and reduces food waste through innovative recycling programs. FutureMobility: This automotive company that has shifted its production to electric vehicles (EVs) only. FutureMobility's EVs are not only energy-efficient but also come with incentives for customers to install solar-powered charging stations at home.

	ZipDeliveries: A leading food delivery app has introduced electric bikes and scooters for its delivery fleet, significantly cutting down on carbon emissions. It also plans to only have EVs as part of its delivery fleet by 2026. They have also partnered with restaurants to promote eco-friendly packaging.
Control	Please read the following text before proceeding with the survey. Across India, a diverse group of corporations/companies are expanding their operations: ModernTech Construction: ModernTech is building new office buildings featuring modern design and amenities like open-floor offices and advanced conference rooms. FreshFoods: This food manufacturing company is opening new factories to meet growing demand, focusing on efficiency and quality control to deliver better products to consumers. FutureMobility: An automotive company that is introducing a new line of luxury vehicles that use AI to

	improve ride quality and safety. ZipDeliveries: A leading food delivery app is expanding its service area and fleet, focusing on faster delivery options to better serve customers.
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Table 4.1: Survey experiment design for information on climate action

After randomly assigning respondents to treatment and control conditions, I ask respondents two questions that measure various outcomes related to support for climate policy. These include whether the respondents are likely to use their vote to hold the government accountable for climate inaction, and whether they are likely to support climate policies that have higher personal costs. These two questions, therefore, capture aspects of vertical accountability and public policy support vis-à-vis climate policies. Survey takers were asked to respond to the vote choice question by indicating how likely they are to hold the government accountable for climate policy inaction by using their vote (on a 5 point likert scale that moves from highly unlikely to highly likely). Similarly, respondents were shown a 5 point scale that goes from strongly agree to strongly disagree for the question on support for climate policies with higher personal costs.

Respondents were subsequently asked a battery of questions that measure individual attitudes around climate change, exposure to climate risks, trust in the government, attitudes around corporate climate action, and willingness to adopt sustainable practices. These questions were used to test for H3, H4, H5, and H6. More details on the survey can be found in the appendix (A3). More importantly, questions on trust and risk are crucial for discerning the effects hypothesized in H3, H4, H5,

and H6. The measure on exposure to climate risks was recorded on a 10 point scale that goes from low to high (risk exposure), while the measure on trust was recorded using a questions that asks respondents if they can trust the government to do what is right on a 4-point scale from almost always to almost never. I estimate the effect of the treatment on the the policy support outcomes using both binomial and ordered Logistic Regressions.

In the context of my study on the role of non-state climate actors in shaping political attitudes in the Global South, one concern could be the potential post-treatment bias arising from measuring the above attitudes after the treatment. Asking respondents about their support for climate policies after exposure to the treatment could indeed influence their responses. However, incorporating these questions before the treatment risks priming participants, making them more aware of their attitudes toward climate action, which could distort their subsequent interpretations of the treatment. Additionally, if participants are asked about their trust in government before being exposed to the treatment, their responses may be influenced by their existing beliefs and attitudes, potentially skewing the results. For instance, individuals with high trust in government might interpret non-state climate actions more favorably, leading them to prioritize climate issues differently than those with lower trust, who might see such actions as a sign of government failure. This pre-existing bias could obscure the true impact of non-state actors on individuals' climate priorities and confound the moderation effect of political trust. Therefore, my decision to measure the above outcomes after the treatment is justified in the context of my study as it potentially minimizes the risk of priming and ensures that any observed effects reflect the impact of exposure to non-state actors.

4.5 Results and Discussion

To test H1 and H2, I employed a series of regression models analyzing binary and ordered outcomes, both with and without controls. The use of different measures of the dependent variable (DV) in this study allows for a more robust understanding of the potential effects of the treatment on various dimensions of support for climate policies. Binary and ordered outcomes capture different aspects of respondent behavior and attitudes, providing a fuller picture of how the treatment might influence these measures. Binary outcomes offer a straightforward interpretation, focusing on whether respondents support or oppose state-led climate actions (e.g., holding the state accountable by voting or supporting policies with personal costs). In this study, the binary measure for voting was created by coding respondents as 1 if they selected "highly likely" or "somewhat likely" to vote and 0 otherwise. Similarly, support for policies with high personal costs was coded as 1 if respondents indicated "strongly agree" or "tend to agree," and 0 otherwise. These dichotomized measures allow for a clear interpretation of whether respondents are inclined to support or oppose state-led climate actions. Ordered measures, by contrast, provide more granularity by capturing variations in the intensity of support or opposition and thus help us understand where respondents fall on the spectrum on response measures.

For H1, ordered and binomial logistic regression models were used to estimate the effects of treatment on the ordered and binary voting outcome. Across both the models without controls and those adjusted for covariates—such as gender, age, education, income, political leaning, and climate skepticism—the treatment effect was found to be statistically insignificant. This suggests that exposure to the treatment did not significantly alter respondents' likelihood of supporting state accountability through voting (see Figure 4.1, Figure 4.2, Figure 4.3, and Figure 4.4).



Figure 4.1: Effect of treatment on binary outcomes without control variables

Similarly, to test for H2, I estimated the effects using both logistic and ordered logistic models, focusing on respondents' support for climate policies with higher personal costs. In these models too, the treatment variable showed no significant effect in either the binary or ordered outcomes, irrespective of whether covariates were included. These results remained robust across different measures, with no meaningful effect from the treatment on respondents' willingness to bear personal costs for climate action (see Figures 4.1, 4.2, 4.3, and 4.4).

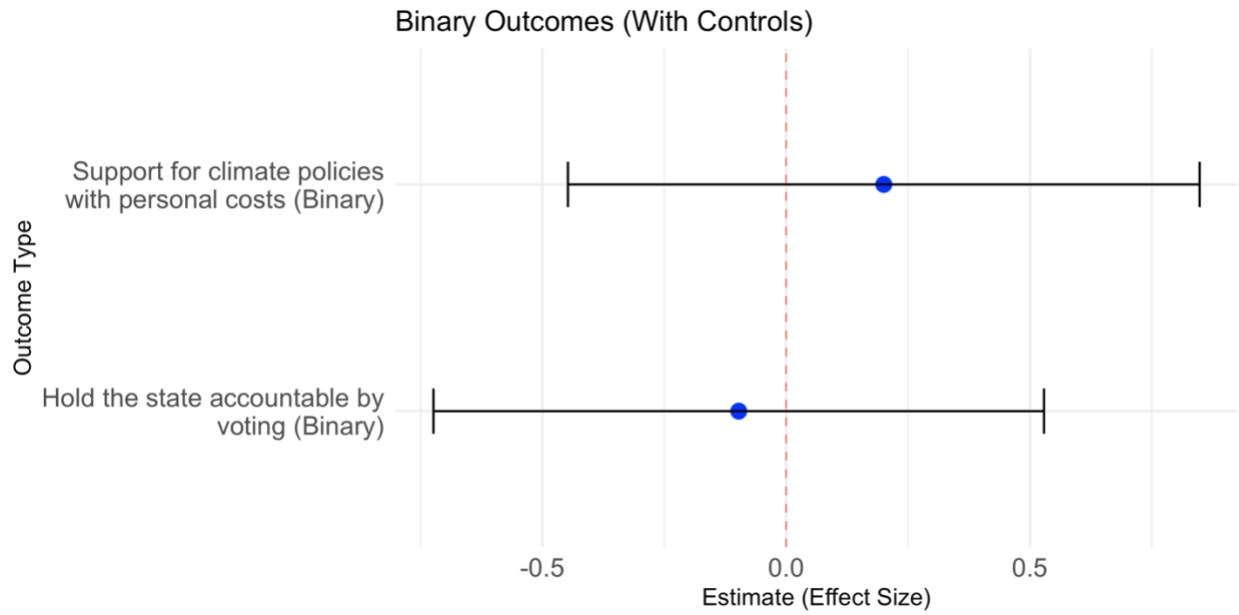


Figure 4.2: Effect of treatment on binary outcomes with control variables

Overall, the treatment did not produce statistically significant changes in respondents' support for voting or climate policies, in either of the models using binary and ordered outcomes. These null results suggest that the hypothesized effect of the treatment may not be present under the conditions of this study, highlighting the need for future research into other potential explanatory variables or moderating factors that may condition the relationship between treatment and policy support.

