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Understanding caste-based differences in self help groups

Evidence from India's NRLM program

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Social protection



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Authors of this paper, *Understanding caste-based differences in self help groups: Evidence from India's NRLM program*, analyze the caste-based differences in office bearer positions, participation and benefits received in self-help groups under India's National Rural Livelihoods Mission. This paper has not been copyedited or proofed by 3ie. It has been made available as received by the authors.

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Executive summary

Community-based development programs are prone to elite capture and exclusion of disadvantaged households. The National Rural Livelihoods Mission (NRLM), India's flagship rural livelihoods program, aims to address this through its mandate for social inclusion, which requires that members from the disadvantaged group (including Scheduled Castes (SC) and Scheduled Tribes (ST)) are identified and included as beneficiaries in the program. Additionally, it also mandates that such members be adequately represented in the management and governance of Self-Help Groups (SHGs) created by the NRLM program. Management of an SHG under NRLM is done by the elected representatives, which includes a President, Vice-President, Treasurer, and Bookkeeper; collectively referred to as Office Bearers (OBs). These Office Bearers are elected by the SHG members themselves for a fixed tenure as decided by the group, in many instances, SHG members appoint the office bearers through consensus and not an election.

Using primary data for SHGs from nine states in India, in this paper we test if members from the SC or ST group have an equal likelihood of holding an office bearer position in mixed caste SHGs. We study the effect of a member's socio-economic characteristics on the likelihood of her becoming an office-bearer in the SHG; specifically, we are interested in understanding its correlation with the member's identity. In addition, we analyze the effect of a member's identity on her participation in the SHG and on the benefits received from the SHG. Caste-based differences are well documented in the Indian context, lower caste and marginalized households usually face discrimination across various spheres, including labor market and access to public goods. We expect NRLM's social inclusion mandate to reduce the bias or discrimination that SC or ST members might otherwise face in becoming office-bearers in a mixed caste SHG. Similarly, given social inclusion, we also expect SC and ST members to equally participate in and receive benefits from the NRLM program. The present context does not allow us to test for the impact of the social inclusion mandate; what we do test in this paper is - given everything else is fixed, do SC or ST members have an equal likelihood of becoming an office-bearer or not in a mixed caste SHG.

The data used in this study was collected for the impact evaluation of the NRLM program (see Kochar et al 2020). This includes data on households, villages, SHGs, village organizations (VOs) and cluster-level federations (CLFs) from rural areas of nine states (including Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, Rajasthan, Odisha, Uttar Pradesh, and West Bengal) in India. In this study, from the 5,672 SHGs that were surveyed, we use data on 1,569 functional SHGs that are mixed group SHGs. We define a mixed group SHG as one that has at least one member from each of the following two types of households – (1) SC and ST (including other minorities), and (2) General and Other Backward Categories (OBCs).

Using SHG level fixed effects to compare members in the same SHG and after controlling for member's background characteristics, we do not find any significant differences in the likelihood of holding an office position across members from different caste groups, but we do find that SC and ST members have a lower likelihood of becoming an SHG president and these differences remain significant even after we control for different member level characteristics. The magnitude of this difference,

however, is small. Besides, we also analyze if there are any significant differences in the participation and benefits received by members from different caste groups, and find that there are some significant differences, but again these differences are small in magnitude. In addition, we find that participation of and benefits received by SC and ST members in a mixed caste SHG are relatively better in groups where they are better represented in the office bearer positions.

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1. Introduction

Decentralized governance has been an experiment in the devolution of powers to local level administrative bodies across many developing nations. In India, it has been deemed successful, with some evidence that reserved politicians at gram panchayat level target differently for program delivery and can lead to policy change (Besley et al, 2007). However, the positive outcomes of decentralization have often been linked to socio-political elites that are created by the very same system (Bardhan & Mookherjee, 2000, Besley et al, 2007). Accountability and responsiveness at the local level has not been very effective due to embedded social divides in terms of income, gender and caste (Haque, 2008). While this discussion around elite capture and its impact on decentralized planning is hardly new, and dates back to the late 1700s (Rajasekhar, Babu & Manjula, 2018), it has taken center stage with the renewed interest in decentralization in developing countries in the past few decades (Chowdhury & Yamauchi, 2010).

Community driven development is often vulnerable to elite capture (Dasgupta & Beard, 2007). There are two important aspects of the problem of collective action (Bandiera, et al 2005) that may influence elite capture: negative externalities created by extraction of resources by one user that leads to reduced resources available for others, while investments made to maintain the resources creates positive externalities by benefitting the entire collective. The first part of the problem is generally addressed in literature through a combination of resource extraction monitoring, negative reinforcements and conflict resolution through better communication channels (Baland and Platteau 1996, Lam 1998, Ostrom 1990). The second part of the problem depends on the ability of a community to cooperate and sustain collective action, which is influenced by characteristics such as heterogeneity in terms of ethnicity, religion and social class, wealth inequality and community size (Bandiera et al, 2005).