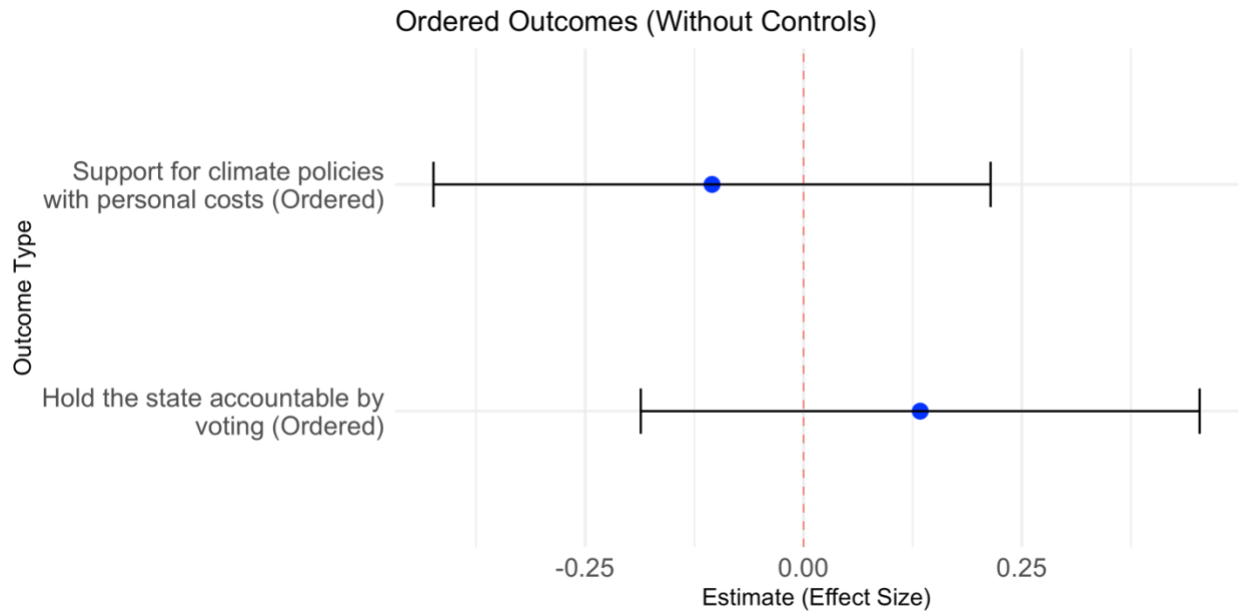


Figure 4.3: Effect of treatment on ordered outcomes without control variables

In exploring the interaction outcomes (H3, H4, H5, and H6), the results provide support for H4 by indicating that political trust moderates the impact of exposure to nonstate climate action on the likelihood of using one's vote to hold the government accountable (see Figure 4.5). More specifically, the results reveal that while exposure to non-state climate action doesn't directly reduce accountability perceptions for everyone, for those who trust the state more, it weakens their likelihood of holding the state accountable..

This indicates that political trust significantly mediates the relationship between exposure to non-state climate action and the intention to use vote to hold the state accountable for climate inaction. More specifically, higher political trust reduces the propoensity of individuals to hold the state accountable. While the results are align with my hypothesis, it also indicates a nefarious relationship between political trust and driving government action, given that higher trust in the system's ability to respond to such needs and pressures lowers citizen's intention to hold the state

accountable for inaction. These results have significant implications for climate policy governance, especially in Global South countries with high political trust.

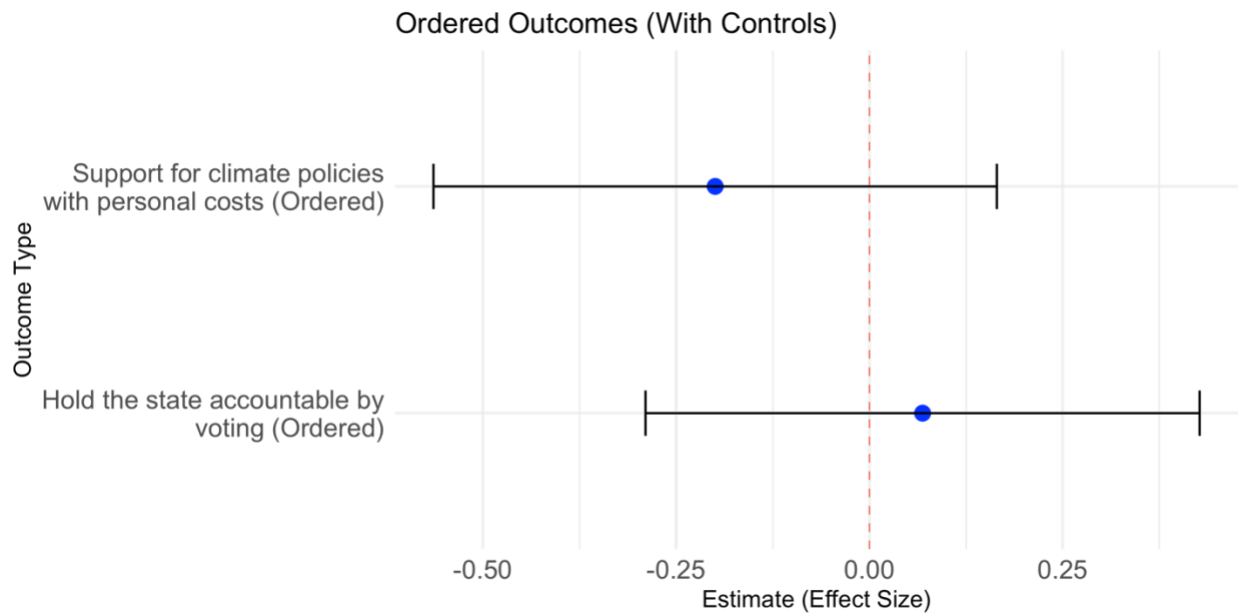


Figure 4.4: Effect of treatment on ordered outcomes with control variables

In contrast, individuals with lower political trust may be skeptical about the effectiveness of the government in addressing climate issues, leading them to be more motivated to use voting as a strategy for accountability. I also test to see if specific trust in the government to address climate change mediates the effect of the treatment on voting outcomes. I find no evidence in support of this. This implies that citizens voting choices are based on more generalised trust in the government rather than policy-specific trust. It could also imply that citizens do not prioritize climate policies electorally, which furthers the argument of tradeoffs between environment and development.

However, I find no evidence in support of the other hypotheses. Specifically, while political trust mediates voting choice outcomes, it does not, surprisingly, mediate outcomes around support for climate policies with higher personal costs (H3).

This might be because trust appears to mediate voting behavior by shaping how voters evaluate and assign responsibility within the political system, while support for policies may be influenced more by direct policy attributes and personal values, and therefore political trust has no effect on support for climate policies with higher personal costs. Similarly, I find no evidence that risk exposure (H5 and H6) mediates the effect of exposure to nonstate climate action on the two outcomes of interest—support for climate policies with higher personal costs and intention to use votes to hold the government accountable for inaction--measured in this study.

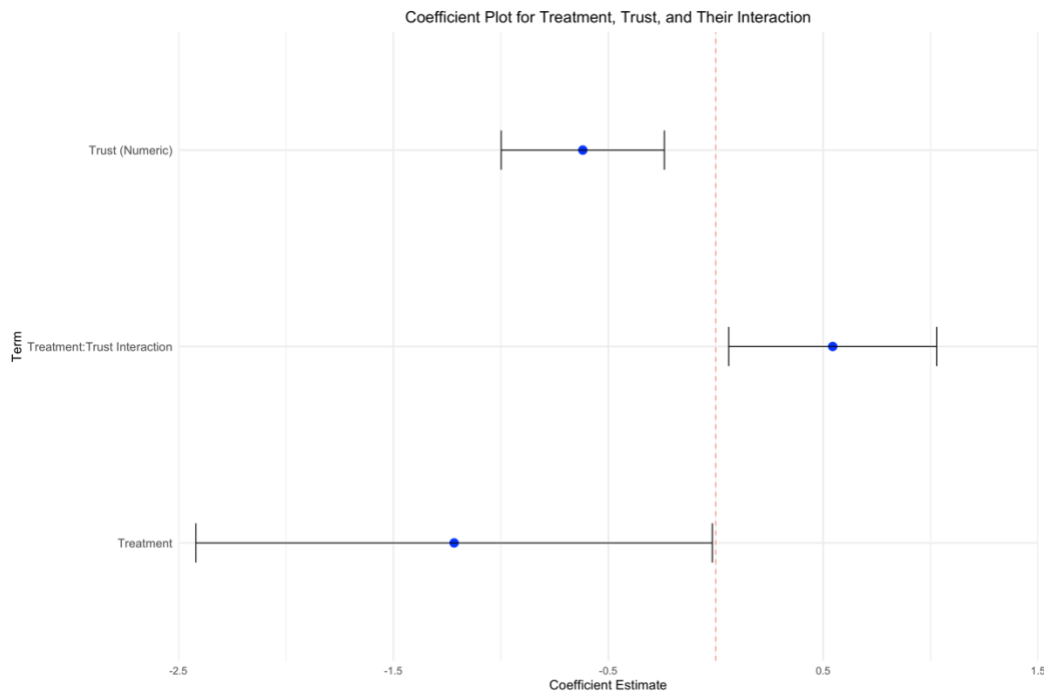


Figure 4.5: Estimates with 95% confidence intervals for the model with Treatment*Trust interaction

I also use a battery of other model specifications⁶ to test if they moderate the effect of exposure to nonstate climate action on policy outcomes (H1 and H2). These

⁶ These have not been pre-registered.

include perceptions around corporate climate action and whether companies are doing enough to combat climate change, as well as issue salience, measured through a question on how important is addressing climate change for them (see Appendix Section A3.3). I also record likelihood to protest against climate inaction as an alternate outcome measure (see Appendix Section A3.4). The results are consistent to these alternate specifications and measures.

The null results, while not aligning with my hypotheses, are not necessarily bad for the governance of climate change in polities with lack of polarization around climate policies. Given the hypothesis that exposure to nonstate climate action would lead people to be less likely to hold the state accountable for climate policy inaction, the absence of significant findings suggests that nonstate climate actions may not influence this behavior as anticipated. This can be interpreted as an indication that the relationship between nonstate climate actions and accountability measures is more complex than initially hypothesized. The null results might imply that other factors, beyond exposure to nonstate climate actions, play a more critical role in shaping individuals' decisions to hold the state accountable. Thus, while the results do not support the hypotheses, they provide an opportunity to reassess the theoretical framework and explore additional variables or mechanisms that could better explain the observed behaviors. However, the results for H4, indicate the importance of understanding political trust as a crucial mediating factor on when citizens hold the state accountable for climate policies. Specifically, the results suggest that for individuals who already trust the state, seeing non-state actors taking initiative might lead them to believe that the state is less responsible for climate action, further diminishing their likelihood to demand accountability further.