Elite capture is well understood in development literature and is different from 'elite dominance'; in the sense, that while dominant elites have the power to influence the course of decision-making, capture generally involves negative connotations wherein, resources are cornered in by these dominant elites for their own benefit which would have otherwise not been available to them (Inbanathan, 2002). There are also instances where households with political proximity to gram panchayat representatives leads to public services being directed in their favor or "clientelism" (World Bank, 2004). Many studies also point out to the distinction between "formal" and "informal elites". Alatas et al. (2019) showed formal elites, who are chosen by the government, acting differently and benefitting more than informal elites, who become leaders by community service. Powis (2007) writes about a similar form of capture wherein he names elites as a new breed of leaders in rural India who may not necessarily be from the dominant caste or a part of the formal governance system but extend important services to the poor for which they are rewarded (manifested as corruption). While elite capture is generally viewed in a negative light, some like Khwaja (2009) have argued that elite capture is beneficial in instances where the elite are better positioned to implement welfare programs. Others have noted (Alatas et al. (2019) that while capture does take place, the welfare losses that it leads to are marginal.

Historically, community-based development programs have been prone to elite capture, where the benefits from the program have been captured either by the community leaders or by the more powerful households in the community (Mansuri & Rao, 2012).

Elite capture results in the poor and marginalized, the target beneficiaries of development or livelihood programs, being excluded from receiving benefits from such programs. Social exclusion and elite capture in earlier livelihoods programs are well documented (Singh et al (2017)). The Radhakrishna committee on “Credit Related Issues Under SGSY” (2009) highlights the capture of groups by influential persons in villages across most areas, especially Bihar and Uttar Pradesh as one of the deficiencies in the delivery mechanisms in the poverty-alleviation program Swarnjayanti Gram Swarozgar Yojana (SGSY). In this paper, we focus on NRLM’s mandate of social inclusion as a way to overcome these challenges that have plagued India’s earlier livelihood programs.

The National Rural Livelihood Mission (NRLM) is India’s flagship rural livelihoods program. Implemented in 2011-12, NRLM aims to provide livelihood support to poor households in rural areas to enable them to increase household income and improve wellbeing. At the center of the NRLM are Self Help Groups (SHGs) that are managed and governed entirely by its members. Members of these SHGs constitute 10-15 women residing in the same neighborhood and the management of these collective institutions is done by the elected representatives, which includes a President, Vice President and Treasurer; collectively referred to as Office Bearers (OBs)¹. Since its inception, NRLM has implemented a range of social inclusion strategies aimed at creating inclusive and participatory community institutions. The mission mandates priority targeting and inclusion of members from the vulnerable groups, particularly the Scheduled Castes (SC), Schedule Tribe (ST), and other minority groups. In addition, the program also requires that members from vulnerable households be well represented in leadership roles or office bearer positions within the SHGs; the objective of this directive is to ensure that the vulnerable households are well represented in the decision-making processes and benefits from the SHG do not disproportionately accrue to the relatively more well-off members in the group. Note however that unlike other affirmative action policies in the Indian context, NRLM’s mandate for inclusion in leadership roles does not allow for any position to be reserved for members from the vulnerable group.

Even though the NRLM program target beneficiaries include marginalized households from all caste groups, SHG members from SC, ST and minority households may be relatively much worse off compared to other members in the group. Using member level household data, collected alongside the SHG level data used in this study, we do find that on average SC and ST members are relatively worse off compared to other SHG members. We find that these members have a larger household size, lower education levels and are less likely to own any land. Thus, within the set of marginalized households that form the target beneficiaries under the NRLM program, there are further differences that exist in members’ socio-economic status and as a result these members are relatively worse off compared to other members in the group.

There is now enough literature to attest to an emerging shift in the nature of rural elites (Powis, 2007) which shows that traditional elites are being replaced by younger or more educated political leaders or “naya netas” (Krishna, 2002) who are neither from a lower status or a higher status but play important roles in shaping welfare decisions in villages (Krishna, 2011). Similarly, Padmaja (et al. 2019) study elite capture within the specific context of SHGs and try to assess how the magnitude of capture varies across

¹ Classification based on the [Master Circular of DAY-NRLM](#), issued in August 2017.

“traditional elites” who are defined based on caste, education, land holding, house-type and economic status and non-traditional or “neo elites” who hold official positions in these SHGs. Given this context, it would be interesting to see if social inclusion targeting, coupled with the evolving nature of local leadership in general is successful in reducing capture by traditional elites.