CHAPTER 5

Conclusion

Political attitudes, specifically, political trust, is crucial for policy implementation. However, in the age of declining political trust (Aitalieva, 2018; Blind, 2007), we appear to be trapped in a vicious cycle. Diminished political trust undermines policy implementation, which, in turn, reduces political participation and makes policies less responsive to citizens' needs. This lack of responsiveness further erodes political trust, perpetuating the cycle. How can we then build trust? In this 3-paper dissertation, I look at how, and more importantly, which type of public policies can help build political trust. My dissertation thus helps understand ways through which we can use policy design to our advantage. I also turn trust into an independent variable and see how it mediates the relationship between governance structures and political attitudes, specifically, climate policy support. I discuss the key findings from these papers below and highlight the implications for policymaking.

In Chapter 2, and the first paper of this dissertation, I explore how targeting choices around public policies can influence political trust. I argue that the idea of self-targeting, wherein citizens can self-select into public policies as beneficiaries can effectively induce positive attitudes around political responsiveness. This can, therefore, help build trust in government institutions. To test this argument, I compare the outcomes self-targeting policy on confidence in local government to a pre-targeting policy, wherein the government identifies a set of policy beneficiaries. My results suggest that self-targeting policies can induce higher trust, while the pre-targeting policies yield a null result. I run a battery of robustness checks to see if

these results vary if the new control variables are introduced into the model, or if the treatment is assigned only to a subset of the population. My results are robust to these specifications, indicating association between the choice of targeting mechanism and political trust. However, I refrain from making causal claims due to several data limitations. It might be useful for future research to explore these implication through experiments, and see if the distribution of similar goods through public policies that use different targeting mechanisms can influence political attitudes. It might also be usefl to explore how the potential benefits for political trust juxtapose against the limitations of self-targeting policies, wherein pre-exisitng socio-economic and political conditions can mediate who can and will access government benefits.

In the third chapter, and the second substantive paper in the dissertation, I expand on the idea of self-targeting, and look at how bottom-up policies that increase interactions between government units and citizens can dampen the negative effect of inequality on trust in government institutions. I use a quasi-experimental design to test these arguments empirically test the assumptions using the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), that was implemented in India to promote rural development. I use a unique measure of inequality, that exploits survey questions from the Indian Human Development Survey on land holding, to construct a granular measure of land-based inequalities. My results show that MGNREGA can effectively neutralize the negative effects of inequalities on trust in government overtime. This again highlights the importance of policy design in not only achieving the desired outcomes, but also in improving broader political attitudes, which can lead to strengthening of the democratic process. Since I examine MGNREGA as both a self-targeting policy and a bottom-up policy in Chapters 2 and 3, it is crucial to clarify the distinct causal mechanisms explored in each chapter. One

chapter focuses on self-selection into policies, showing how this can enhance perceptions of political responsiveness. The other chapter emphasizes the negative impact of inequality on political trust and demonstrates how bottom-up policies can mitigate these effects. Additionally, I test how other self-targeting policies influence political trust (see Appendix A). I also explore how non-bottom-up policies affect the inequality–trust relationship and find no evidence of their impact. A key policy lesson from these findings is that when designing policies, it is not only essential to consider the intended outcomes but also how the design itself can lead to unintended consequences.

In the final chapter, I look at how existing governance structures can influence policy attitudes. Specifically, I build on existing literature on non-state climate action to see how exposure to such action can lower climate policy support specifically in polities that do not face polarization over the climate policy agenda and also face several other developmental challenges. This is because, the numerous developmental challenges are likely to result in citizens prioritizing development over environment, or in other words, there are tradeoffs that citizens in developing countries face while prioritizing policy issues. This results in prioritizing immediate needs over long-term needs/impacts, such as climate action. In addition to this, when there is no polarization in policy stances across party lines on climate policies, citizens cannot use cues from parties to form their opinions. This in combination with exposure to non-state climate action lowers the likelihood of prioritizing climate action because they see that the issues is being addressed, to some extent, by other actors. I use the case of India, and a survey experiment to test these assumptions through a variety of outcome measures that ask respondents their intention to use their votes to hold the government accountable for climate action, and their support for climate policies with higher personal costs. I further argue that such a decrease

in policy support will be less pronounced in people with lower political trust, who will be likely to hold the state accountable for climate inaction but also not be likely to support climate policies with higher personal costs. My results paint an interesting picture: while the exposure to nonstate climate action does not influence climate policy support, the interaction between trust and treatment has a significant and negative effect. It implies that citizens with higher political trust are even less likely to hold the government accountable through their vote choice for climate inaction when exposed to the treatment on non-state climate action. This highlights the need to understand the nuances of how political trust can mediate policy outcomes, because in the absence of it, citizens might be more likely to hold the state accountable for climate inaction, which in the developing world context, can have significant implications for well-being.

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APPENDIX

A.1 Targeting matters: The effect of self- and pre-targeting on confidence in local government

A1.1 Effect of MGNREGA on confidence with district fixed effects

As discussed in the results section of Chapter 2, I also include a model with district fixed effects when estimating the effect of MGNREGA on confidence in local government. This is to control for district specific trends such as administrative capacities that might influence the functioning of local level Panchayats, and other district-specific, time-invariant trends. The results remain robust to this alternate specification as well, as noted in the below table.

	<i>Dependent variable:</i>
	Confidence in local government
	(1)
MGNREGA	−0.087 (0.067)
Year	−0.250*** (0.019)
Poor	−0.051* (0.023)
Income	4.9592e-07*** (1.4268e-07)
Inequality	−0.0003 (0.0002)
Education	0.001 (0.002)
MGNREGA:Times	0.160*** (0.042)
District Fixed effects	Yes
Observations	47,056

Notes: All households with income from MGNREGA are considered as treated.*p<0.05; **p<0.01; ***p<0.001.

Table A1. 1: Effect of MGNREGA on confidence with district fixed effects

A1.2 Effect of IAY on confidence while controlling for caste of respondent

Since IAY does not seem to induce higher political trust, I also include a control variable for caste of the respondent. The coefficient on IAY remains insignificant to this alternate specification. See the below table for the results.

	<i>Dependent variable:</i>
	Confidence in local government
	(1)
IAY	0.0455 (0.0307)
Year	-0.237*** (0.019)
Poor	-0.0858*** (0.021)
Income	3.79e-07*** (7.40e-08)
Education	-0.00318 (0.002)
Inequality	0.000993*** (0.002)
Caste - Other Backward Castes (OBC)	-0.0341 (0.485)
Caste - Scheduled Castes (SC)	0.0430 (0.0452)
Caste - Scheduled Tribes (ST)	0.119 (0.1000)
District Fixed effects	Yes
Observations	46,533

Notes: *p<0.1; **p<0.05; ***p<0.01.

Table A1. 2: Effect of IAY on confidence while controlling for caste of respondent

A1.3 Effect of IAY on confidence while controlling for village specific characteristics

This model controls for village specific trends that might confound the relationship IAY and trust in local government. Specifically, it controls for the population of the village, the level of public services that is measured through a binary question that asks if the village has a primary health center, and a categorical variable that measures the type of road in the village. I believe these variables capture the quality of public services at the local level which could influence confidence in local governments.

		<i>Dependent variable:</i>
		Confidence in local government
		(1)
IAY		0.0512 (0.0309)
Year		−0.232*** (0.0182)
Poor		−0.0827*** (0.0226)
Income		3.58e-07*** (7.53e-08)
Education		−0.00159 (0.00289)
Inequality		0.000994*** (0.0003)
Caste - Other Backward Castes (OBC)		−0.0368 (0.486)
Caste - Scheduled Castes (SC)		0.044 (0.0456)
Caste - Scheduled Tribes (ST)		0.131** (0.0533)
Health Center		−0.0249 (0.0273)
Medium Population (<5000)		−0.0650*** (0.0223)
High Population (>5001)		−0.153*** (0.0310)
Partially built road		−0.106*** (0.0210)
Built road		−0.165*** (0.040)
District Fixed effects		Yes
Observations	7	45,835
Notes: *p<0.1; **p<0.05; ***p<0.01.		

Table A1. 3: Effect of IAY on confidence while controlling for village specific characteristics

A1.4 Effect of MGNREGA on confidence using a subset of beneficiaries

In this model, I subset the MGNREGA beneficiaries to respondents who have received less than INR 20,000 (approximately USD 250) as benefits. This is to account for potential differences in the type of benefits received from each policy, and is roughly 1/3rd of the total benefits received through IAY. The results are robust to this alternate specification as well.

	<i>Dependent variable:</i>	
	Confidence in local government	
	(1)	(2)
MGNREGA	−0.157 (0.110)	−0.104 (0.111)
Year	−0.242*** (0.0195)	−0.247*** (0.019)
Poor	−0.082*** (0.023)	−0.049 (0.025)
Income	8.6214e-07*** (1.4388e-07)	4.6343e-07** (1.4429e-07)
Inequality	−0.0003 (0.0003)	−0.0003 (0.0003)
Education	0.002 (0.002)	0.002 (0.003)
MGNREGA:Times	0.146* (0.069)	0.142* (0.069)
District Fixed effects	No	Yes
Observations	40,054	40,054

Notes: All households with income less than INR 20,000 from MGNREGA are considered as treated.*p<0.05; **p<0.01; ***p<0.001.

Table A1. 4: Effect of IAY on confidence while controlling for village specific characteristics

A1.5 Bootstrapping

I also perform bootstrapping to assess the reliability of the estimates. This method allows for the estimation of the sampling distribution of a statistic, such as a regression coefficient or p-value, without relying on parametric assumptions about the underlying data distribution. As highlighted in the discussion of Chapter 2, the results reveal that MGNREGA consistently results in higher political trust in 76% of the samples. On the other hand, IAY does not result in higher trust in local governments in 77% of the samples. Please see the below figures for volcano plot of the distribution of effect sizes and p-values. While the model specification for these bootstrapped samples remain the same, the effects are modelled using ordinary least square to reduce computational resources.