In this paper, we study the effect of member’s socio-economic characteristics on the likelihood of her becoming an office bearer in the SHG; specifically, we are interested in understanding its correlation with member’s identity. In addition, we analyze the effect of member’s identity on her participation in the SHG and on the benefits received from the SHG. Caste forms an important social institution in India and by birth, individuals are divided into different caste groups. Traditionally, these caste divisions have been based on occupations. And even though caste-based discrimination is prohibited by the Indian constitution, caste remains a social fact (Beteille, 1992) with innumerable instances of biases perpetrated on the basis on caste. Evidence for caste-based differences and discrimination in the labor market (Madheswaran and Attewell (2007), Singh and Pattanaik (2020), Thorat, Madheswaran and Vani (2021), Deshpande and Sharma (2015)), public services such as education (Bailwal and Paul (2020)) and drinking water (Dutta, Behera and Bharti (2017)), access to formal credit (Raj and Sasidharan (2018), Patel, Lenka and Parida (2020)) is well documented and established. Studies (Adhikari and Falco (2009) and Yadav, Bigsby and MacDonald (2015)) done in the context of forest management groups in Nepal have also documented the negative association between affiliation to lower caste group and membership into executive committees and decision-making units of these community-based groups. Comparing institutional structures of group farming projects across two states in India (Telangana and Kerala), the study by Agarwal (2020) provides some anecdotal evidence for leadership positions in mixed groups being captured by women from the upper caste. Within the context of SHGs as well, recent study by Hoffman et al (2018) notes that during their fieldwork in Bihar they observed cases where women from the upper caste took control of the election process for SHGs and fielded their own candidates for the positions.

We expect NRLM’s social inclusion mandate to reduce the bias or discrimination that SC or ST members might otherwise face in becoming an office bearer in a mixed caste SHG. The present context, however, does not allow us to test for the impact of social inclusion mandate on the likelihood of becoming an office bearer; what we do test in this paper is - given everything else as fixed, do SC or ST members have an equal likelihood of becoming an office bearer or not in a mixed caste SHG. Similarly, given social inclusion, we also expect SC and ST members to equally participate in and receive benefits from the NRLM program. To examine these hypotheses, we use primary data, collected in 2018-19, for an impact evaluation of the NRLM program. The primary survey covered a total of 5,672 SHGs across nine states and collected detailed data on various aspects (such as formation, members, functioning) of the SHG. Our analysis, however, is restricted to mixed group SHGs only and we define a mixed group SHG as one that has at least one member from each of the following two type of households - 1. SC and ST (including other minority), and 2. General and OBC. In our empirical analysis, we use SHG level fixed effects to compare members in the same group.

Broadly, it seems that NRLM's mandate for social inclusion has been successful in ensuring SC and ST² representation in office bearer positions. Controlling for member's other characteristics, we find no difference in the likelihood of an SC or ST member becoming an office bearer in a mixed caste SHG. Disaggregated analysis of the different positions, however, shows that SC and STs have a significant lower likelihood of becoming an SHG president even after controlling for member's socio-economic characteristics. Whereas, regarding differences in participation and benefits from the SHG, we do find some significant differences across members from different caste groups; we find that members from the vulnerable households attend fewer meetings and also, save lower number of times with the SHG. Whereas these members on an average demanded and received a greater number of loans from the SHG, the amount of loan received is significantly lower compared to members from other caste groups. Due to unavailability of data, we can't distinguish if this difference in the loan amount received is due to a lower amount of loan being requested or if this represents any systematic bias or discrimination towards members from vulnerable households. Finally, we also analyze if participation and benefits received by SC and ST members varies depending upon on their representation in office bearer positions in the SHG and we find that SC and ST members attend a greater number of meetings, save more and have received larger support in terms of loans from the SHG in groups where there is better representation of these members in the office bearer positions.

The primary contribution of our study is the evidence it provides for caste-based differences in the context of a large-scale collective-based rural livelihoods program, that is the NRLM. The paper contributes to literature that has rigorously evaluated similar differences in the context of other but similar collective-based development interventions such as in case of forest management groups (as cited above). Depending on the local context and structures, such collective-based interventions often come with the risk of exclusion especially in cases where the collectives are heterogenous in terms of their composition. The core values which guide NRLM have very strong social inclusion strategies embedded in the program. The likelihood of such a strategy being effective may not be contentious in SHGs that are homogeneous in terms of caste structure. It is in the context of mixed caste SHGs that the social inclusion policies and directives of the program encounter daunting challenges. It is the contextual factors, for example the nature and composition of groups that to a large extent drive the effectiveness of social inclusion in addition to the program strategies. Our paper provides empirical evidence and refutes the widespread belief that a social inclusion mandate or similar program directives may be sufficient to prevent capture or accrual of program benefits only to the relatively more powerful or dominant households in the SHG. We do find small but significant differences in representation and participation across members from different caste groups in the SHGs under NRLM.

The second contribution of our paper is that our findings confirm, to some degree, the complementarity of various approaches to social inclusion that need to be implemented simultaneously for a comprehensive poverty alleviation approach. As has already been

² The survey classified members into the following groups - General, Other Backward Castes (OBC), Schedule Caste (SC), Schedule Tribe (ST), Minorities, and Others. Only a small percentage (around 2 percent) of individuals in the sample belong to the minority group while the rest are all SC or ST, hence we have included the Minorities in the SC and ST category in our analysis.