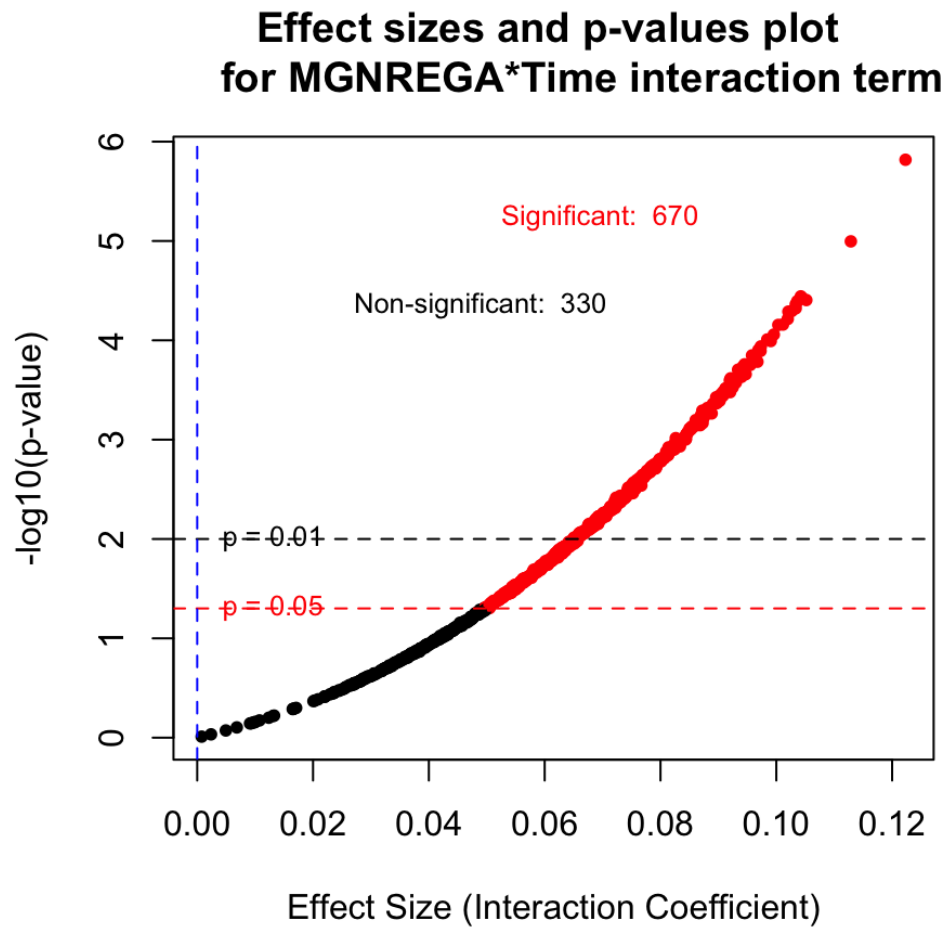


Figure A1. 1: Volcano plot of effect sizes and p-values of bootstrapped MGNREGA samples

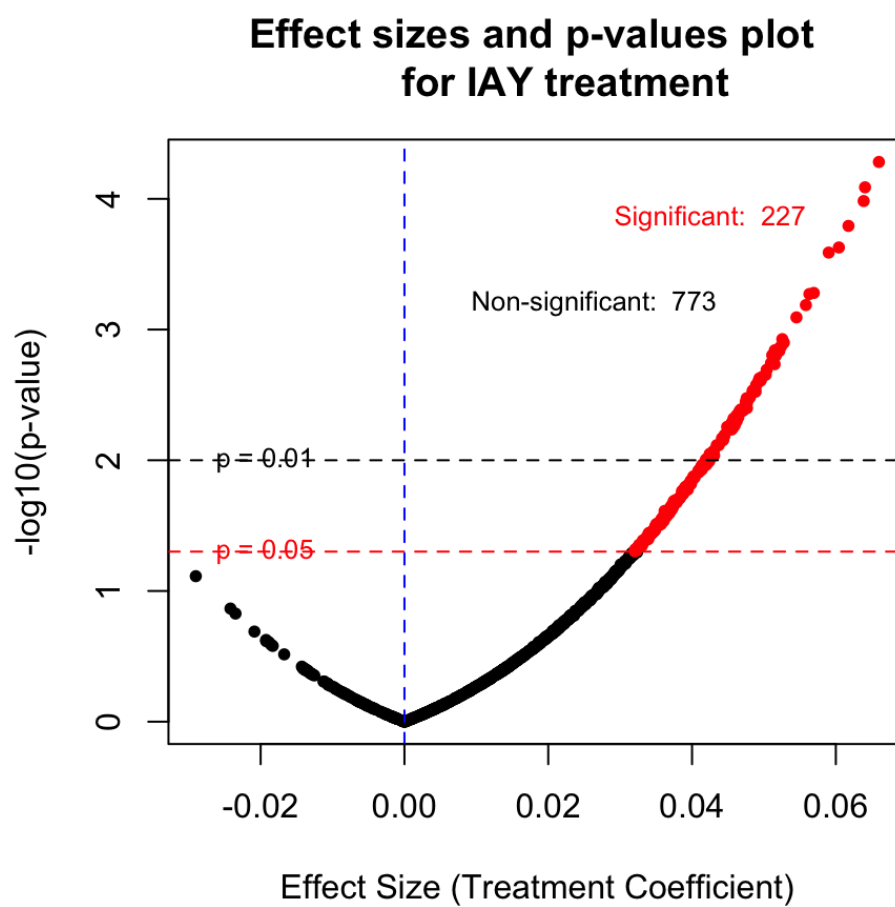


Figure A1. 2: Volcano plot of effect sizes and p-values of bootstrapped IAY samples

A1.6 Effect of IAY on confidence in local government using a matched sample

To account for potential issues with differences in treated and un-treated households, I use Propensity Score Matching (PSM) to also generate the probability of receiving IAY treatment given certain covariates which are then used to calculate inverse probability weights. The estimates for the effect of IAY on the trust remain insignificant.

	<i>Dependent variable:</i>
	Confidence in local government
	(1)
IAY	−0.001 (0.010)
Year	0.0001 (0.011)
Poor	0.0001 (0.012)
Income	0.00000*** (0.00000)
Education	−0.0002 (0.002)
Inequality	0.001*** (0.0003)
District Fixed effects	Yes
Observations	46,533
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table A1. 5: Effect of IAY on confidence in local government using a matched sample

A1.7 Robustness checks with other self-targeting and pre-targeting policies

To test if other policies that resemble the idea of self-targeting also lead to positive effects on trust, I use the case of Forest Rights Act. The Forest Rights Act (FRA) was implemented between 2006 and 2012 and makes it a valuable case to understand the effect of the self-targeting on the outcome of interest. The Forest Rights Act (FRA) in India, which targeted Scheduled Tribes (ST), the traditional forest-dwelling communities in the country, was a policy aimed at providing statutory rights to land for individuals and communities that had historically lived in and maintained forests. I use a difference in difference design that exploits the variation in the level of implementation of FRA at the state level to test if the policy leads to higher trust (FRA is coded as 0 if FRA hasn't been implemented in the state or less than 1% of the title claims have been distributed). I also consider an alternate measurement for the treatment variable, which is coded 0 for states where FRA wasn't implemented or if less than 5% of the title claims have been distributed.

	<i>Dependent variable:</i>	
	Confidence in local government	
	(1)	(2)
Income	−0.007 (0.006)	−0.005 (0.006)
Poor	−0.131** (0.062)	−0.103 (0.065)
Education	0.004 (0.011)	0.003 (0.012)
FRA:Times	0.383** (0.191)	0.398** (0.192)
State Fixed effects	Yes	Yes
District Fixed effects	No	Yes
Observations	5,368	5,368

Notes: States where the implementation of FRA has not yet started and states with less than 1% of titles distributed are considered as un-treated. *p<0.1; **p<0.05; ***p<0.01.

Table A1. 6: Effects of another self-targeting policy, the Forest Rights Act, on Confidence in government

	<i>Dependent variable:</i>	
	Confidence in local government	
	(1)	(2)
Income	−0.007 (0.006)	−0.005 (0.006)
Poor	−0.131** (0.062)	−0.103 (0.065)
Education	0.004 (0.011)	0.003 (0.012)
FRA:Times	0.267** (0.132)	0.258* (0.132)
State Fixed effects	Yes	Yes
District Fixed effects	No	Yes
Observations	5,368	5,368

Notes: States where the implementation of FRA has not yet started and states with less than 5% of titles approved are considered as un-treated. *p<0.1; **p<0.05; ***p<0.01.

Table A1. 7: Effects of another self-targeting policy, the Forest Rights Act, on Confidence in government using an alternate measurement for treatment assignment

A.2 The problem of inequalities for local institutions and how rural development programs can help: Evidence from india

A2.1 Descriptive statistics

Figure A2. 1 captures inequality trends across villages. Intra-village inequality values range from 0.16 to 802. The mean inequality is 4.36, with a median of 0.39. These large variations are crucial for understanding MGNREGA's effect on the relationship between inequalities and confidence. Figure 2 captures confidence in local government (Panchayat) trends across 2005 and 2011.