pointed out in our paper, since its inception in 2011, the National Rural Livelihood Mission has implemented a range of social inclusion strategies aimed at creating inclusive community institutions geared towards eradication of poverty. However, our paper shows that the NRLM program has been somewhat successful in ensuring adequate representation from the disadvantaged groups in office bearer positions in the SHG but there is still a significant difference in representation in the top position, that is SHG President. From a program perspective, adequate representation of the disadvantaged group in the decision-making body is needed to ensure that the program remains inclusive and that SHGs are responsive to the needs and requirements of all members in the group. In the light of the findings of our paper, it is evident that along with inclusionary mandates that might be applicable in general to all homogenous groups, there needs to be some special inclusion mandate with respect to mixed caste group which would encourage the backward caste members from these groups to occupy leadership positions. Policies like protective discrimination (Article 15 and article 16 of the Indian constitution) may be thought of in which the office bearer position of SHGs including president are reserved for SC and ST in mixed caste groups or ensuring that there is regular rotation of office bearer positions to encourage representation. Even though NRLM mandates that office bearer positions be rotated amongst the members, however, we find that only a small percentage (around 7 percent) of the surveyed SHGs reported a change in office bearers since its formation.

The remaining paper is divided into the following sections - section 2 discusses the NRLM programme and social inclusion mandate in detail. Section 3 discusses the data while in section 4 we present a descriptive analysis. The empirical methodology and estimation results are discussed in section 5 and 6 respectively. Finally, section 7 discusses the policy implications and conclusions from this paper.

2. Program Context

2.1 Background of the NRLM Program

The Ministry of Rural Development, Government of India launched the National Rural Livelihoods Mission (NRLM) in 2012 to bring momentum to its poverty alleviation efforts. Within the ambit of this mission, the National Rural Livelihoods Programme (NRLP) was formed to build capacity and foster an enabling environment to support its expansion. Women's self-help groups (SHGs) were formed in select blocks of high poverty districts. Under the programme, all households with one or more deprivation included households in Socio economic and caste census (SECC 2011) and all eligible households identified through a 'participatory identification of poor' (PIP) process and validated by gram sabha constitute the NRLM target group. The program deploys frontline staff, external Community Resource Persons (CRPs) (wherever possible and required), internal CRPs and active women for undertaking inclusive mobilization within the village. Wherever internal CRPs are not adequate in number, the programme identifies active women and train and deploy them to undertake social mobilization of poor households into SHGs.

Unlike previous programmes, NRLM focused on building institutions and capacities. A federated structure, starting with an apex 'umbrella' institution at the state-level called State Rural Livelihoods Missions (SRLM), oversees a hierarchy of institutions at lower levels. At the bottom of this structure are SHGs or 'institutions of the poor' to give them a

collective voice and enhance their bargaining power. Unlike its predecessor (SGSY), groups under NRLM have only women members. SHGs were federated into Village Organizations (VOs), which were federated into Cluster Level Federations (CLFs). Each block was divided into three to four such clusters, each cluster contained approximately 8-10 Gram Panchayats or 25-30 villages. The impact evaluation of NRLM implemented in 2019 (Kochar et al 2020) provides robust evidence that the programme has significant impact on the targeted households in terms of increasing their incomes and savings.

2.2 Office Bearers in NRLM

As discussed above, the management of an SHG under NRLM is done by the elected representatives, which includes a President, Vice-President, and Treasurer; collectively referred to as Office Bearers (OBs). As per the SHG norms under NRLM, the group should endeavor that the office bearer position rests with the most vulnerable members of the group. (Community Operation Manual, Government of India) The office bearers are elected for a fixed tenure (as decided by the group). The President of the SHG is the overall leader of the group under whose stewardship the group functions. She guides the group, ensures participation of all members in group meetings and activities, and assigns responsibilities to group members on various tasks related to SHG functioning. The Vice President or Secretary of the SHG on the other hand is responsible for managing day to day affairs and administrative matters of the SHG. Finally, the Treasurer is responsible for financial matters of the SHG. Besides these three office bearers, a bookkeeper is also anointed/selected for the SHG. Preference is given to someone who is literate and possesses basic calculation and writing skills. The role of the bookkeeper is to maintain the accounts and books of records that happen in each meeting. The SHG pays the bookkeeper an honorarium for writing and maintaining the books of accounts for the SHG. The President and Secretary of the group are elected by the SHG members themselves for a fixed tenure as decided by the group. However, in many instances SHG members appoint the two office bearers through consensus and not election.

2.3 Social Inclusion within NRLM

Since its inception in 2011, the National Rural Livelihood Mission has implemented a range of social inclusion strategies aimed at creating inclusive community institutions geared towards eradication of poverty. The focus on social inclusion aspect of the programme during its implementation have been well documented in the operational manual of the programme (MORD, 2020). The mission mandates priority targeting and inclusion of Scheduled Castes, (SC), Schedule Tribe (ST), single women and women headed families, elderly persons, person with disabilities (PwDs) and minority groups. NRLM places emphasis on building inclusive, participatory and accountable federations. The social inclusion manual for practitioners (MoRD, 2018) clearly specifies that women from SC, ST and minority households should be included in leadership roles within the SHGs, VOs and Cluster Level Federations.