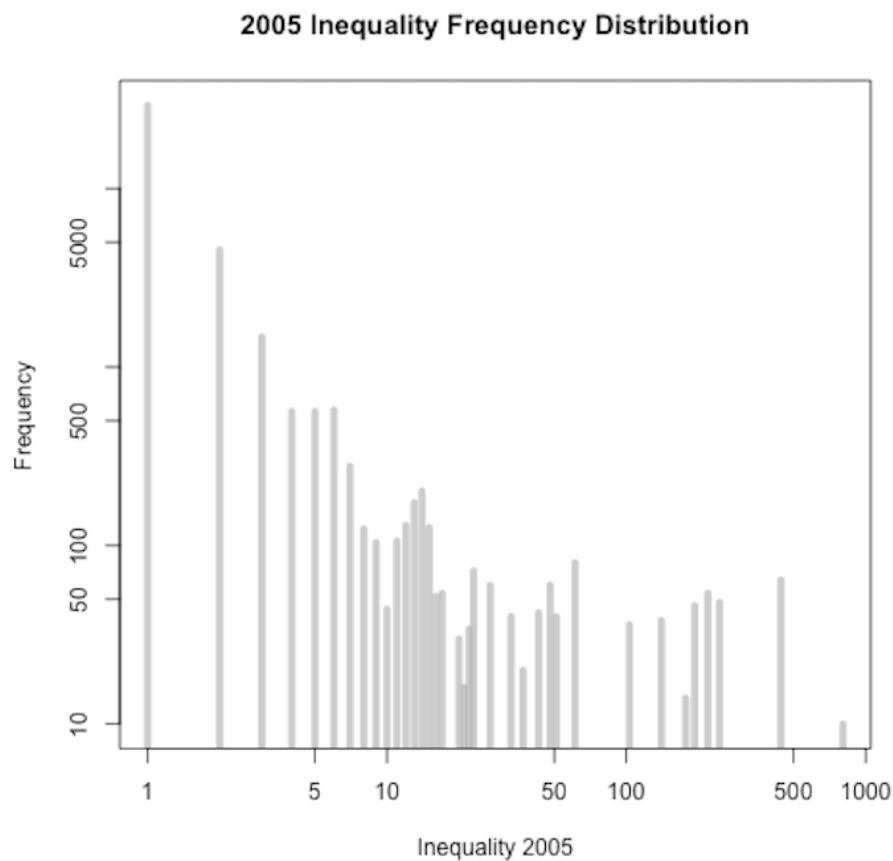


Figure A2. 1: Frequency distribution of inequality

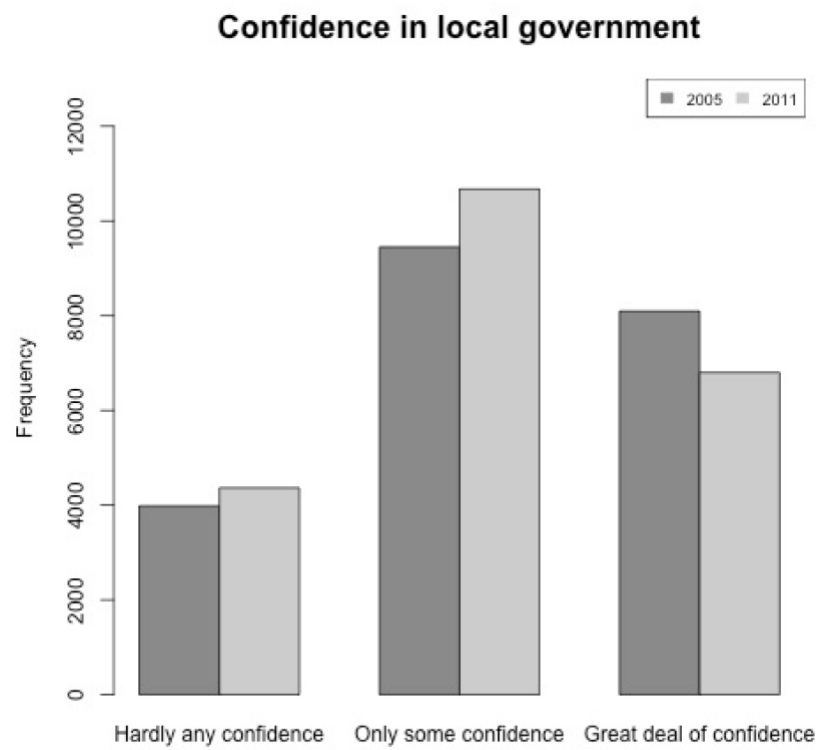


Figure A2. 2: Frequency distribution for confidence in panchayat

A2.2 Covariate balance plots

The covariate balance plots post Coarsened Exact Matching (CEM) is captured in the figure below (Figure 3).

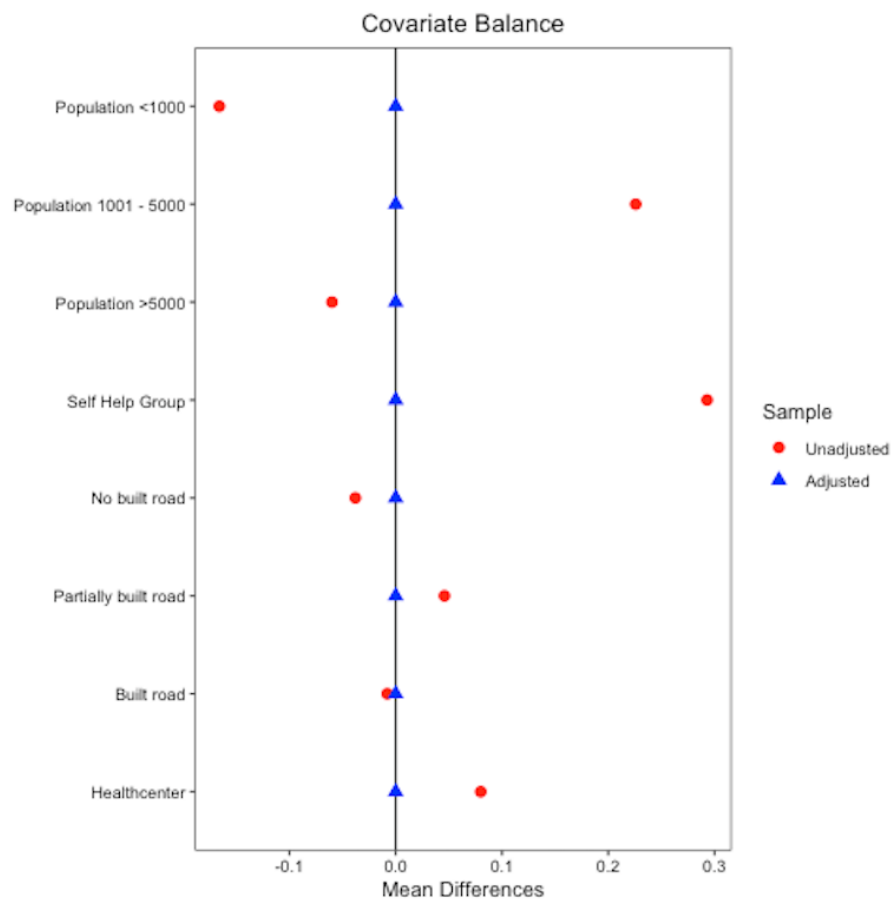


Figure A2. 3: Covariate balance plots

A2.3 Alternate specifications

In this section, we present alternate specifications of the models which account for both castes of the household and the education of the head of the household. Table 1 captures these estimates from a matched sample using ordered logistic regression. To account for state level factors that might influence our results, we also introduce state fixed effects in the model. These results are captured in Table 2. Finally, we also estimate the effects using Ordinary Least Squares (OLS). These are captured in Table 3. The effects remain significant across all three models.

	<i>Dependent variable:</i>
	Confidence in panchayat to implement public projects
MGNREGA	0.182* (0.105)
Year	-0.040 (0.146)
Inequality 2005	0.093* (0.055)
Population 1001-5000	-0.029 (0.024)
Population >5000	-0.135*** (0.037)
Self help group	-0.042** (0.021)
Partially built road	-0.093*** (0.023)
Built road	-0.148** (0.058)
Health centre	0.046 (0.048)
Income	0.010*** (0.002)
Education	0.001 (0.003)
Caste - Forward/General (except Brahmin)	0.062 (0.052)
Caste - Other Backward Castes (OBC)	0.028 (0.050)
Caste - Scheduled Castes (SC)	0.037 (0.052)
Caste - Scheduled Tribes (ST)	0.127** (0.057)
Caste - Others	0.145 (0.110)
MGNREGA:Year	-0.178 (0.148)
MGNREGA:Inequality 2005	-0.094* (0.055)
Year:Inequality 2005	-0.414*** (0.084)
MGNREGA:Year:Inequality 2005	0.414*** (0.084)
Threshold (1->2)	-1.400*** (0.116)
Threshold (2->3)	0.701*** (0.115)
Observations	38,503
Log Likelihood	-39,850.79
Akaike Inf. Crit.	79,745.59
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table A2. 1: Alternate specification: Model accounts for education and caste

	<i>Dependent variable:</i>
	Confidence in panchayat to implement public projects
MGNREGA	0.361*** (0.106)
Year	-0.018 (0.146)
Inequality 2005	0.075 (0.056)
Population 1001-5000	-0.005 (0.025)
Population >5000.f3	-0.023 (0.040)
Self help group	0.037 (0.026)
Partially built road	0.101*** (0.025)
Built road	0.081 (0.060)
Health centre	-0.077 (0.052)
Income	0.006*** (0.002)
Education	0.0005 (0.003)
Caste - Forward/General (except Brahmin)	-0.019 (0.053)
Caste - Other Backward Castes (OBC)	0.024 (0.051)
Caste - Scheduled Castes (SC)	0.027 (0.053)
Caste - Scheduled Tribes (ST)	0.070 (0.059)
Caste - Others	0.175 (0.112)
MGNREGA:Year	-0.206 (0.147)
MGNREGA:Inequality 2005	-0.075 (0.056)
Year:Inequality 2005	-0.424*** (0.084)
MGNREGA:Year:Inequality 2005	0.423*** (0.084)
Threshold (1->2)	-0.245* (0.148)
Threshold (2->3)	1.907*** (0.148)
Observations	38,503
State fixed effects	Yes
Log Likelihood	-39248.07
Akaike Inf. Crit.	78,588.14
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table A2. 2: Alternate specification: With state fixed effects