While operationalizing its implementation plan, the mission aimed to ensure that 50 percent of the beneficiaries are SC/STs, 15 percent are religious minorities and 3 percent are persons with disability, while keeping in view the ultimate target of 100 percent coverage of identified rural poor families (MoRD, 2018). When the programme commenced as a proof of concept at the early stages, the implementing teams in the

state rural livelihood missions (SRLMs) had applied pro-poor inclusion criteria to select the initial blocks based on higher concentration of poor and SC/ST households.

The monitoring framework of the programme provides clear guidelines on the governance mechanism. As per the guidelines in terms of the leadership and governance position within the institutions, the programme explicitly states the goal of reaching out and mobilizing the poorest in the community, including the poor in leadership positions in community institutions. The final step is to ensure that all the vulnerable poor are organized, and they participate in all key processes and access full range of benefits and services offered by SHGs and their federations. Social inclusion at all stages of the programme is an important measure that should be systematically monitored and should feed into the strategy formulation and policy making processes.

3. Data

The data we use for this study was collected by a team of researchers, from Stanford University, International Initiative for Impact Evaluation (3ie), and Vrutti (Catalyst Group), for the impact evaluation of the National Rural Livelihood Program (see Kochar et al 2020). The study collected detailed data on Households, Villages, SHGs, Village Organizations (VOs) and Cluster Level Federation (CLFs) from rural areas of nine states (including Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, Rajasthan, Orissa, Uttar Pradesh, and West Bengal) in India. This data was collected in 2019-20. The impact evaluation used a difference in differences methodology, where the authors compared early and late NRLM blocks and villages, to estimate the effects of the NRLM program. The sampled villages and SHGs were selected keeping in mind the methodology for the impact evaluation. Accordingly, the SHG module was canvassed to a total of six SHGs in each of the selected villages; two out of these six SHGs were those that were formed at the time of the entry of the NRLM program in the village while the remaining four were randomly selected from the list of SHGs in the village. In this study, we use SHG level data from this survey. The team surveyed a total of 5,672 SHGs and collected detailed data on various aspects of the SHG, including - a) formation, b) member wise details on caste, education and household details, c) functioning - office bearers, savings, loans, trainings, financial health, adherence to *Panchasutras*, and d) support to members for accessing social security schemes. Out of the 5,672 SHGs, 914 SHGs were nonfunctioning at the time of the survey, and we drop these SHGs from our analysis sample. We further drop SHGs that are single caste SHGs, these are those SHGs where all the members are from the same caste group. Of the functioning SHGs, 2,829 are single caste SHGs. Further, we have also dropped those SHGs that either have only SC and ST members (211 SHGs) or Non-SC and ST (149 SHGs) members. Our analytical sample, thus, consists of 1,569 functional and mixed caste SHGs, with a total of 17,849 constituent members. Table 1 compares the number of SHGs in the full sample with the sample used in this analysis.

Table 1: Number of SHGs in analytical sample

	Primary Survey Sample	Analytical Sample
	Number of SHGs	
Bihar	1,217	446
Chhattisgarh	513	227
Jharkhand	517	157
Madhya Pradesh	305	118
Maharashtra	423	116
Odisha	487	152
Rajasthan	570	79
Uttar Pradesh	312	98
West Bengal	413	176
Total	4,757	1,569

Note: The number of SHGs presented above excludes those that are nonfunctional SHGs. Out of a total of 5,672 SHGs that were surveyed 914 were nonfunctional SHGs and have been excluded from the analysis in this paper as well. Analysis sample includes SHGs that are mixed group, we define a mixed group SHG as one that has at least one member from each of the following two type of households - 1. SC and ST (including other minority), and 2. General and OBC.

4. Descriptive analysis

In table 2 we compare the average characteristics between the officials and other members of the SHG. We find that SHG officials are less likely to belong to the SC and ST category; even though the difference between the two groups is small, this difference is statistically significant (using a *ttest*). As in table 2, in table 3 we provide a similar comparison between the officials and other members, for each of the office bearer position in the SHG. Of the four positions in the SHG, from table 3, we find that a greater proportion of the Presidents and Bookkeepers belong to the non-SC or ST group, again these differences are statistically significant. Besides the difference in terms of caste, there do exist significant differences between the two groups on other characteristics. Compared to the other members in the group, on average, officials are relatively better educated, younger and are more likely to have been married. The average age of the officials is around 36 years compared to 39 years for the other members. Regarding education, more than 50 percent of the officials have completed at least five years of education, compared to less than 30 percent for the other members in the group. Similarly, we find that the husbands of SHG officials are significantly better educated as well. Besides this, we do not find any significant difference in the religion or the main occupation of the husband across the two groups.

Table 2: SHG member characteristics (*Proportions*)

	Holds an OB position in SHG	
	Yes	No
Caste - SC/ST	0.508	0.540
Education - Less than 5 years	0.440	0.723
Education - Between 5 to 8 years	0.173	0.121
Education - Between 8 to 12 years	0.280	0.122
Education - More than 12 years	0.108	0.034
Age (years)	35.631	39.182
Married or separated	0.939	0.902
Engaged in income gen activities	0.435	0.458
Household's main Occupation - Agri in own land	0.293	0.293
Religion - Household	0.911	0.913
Husband Education - Less than 5 years	0.378	0.578
Husband Education - Between 5 to 8 years	0.154	0.154
Husband Education - Between 8 to 12 years	0.329	0.204
Husband Education - More than 12 years	0.139	0.064

Note: Numbers presented in the above table are averages. Yes above represents those who hold an office bearer office in the SHG and No represents other members in the group. The sample is restricted to mixed caste SHGs only.