	<i>Dependent variable:</i>
	Confidence in panchayat to implement public projects
MGNREGA	0.131*** (0.039)
Year	-0.007 (0.054)
Inequality 2005	0.024 (0.020)
Population 1001-5000	-0.003 (0.009)
Population >5000	-0.006 (0.015)
Selg help group	0.014 (0.009)
Partially built road	0.040*** (0.009)
Built road	0.034 (0.023)
Health centre	-0.030 (0.019)
Income	0.002*** (0.001)
Caste - Forward/General (except Brahmin)	-0.005 (0.020)
Caste - Other Backward Castes (OBC)	0.010 (0.019)
Caste - Scheduled Castes (SC)	0.011 (0.019)
Caste - Scheduled Tribes (ST)	0.030 (0.022)
Caste - Others	0.075* (0.043)
Education	0.0003 (0.001)
MGNREGA:Year	-0.071 (0.055)
MGNREGA:Inequality 2005	-0.024 (0.020)
Year:Inequality 2005	-0.142*** (0.028)
MGNREGA:Year:Inequality 2005	0.141*** (0.028)
Constant	1.706*** (0.054)
Observations	38,503
State fixed effects	Yes
R ²	0.037
Adjusted R ²	0.035
Residual Std. Error	0.702 (df = 38458)
F Statistic	33.205*** (df = 44; 38458)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table A2. 3: Alternate specification: Effects estimated using OLS

A2.4 MGNREGA's effect on social capital

The below table captures the effect of MGNREGA on peoples' willingness to work collectively to solve local problems. We a difference-in-differences model specification to estimate these effects.

	Dependent variable:
	Willingness to work collectively
MGNREGA	0.023 (0.020)
Year	0.075*** (0.028)
Partially built road	−0.049*** (0.005)
Built Road	−0.004 (0.013)
Income	0.0002 (0.0003)
Population 1001-5000	−0.031*** (0.005)
Population >5000	−0.031*** (0.008)
Poor	−0.022*** (0.005)
Caste - Forward/General (except Brahmin)	0.009 (0.012)
Caste - Other Backward Castes (OBC)	−0.011 (0.012)
Caste - Scheduled Castes (SC)	0.013 (0.012)
Caste - Scheduled Tribes (ST) 5	0.003 (0.013)
Caste - Others	−0.067*** (0.025)
Education	0.001 (0.001)
MGNREGA:Year	0.083*** (0.029)
Constant	0.610*** (0.024)
Observations	43,355
Log Likelihood	−28,061.060
Akaike Inf. Crit.	56,154.110
Note:	*p<0.1; **p<0.05; ***p<0.01

Table A2. 4: The effect of MGNREGA on bonding social capital, measured as the willingness to work with other – logistic regression on matched sample

The marginal effects plot below captures the effect of MGNREGA on bonding social capital, measured as the willingness to work with others to solve local problems.

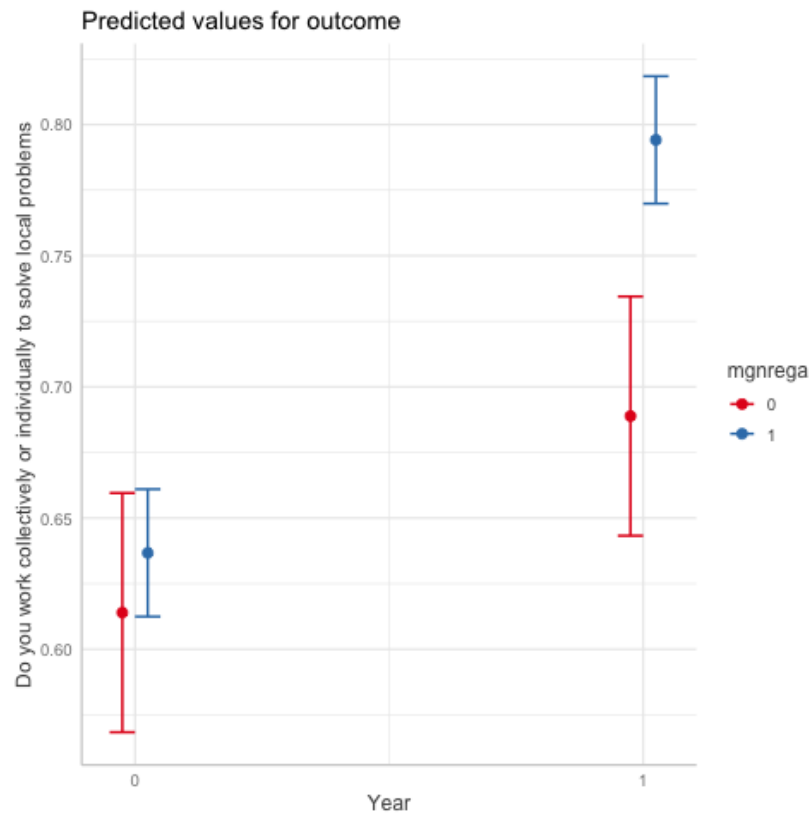


Figure A2. 4: Marginal effects plot for the relationship between MGNREGA and bonding social capital

A2.5 Differences in conflicts across villages in which work under MGNREGA was and was not carried out

Variable	Statistic	p value	95% Confidence interval
Conflict among jatis	-0.75965	0.4478	-12.900529 – 5.707246
Physical violence in village	0.25163	0.8015	-13.46201 – 17.40981

Note: Conflict among jatis measures the percent population within a village reporting a lot of conflict. Physical violence measures the percentage population reporting being attacked or threatened in the village in the past 12 months. Two-sided tests. **p<0.05

Table A2. 5: t-test on the pre-program difference in conflict within villages across treatment and control villages

A2.6 Public distribution system (PDS) as treatment – the effect of non-bottom-up welfare policies the inequality-trust relationship

The variable of interest in the below regression output is the triple interaction between Treated 2011, Year, and Inequality. Treated is a factor variable with 4 categories: Treated 2011 which implies whether the household was a new beneficiary under the PDS between 2005 and 2011. Treated 2005 which indicates whether the household had been a beneficiary of the PDS even before 2005. Treated both indicates whether the household was a beneficiary during both 2005 and 2011. The omitted category in the below case is untreated households. The estimates are based on an unmatched sample using ordered logistic regression.

	(Confidence in Panchayat)	(Confidence in Police)
Treated 2005	0.14 (0.08)	-0.09 (0.08)
Treated 2011	0.09 (0.08)	0.07 (0.08)
Treated both	0.33*** (0.07)	0.13 (0.07)
Year	-0.07 (0.10)	0.23* (0.10)
Inequality2004	-0.00 (0.00)	-0.00 (0.00)
Kutchra road	-0.06** (0.02)	0.06** (0.02)
No road	-0.07 (0.04)	0.29*** (0.04)
Income	0.00*** (0.00)	-0.00*** (0.00)
Medium population	-0.04 (0.02)	0.00 (0.02)
High population	-0.10*** (0.03)	0.02 (0.03)
Health centre	-0.11*** (0.03)	0.15*** (0.03)
Treated 2005:Year	-0.09 (0.11)	0.14 (0.11)
Treated 2011:Year	-0.07 (0.12)	0.01 (0.11)
Treated both:Year	-0.16 (0.10)	0.04 (0.10)
Treated 2005:Inequality2004	0.00 (0.00)	0.00 (0.00)
Treated 2011:Inequality2004	0.00 (0.00)	0.00 (0.00)
Treated both:Inequality2004	-0.00 (0.00)	0.00 (0.00)
Year:Inequality2004	-0.00 (0.00)	-0.00 (0.00)
Treated 2005:Year:Inequality2004	-0.00 (0.00)	-0.00 (0.00)
Treated 2011:Year:Inequality2004	0.00 (0.00)	0.00 (0.00)
Treated both:Year:Inequality2004	0.00 (0.00)	0.00 (0.00)
AIC	97508.89	97790.21
Log Likelihood	-48731.45	-48872.11
Num. obs.	47023	47193
Iterations	5	5
McFadden's R ²	0.00	0.00

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Table A2. 6: Effect of Public Distribution System (non-bottom-up policy) on the Inequality—trust relationship

A.3 How does exposure to non-state climate action alter policy preferences?

A3.1 Survey Instrument

India policy opinion study

consent The purpose of this survey is to study policy opinion in India. Your participation in the survey will contribute to a better understanding of this topic. I estimate that it will take about 10 minutes of your time to complete our survey. You must be 18 years of age or older, a resident of India, and must be able to read English to take this survey.

You will potentially be asked to read short paragraphs. We do not foresee any risks or discomforts. There will be no costs for participating. You will gather points according to your standard reward program agreement. Whether or not you take part in this research is your choice. You can leave the research at any time and it will not be held against you.

If you agree to take part in the study, you will respond to a 10-minute online survey in English. After recording basic demographic data, I will ask you to read a prompt and respond to questions about certain policy preferences. You may skip questions you do not want to answer.

You will be directed to the start of the survey after you have read this consent information and click “**I Agree.**” You will not be asked to disclose any personally identifiable information as part of this study. The aggregate information from this research may be published for scientific purposes. All study data will be stored

securely and only accessed by study staff.