Table 3: Member characteristics (*Proportions*) - disaggregated analysis by position

	President		Vice President	
	Yes	No	Yes	No
Caste - SC/ST	0.49	0.54	0.53	0.53
Education - Less than 5 years	0.43	0.67	0.44	0.67
Education - Between 5 to 8 years	0.20	0.13	0.18	0.13
Education - Between 8 to 12 years	0.27	0.15	0.30	0.15
Education - More than 12 years	0.10	0.05	0.09	0.05
Age (years)	36.38	38.48	35.29	38.59
Married or separated	0.93	0.91	0.95	0.91
Engaged in income gen activities	0.45	0.45	0.46	0.45
Household's main Occupation - Agri in own land	0.32	0.29	0.30	0.29
Religion - Household	0.92	0.91	0.92	0.91
Husband Education - Less than 5 years	0.38	0.54	0.39	0.54
Husband Education - Between 5 to 8 years	0.16	0.15	0.16	0.15
Husband Education - Between 8 to 12 years	0.33	0.23	0.33	0.23
Husband Education - More than 12 years	0.14	0.08	0.12	0.08

	Treasurer		Bookkeeper	
	Yes	No	Yes	No
Caste - SC/ST	0.51	0.53	0.45	0.54
Education - Less than 5 years	0.46	0.67	0.08	0.68
Education - Between 5 to 8 years	0.16	0.13	0.14	0.13
Education - Between 8 to 12 years	0.27	0.15	0.50	0.14
Education - More than 12 years	0.10	0.05	0.29	0.04
Age (years)	36.11	38.49	32.32	38.59
Married or separated	0.94	0.91	0.92	0.91
Engaged in income gen activities	0.43	0.45	0.49	0.45
Household's main Occupation - Agri in own land	0.28	0.29	0.36	0.29
Religion - Household	0.91	0.91	0.89	0.91
Husband Education - Less than 5 years	0.39	0.54	0.11	0.55
Husband Education - Between 5 to 8 years	0.15	0.15	0.14	0.15
Husband Education - Between 8 to 12 years	0.32	0.23	0.47	0.22
Husband Education - More than 12 years	0.14	0.08	0.28	0.07

Note: Numbers presented in the above table are averages. Yes, above represents those who hold that particular position in the SHG and No represents other members in the group. The sample is restricted to mixed caste SHGs only.

In table 4, we compare average participation in, and benefits received from the SHG across members from different caste groups. We measure SHG participation using information on savings and the number of meetings attended by the members in the past 12 months. Whereas benefits are defined in terms of access to loans and SHG support for establishing enterprises or constructing toilets at home. Regarding participation in SHG activities, we find that on average, members from the SC and ST categories attended fewer meetings and saved less frequently with the SHG. In the past 12 months, SC and ST members, on average, attended 34.66 group meetings and saved 33.10 times with the SHG, whereas other members, on average, attended 36.81 meetings and saved 35.03 times with the SHG; note that these differences are statistically significant (using a *ttest*). Similarly, the average amount saved in the past one year and the cumulative amount saved by SC and ST members is lower compared to other members in the group; this could be due to differences in the economic status between the two groups. The average cumulative amount saved by the SC and ST members with the SHG is around Rs. 2188.17, while the same is around Rs. 2335.96 for non-SC and ST members in the group.

Table 4: Comparing participation and benefits across groups

	Member - SC/ST	
	Yes	No
<i>Participation in SHG Leadership</i>		
Any Position in SHG	0.238	0.262
Number of positions in SHG	0.284	0.323
President	0.080	0.096
Vice President	0.086	0.088
Treasurer	0.077	0.083
Bookkeeper	0.040	0.055
<i>Participation in SHG</i>		
Number of meetings attended (past 12 months)	34.660	36.809
Number of times saved (past 12 months)	33.107	35.033
Log amount saved (past 12 months)	5.811	6.053
Log cumulative amount saved	7.258	7.340
<i>Benefits from SHG</i>		
Ever demanded loan	0.788	0.778
Ever received loan	0.975	0.978
Number of loans received	3.838	3.816
Number of loans received (past 12 months)	0.706	0.766
Log amount received as loan	9.007	9.157
Support for toilet construction	0.110	0.124
Support for enterprise	0.032	0.046
Received any training	0.491	0.455
Number of training attended	0.707	0.645

Note: Numbers presented in the above table are averages. Yes above represents those who belong to either SC, ST or minority households. The sample is restricted to mixed caste SHGs only

Regarding loans from the SHG, we find that on average SC and ST members are more likely to have demanded a loan and have also received a greater number of loans from the SHG. The average amount of loan received by SC and ST members on average, however, is lower. The magnitude of these differences in loans across the two groups is

small and not statistically significant except for the case of the amount of loan received. SC and ST members on average have received around Rs. 19354.13 from the SHG as loan compared to Rs. 23117.17 for the other members in the SHG. A similar difference is observed for support received for toilet construction or starting an enterprise – on average we find that SC and ST members are less likely to have received such support and as above the magnitude of the difference is quite small. Lastly, we find that a greater proportion of the SC and ST members received trainings from the SHG and on an average received a greater number of trainings compared to members from other groups.