Questions

If you have questions about the research, you can contact the Principal Investigator at Ganesh.Gorti@colorado.edu.

If you have concerns or complaints about the research you can contact the CU Boulder IRB at +1-(303) 735-3702 or irbadmin@colorado.edu.

Q2 To make sure I am surveying a representative cross-section of respondents, I would like to ask some information about your background.

state In which state or union territory do you live?

- ☐ *Andhra Pradesh (1)*
- ☐ *Arunachal Pradesh (2)*
- ☐ *Assam (3)*
- ☐ *Bihar (4)*
- ☐ *Chhattisgarh (5)*
- ☐ *Goa (6)*
- ☐ *Gujarat (7)*
- ☐ *Haryana (8)*
- ☐ *Himachal Pradesh (9)*
- ☐ *Jharkhand (10)*
- ☐ *Karnataka (11)*
- ☐ *Kerala (12)*
- ☐ *Maharashtra (13)*
- ☐ *Madhya Pradesh (14)*
- ☐ *Manipur (15)*
- ☐ *Meghalaya (16)*
- ☐ *Mizoram (17)*
- ☐ *Nagaland (18)*

- ☐ *Odisha (19)*
- ☐ *Punjab (20)*
- ☐ *Rajasthan (21)*
- ☐ *Sikkim (22)*
- ☐ *Tamil Nadu (23)*
- ☐ *Tripura (24)*
- ☐ *Telangana (25)*
- ☐ *Uttar Pradesh (26)*
- ☐ *Uttarakhand (27)*
- ☐ *West Bengal (28)*
- ☐ *Andaman & Nicobar (UT) (29)*
- ☐ *Chandigarh (UT) (30)*
- ☐ *Dadra & Nagar Haveli and Daman & Diu (UT) (31)*
- ☐ *Delhi [National Capital Territory (NCT)] (32)*
- ☐ *Jammu & Kashmir (UT) (33)*
- ☐ *Ladakh (UT) (34)*
- ☐ *Lakshadweep (UT) (35)*
- ☐ *Puducherry (UT) (36)*
- ☐ *I don't live in India (37)*
- ☐ *Prefer not to say (38)*
- ☐ *Others (please specify) (39)*

What is your gender?

- ☐ *Male (1)*
- ☐ *Female (2)*
- ☐ *Other (3)*
- ☐ *Prefer not to say (4)*

What is your age group?

- ☐ *18-24 years old (1)*
- ☐ *25-34 years old (2)*
- ☐ *35-44 years old (3)*
- ☐ *45-54 years old (4)*
- ☐ *55-64 years old (5)*
- ☐ *65 years old and above (6)*
- ☐ *Prefer not to say (7)*

What is your highest level of education?

- ☐ *Primary school (1)*
- ☐ *Middle School (2)*
- ☐ *High School (3)*
- ☐ *Intermediate/12th (4)*
- ☐ *Degree/Undergraduate (5)*
- ☐ *Masters and above (6)*
- ☐ *Did not receive formal education (7)*
- ☐ *Prefer not to say (8)*

What is your total monthly household income in rupees—putting together the income of all members of the household?

- ☐ *Less than 5,000 (1)*
- ☐ *5,000-9,999 (2)*
- ☐ *10,000-14,999 (3)*
- ☐ *15,000-19,999 (4)*
- ☐ *20,000-24,999 (5)*
- ☐ *25,000-29,999 (6)*
- ☐ *30,000-34,999 (7)*
- ☐ *35,000-39,999 (8)*
- ☐ *40,000-44,999 (9)*

- ☐ *45,000-49,999 (10)*
- ☐ *50,000-54,999 (11)*
- ☐ *55,000-59,999 (12)*
- ☐ *60,000-64,999 (13)*
- ☐ *65,000-69,999 (14)*
- ☐ *70,000-74,999 (15)*
- ☐ *More than 75,000 (16)*
- ☐ *Prefer not to say (17)*

In politics, people sometimes talk of left and right. Where would you place yourself on a scale of 1 to 10, where 1 means the extreme left and 10 means the extreme right?

- ☐ 1 (*extreme left*) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (5)
- ☐ 6 (6)
- ☐ 7 (7)
- ☐ 8 (8)
- ☐ 9 (9)
- ☐ 10 (*extreme right*) (10)
- ☐ *Don't know* (11)
- ☐ *Prefer not to say* (12)

How likely are you to go watch a movie within the next month? For this question, I am more interested in ensuring that you are doing the survey carefully, so please just select the option “Neither likely nor unlikely”.

- ☐ *Extremely unlikely (1)*
- ☐ *Somewhat unlikely (2)*
- ☐ *Neither likely nor unlikely (3)*
- ☐ *Somewhat likely (4)*
- ☐ *Extremely likely (5)*

Treatment **Please read the following text before proceeding with the survey.**

Across India, a diverse group of corporations/companies are taking bold and voluntary steps to combat climate change:

ModernTech Construction: ModernTech's new office buildings are powered by solar energy and use advanced water recycling systems. By adopting sustainable materials and reducing carbon emissions, ModernTech is leading from the front.

FreshFoods: This food manufacturing company is using renewable energy sources in all its factories, and has drastically reduced its carbon footprint. FreshFoods also sources ingredients from sustainable farms and reduces food waste through innovative recycling programs.

FutureMobility: This automotive company that has shifted its production to electric vehicles (EVs) only. FutureMobility's EVs are not only energy-efficient but also come with incentives for customers to install solar-powered charging stations at home.

ZipDeliveries: A leading food delivery app has introduced electric bikes and scooters for its delivery fleet, significantly cutting down on carbon emissions. It also plans to only have EVs as part of its delivery fleet by 2026. They have also partnered with restaurants to promote eco-friendly packaging.

Control **Please read the following text before proceeding with the survey.**

Across India, a diverse group of corporations/companies are expanding their operations:

ModernTech Construction: ModernTech is building new office buildings featuring modern design and amenities like open-floor offices and advanced conference rooms.

FreshFoods: This food manufacturing company is opening new factories to meet growing demand, focusing on efficiency and quality control to deliver better products to consumers.

FutureMobility: An automotive company that is introducing a new line of luxury vehicles that use AI to improve ride quality and safety.

ZipDeliveries: A leading food delivery app is expanding its service area and fleet, focusing on faster delivery options to better serve customers.

How likely are you to exercise your vote to hold the government more accountable for not acting on climate change?

- ☐ *Extremely unlikely (1)*
- ☐ *Somewhat unlikely (2)*
- ☐ *Neither likely nor unlikely (3)*
- ☐ *Somewhat likely (4)*
- ☐ *Extremely likely (5)*
- ☐ *Don't know (6)*
- ☐ *Prefer not to say (7)*

How likely are you to participate in a protest asking for stronger climate action from the government?

- ☐ *Extremely unlikely (1)*
- ☐ *Somewhat unlikely (2)*
- ☐ *Neither likely nor unlikely (3)*
- ☐ *Somewhat likely (4)*
- ☐ *Extremely likely (5)*
- ☐ *Don't know (6)*
- ☐ *Prefer not to say (7)*

How much do you agree or disagree with the following statement: "I would support more stringent climate and environmental policies and would be willing to pay higher taxes to support these policies."

- ☐ *Strongly agree (1)*
- ☐ *Tend to agree (2)*
- ☐ *Neither agree nor disagree (3)*
- ☐ *Tend to disagree (4)*
- ☐ *Strongly disagree (5)*
- ☐ *Don't know (6)*
- ☐ *Prefer not to say (7)*

How much of the time, if at all, do you think you can trust the government to do what is right?

- ☐ *Almost always (1)*
- ☐ *Most of the time (2)*
- ☐ *Only some of the time (3)*
- ☐ *Almost never (4)*
- ☐ *Don't know (5)*
- ☐ *Prefer not to say (6)*

How much do you agree or disagree with the following statement: "Climate change is a hoax and the extreme weather events we are witnessing are part of the natural cycle."

- ☐ *Strongly agree (1)*
- ☐ *Tend to agree (2)*
- ☐ *Neither agree nor disagree (3)*
- ☐ *Tend to disagree (4)*
- ☐ *Strongly disagree (5)*
- ☐ *Don't know (6)*
- ☐ *Prefer not to say (7)*

How much do you trust the government in addressing climate change on a scale of 1 to 10, where 1 implies that you do not trust the government at all to address climate change, and 10 implies that you trust the government completely to address climate change?

- ☐ 1 (*No trust at all*) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (5)
- ☐ 6 (6)
- ☐ 7 (7)
- ☐ 8 (8)
- ☐ 9 (9)
- ☐ 10 (*Complete trust*) (10)
- ☐ *Don't know* (11)
- ☐ *Prefer not to say* (12)

On a scale of 1 to 10, how important is it for you to address climate change, where 1 = not important at all, and 10 = extremely important?

- ☐ 1 (*Not important at all*) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (5)
- ☐ 6 (6)
- ☐ 7 (7)
- ☐ 8 (8)
- ☐ 9 (9)
- ☐ 10 (*Extremely important*) (10)
- ☐ *Don't know* (11)
- ☐ *Prefer not to say* (12)

On a scale of 1 to 10, how much do you believe climate change is currently impacting your local community or region, where 1 = no impact at all, 10 = very strong impact?

- ☐ 1 (*No impact at all*) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (5)
- ☐ 6 (6)
- ☐ 7 (7)
- ☐ 8 (8)
- ☐ 9 (9)
- ☐ 10 (*Very strong impact*) (10)
- ☐ *Don't know* (11)
- ☐ *Prefer not to say* (12)

On a scale of 1 to 10, to what extent are you willing to adopt more sustainable practices in your daily life, where 1 = not at all willing and 10 = very willing?