5. Empirical Specification

Descriptive analysis presented above suggests that SHG officials are less likely to belong to the SC or ST group; this difference in means could be due to differences in other characteristics, such as education and wealth, across members from different caste groups. In order to ascertain if the observed difference across caste groups is statistically significant after controlling for member's background and other characteristics, we estimate the following specification using member level data -

$$Position\ in\ SHG_{is} = \beta_0 + \beta_1 SC_or_ST_{is} + \beta_2 Education_{is} + \beta X_{is} + \delta_s + \epsilon_{is} - (1)$$

i herein denotes an individual member belonging to an SHG s . The outcome $Position\ in\ SHG_{is}$ indicates whether the member i holds a position in the SHG and accordingly, it takes a value 1 if the member holds any position (either as SHG's President, Vice President, Bookkeeper or Treasurer) in the SHG and 0 otherwise. The variable $SC_or_ST_{is}$ is an indicator variable and it takes a value 1 if the member belongs to either the SC, ST and 0 otherwise. $Education_{is}$ controls for the education level of the member i . To capture the education level of the member we create indicator variables for the following levels of education - 1. less than 5 years of education (less than primary schooling), 2. between 5 to 8 years of education (at least completed primary school), 3. between 8 to 12 years of education (at least completed middle school), and 4. more than 12 years of education (completed schooling). Besides the caste affiliation and education of the members, we also control for various member level characteristics (represented as X_{is} above) that we discussed in the previous section, including the age, marital status, and participation in income generating activities. In addition, we also control for characteristics of the member's husband, including husband's religion, primary occupation, and level of education. Given the inclusion of SHG level fixed effects (δ_s), our specification therefore compares members who belong to the same group and these fixed effects allow us to control for various factors such as those at the village level (including the caste composition and other caste related dynamics of the village) that might correlate with the outcome variable. In addition, we estimate equation (1) separately for each of the four office positions as well, the outcome variable in that case takes a value 1 if the member holds that position and 0 otherwise. Besides, we use a similar specification as in equation (1) to ascertain differences in participation and benefits as well. As described above, we measure SHG participation and benefits using different outcomes including - a) number of meetings attended, b) frequency and amount of savings, c) number and amount of loans received, d) support for enterprise and toilet construction from SHG, and e) number of trainings attended.

6. Estimation Results

6.1 Caste based differences in office bearer positions in mixed caste SHGs

The estimation results for equation (1) are presented in table 5. From column 2 in table 5, we find that the estimated coefficient for the caste variable is negative and statistically significant, thus suggesting that those from SC or ST background have a lower likelihood of holding a position in the SHG; do note however, in the specification presented in column 2, we do not allow for any other individual or household level controls. The estimated coefficient for caste turns insignificant once we control for member's education and other characteristics in subsequent columns of table 5. Regarding member's education, from column 3, we find that the estimated coefficients for different levels of education are positive and statistically significant. Additionally, we also find that the correlation between member's education and a likelihood of holding a position increases with an increase in member's level of education. The estimated coefficients of different levels of education remain positive and significant as we allow for additional member and household level controls in column 4 and 5, there is however a small decline in the magnitude of these coefficients as we allow for additional controls. With regard to other member level characteristics, we find that younger, married and those engaged in income generating activities are more likely to hold a position in the SHG. The estimated coefficients for these variables are also significant. In table 6, we present additional estimation results for SHG position; the outcome variable, however, measures the number of positions held by the member. The estimated coefficients in table 6 are similar to those presented in table 5.