- ☐ 1 (*Not at all willing*) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (5)
- ☐ 6 (6)
- ☐ 7 (7)
- ☐ 8 (8)
- ☐ 9 (9)
- ☐ 10 (*Very willing*) (10)
- ☐ *Don't know* (11)
- ☐ *Prefer not to say* (12)

How much do you agree with the following statement: "Corporations/companies in India are doing enough to combat climate change."

- ☐ *Strongly agree (1)*
- ☐ *Tend to agree (13)*
- ☐ *Neither agree nor disagree (14)*
- ☐ *Tend to disagree (15)*
- ☐ *Strongly disagree (16)*
- ☐ *Don't know (17)*
- ☐ *Prefer not to say (19)*

According to the information you read in this survey, which company has introduced electric bikes and scooters for its delivery fleet to reduce emissions? It is perfectly fine to select "Don't know" if you do not remember.

- ☐ *ModernTech Construction (1)*
- ☐ *FreshFoods (2)*
- ☐ *FutureMobility (3)*
- ☐ *ZipDeliveries (4)*
- ☐ *Don't know (5)*

According to the information you read in this survey, which company has introduced expanding its service area and fleet? It is perfectly fine to select "Don't know" if you do not remember.

- ☐ *ModernTech Construction (1)*
- ☐ *FreshFoods (2)*
- ☐ *FutureMobility (3)*
- ☐ *ZipDeliveries (4)*
- ☐ *Don't know (5)*

A3.2 Regression tables

Below, I present the regression tables for models that estimate the direct effect of the treatment on the outcomes of interest (holding the state accountable for inaction through vote choice and support for climate policies with personal costs).

	<i>Dependent variable:</i>	
	Electoral accountability	
	(Binary)	(Ordered)
Treatment	−0.028 (0.259)	0.134 (0.163)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01	

Table A3. 1: Effect of treatment on vote choice (electoral accountability)

	<i>Dependent variable:</i>	
	Policy support	
	(Binary)	(Ordered)
Treatment	−0.002 (0.265)	−0.105 (0.163)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01	

Table A3. 2: Effect of treatment on support for policies with high personal costs

	<i>Dependent variable:</i>	
	Electoral accountability	
	(Binary)	(Ordered)
Treatment	0.045 (0.310)	0.111 (0.193)
Gender	0.538* (0.308)	0.469** (0.192)
Age	0.109 (0.172)	0.183* (0.104)
Education	-0.141 (0.113)	-0.041 (0.069)
Income	0.034 (0.037)	0.016 (0.023)
Political leaning	0.242*** (0.066)	0.230*** (0.043)
Climate skepticism	-0.302 (0.333)	-0.402* (0.212)
Threshold (Extremely unlikely->Somewhat unlikely)		-0.794* (0.447)
Threshold (Somewhat unlikely->Neither likely nor unlikely)		0.128 (0.424)
Threshold (Neither likely nor unlikely->Somewhat likely)		0.848** (0.422)
Threshold (Somewhat likely->Extremely likely)		2.361*** (0.440)
Constant	-0.296 (0.679)	
<i>Note:</i>		
*p<0.1; **p<0.05; ***p<0.01		

Table A3. 3: Effect of treatment on vote choice (electoral accountability). Models with controls.

	<i>Dependent variable:</i>	
	Policy support	
	(Binary)	(Ordered)
Treatment	0.206 (0.328)	−0.025 (0.194)
Gender	0.210 (0.328)	−0.363* (0.192)
Age	0.125 (0.179)	−0.018 (0.099)
Education	0.154 (0.119)	−0.168** (0.069)
Income	0.060 (0.037)	−0.048** (0.024)
Political leaning	0.096 (0.067)	−0.189*** (0.043)
Climate skepticism	1.038*** (0.337)	−0.340 (0.212)
Threshold (Strongly agree->Tend to agree)		−3.396*** (0.472)
Threshold (Tend to agree->Neither agree nor disagree)		−1.401*** (0.441)
Threshold (Neither agree nor disagree->Tend to disagree)		−0.637 (0.442)
Threshold (Tend to disagree->Strongly disagree)		0.519 (0.477)
Constant	−0.958 (0.691)	
<i>Note:</i>		
*p<0.1; **p<0.05; ***p<0.01		

Table A3. 4: Effect of treatment on support for policies with high personal costs. Models with controls.

A3.3 Alternate specifications to test for H1 and H2

Next, I present alternate specifications of the ordered logistic regression models that include two new control variables – corporate climate action perceptions and personal importance of climate action. For perceptions of corporate climate action exploit a question in the survey that asks respondents how much do they agree with the following sentence: Corporations/companies in India are doing enough to combat climate change. Responses are recorded on a 5-point Likert scale. This is then converted into a numeric variable and included in the model. Similarly, to measure the importance of climate action for the individual, I make use of a survey question that asks respondents how important it is to them to address climate change. Responses are recorded on a scale of 1-10 and included in the model. The results continue to remain insignificant.

	<i>Dependent variable:</i>	
	Electoral accountability – ordered	
	(1)	(2)
Treatment	0.106 (0.196)	−0.035 (0.297)
Gender	0.476** (0.194)	0.233 (0.289)
Age	0.182* (0.104)	0.328** (0.155)
Education	−0.036 (0.069)	−0.034 (0.107)
Income	0.015 (0.023)	0.030 (0.036)
Political leaning	0.225*** (0.044)	0.221*** (0.072)
Climate skepticism	−0.402* (0.225)	−0.138 (0.348)
Corporate climate action perceptions	−0.018 (0.086)	0.205 (0.148)
Importance of climate action		0.094 (0.133)
Threshold (Extremely unlikely->Somewhat unlikely)	−0.861 (0.556)	0.341 (1.238)
Threshold (Somewhat unlikely->Neither likely nor unlikely)	0.061 (0.538)	1.546 (1.203)
Threshold (Neither likely nor unlikely->Somewhat likely)	0.767 (0.538)	2.493** (1.207)
Threshold (Somewhat likely->Extremely likely)	2.271*** (0.553)	4.542*** (1.250)
<i>Note:</i>		
*p<0.1; **p<0.05; ***p<0.01		

Table A3. 5: Effect of treatment on vote choice (electoral accountability) controlling for corporate climate action perceptions and importance of climate action

	<i>Dependent variable:</i>	
	Policy support – ordered	
	(1)	(2)
Treatment	−0.115 (0.197)	−0.035 (0.301)
Gender	−0.391** (0.194)	−0.230 (0.299)
Age	−0.003 (0.100)	0.043 (0.151)
Education	−0.146** (0.070)	−0.018 (0.109)
Income	−0.055** (0.024)	−0.059 (0.037)
Political leaning	−0.167*** (0.044)	0.025 (0.076)
Climate skepticism	−0.122 (0.224)	−1.068*** (0.372)
Corporate climate action perceptions	0.250*** (0.084)	0.220 (0.149)
Importance of climate action		−0.535*** (0.141)
Threshold (Strongly agree->Tend to agree)	−2.494*** (0.555)	−6.811*** (1.332)
Threshold (Tend to agree->Neither agree nor disagree)	−0.459 (0.538)	−4.085*** (1.261)
Threshold (Neither agree nor disagree->Tend to disagree)	0.303 (0.541)	−3.053** (1.246)
Threshold (Tend to disagree->Strongly disagree)	1.436** (0.571)	−1.896 (1.253)

Note:

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

Table A3. 6: Effect of treatment on support for policies with high personal costs controlling for corporate climate action perceptions and importance of climate action

A3.4 Alternate outcome measures to test for H1 and H2

Finally, I use alternate outcome measure – likelihood to protest against climate inaction – to test if the treatment influences policy support outcomes. Protests can help us understand if individuals are likely to take high costs action to hold the state accountable. Similar to the vote choice question, this question records responses on a 5-point Likert scale. The treatment has null effect for this alternate measure as well.

	<i>Dependent variable:</i>
	Intention to protest
	(1)
Treatment	−0.126 (0.179)
Gender	−0.029 (0.180)
Age	0.054 (0.096)
Education	0.089 (0.064)
Income	0.029 (0.021)
Political leaning	0.088** (0.039)
Climate skepticism	−0.170*** (0.065)
Threshold (Extremely unlikely->Somewhat unlikely)	−2.701*** (0.488)
Threshold (Somewhat unlikely->Neither likely nor unlikely)	−1.598*** (0.443)
Threshold (Neither likely nor unlikely->Somewhat likely)	−0.598 (0.429)
Threshold (Somewhat likely->Extremely likely)	0.928** (0.430)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table A3. 7: Effect of treatment on intentions to protest against climate inaction

I also test to see if trust mediates the outcome of the treatment on intention to protest, as seen in the case of vote choice outcome. However, I find null results, indicating

that higher trust results in more formal forms of accountability, such as voting, and not necessarily in non-institutional forms of accountability, such as protests.

	<i>Dependent variable:</i>
	Intention to protest
	(1)
Treatment	0.422 (0.599)
Trust	−0.319* (0.186)
Gender	−0.019 (0.182)
Age	0.079 (0.096)
Education	0.076 (0.065)
Income	0.022 (0.021)
Political leaning	0.042 (0.041)
Climate skepticism	−0.116* (0.068)
Treatment:Trust	−0.215 (0.238)
Threshold (Extremely unlikely->Somewhat unlikely)	−3.689*** (0.662)
Threshold (Somewhat unlikely->Neither likely nor unlikely)	−2.586*** (0.630)
Threshold (Neither likely nor unlikely->Somewhat likely)	−1.593** (0.619)
Threshold (Somewhat likely->Extremely likely)	−0.027 (0.613)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table A3. 8: Effect of treatment on intention to protest climate action, with trust as an interaction term