Figure 1: Comparing estimated coefficient across education levels

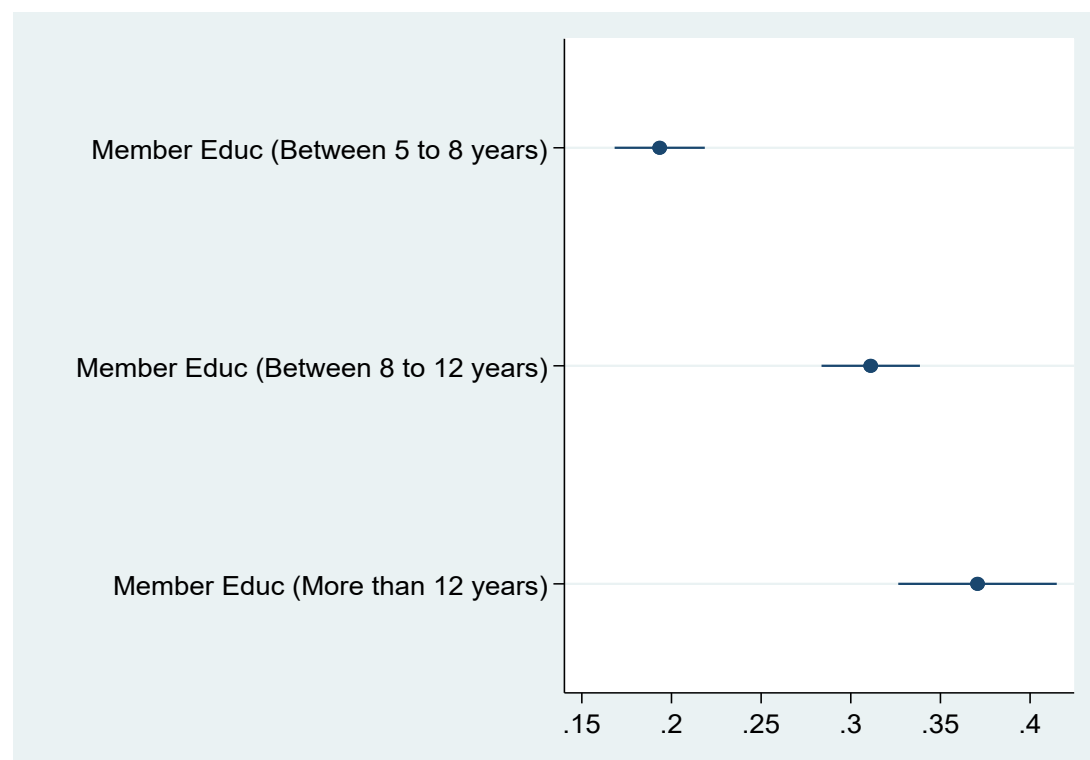


Table 5: Estimation results for position in SHG

	(1) Any position in SHG	(2) Any position in SHG	(3) Any position in SHG	(4) Any position in SHG
Caste - SC/ST	-0.0380*** (0.00906)	-0.00823 (0.00864)	-0.0115 (0.00867)	-0.00398 (0.00885)
Member Educ (Between 5 to 8 years)		0.234*** (0.0118)	0.222*** (0.0122)	0.193*** (0.0128)
Member Educ (Between 8 to 12 years)		0.364*** (0.0113)	0.348*** (0.0120)	0.311*** (0.0140)
Member Educ (More than 12 years)		0.450*** (0.0190)	0.433*** (0.0196)	0.371*** (0.0225)
Age			-0.00141*** (0.000370)	-0.00132*** (0.000383)
Married or separated			0.0487*** (0.0119)	0.0324** (0.0128)
Engaged in income gen activities			0.0311** (0.0121)	0.0421*** (0.0124)
Husband Educ (Between 5 to 8 years)				0.0543*** (0.0115)
Husband Educ (Between 8 to 12 years)				0.0985*** (0.0120)
Husband Educ (More than 12 years)				0.102*** (0.0192)
Engaged in Agricultural on own land				0.0160 (0.0116)
Religion - Hindu				0.0260 (0.0192)
Constant	0.269*** (0.00482)	0.140*** (0.00566)	0.142*** (0.0220)	0.0919*** (0.0294)
Observations	17,818	17,657	17,657	16,864
R-squared	0.001	0.103	0.105	0.112
Number of SHGs	1,566	1,564	1,564	1,563
Fixed Effects	SHG	SHG	SHG	SHG
HH Controls	No	No	No	Yes

*** p<0.01, ** p<0.05, * p<0.1.

Robust standard errors clustered at the SHG level in parentheses. Sample is restricted to mixed caste SHGs.

Table 6: Estimation results for number of positions in SHG

	(1) Number of positions in SHG	(2) Number of positions in SHG	(3) Number of positions in SHG	(4) Number of positions in SHG
Caste - SC/ST	-0.0569*** (0.0121)	-0.0139 (0.0115)	-0.0176 (0.0115)	-0.00692 (0.0117)
Member Educ (Between 5 to 8 years)		0.293*** (0.0158)	0.280*** (0.0163)	0.240*** (0.0168)
Member Educ (Between 8 to 12 years)		0.528*** (0.0167)	0.512*** (0.0175)	0.464*** (0.0202)
Member Educ (More than 12 years)		0.690*** (0.0312)	0.673*** (0.0316)	0.595*** (0.0367)
Age			-0.00142*** (0.000472)	-0.00136*** (0.000484)
Married or separated			0.0628*** (0.0165)	0.0444*** (0.0163)
Engaged in income gen activities			0.0392** (0.0166)	0.0537*** (0.0170)
Husband Educ (Between 5 to 8 years)				0.0558*** (0.0149)
Husband Educ (Between 8 to 12 years)				0.124*** (0.0160)
Husband Educ (More than 12 years)				0.131*** (0.0286)
Engaged in Agricultural on own land				0.0201 (0.0163)
Religion - Hindu				0.0163 (0.0243)
Constant	0.333*** (0.00644)	0.149*** (0.00758)	0.136*** (0.0296)	0.0891** (0.0372)
Observations	17,818	17,657	17,657	16,864
R-squared	0.002	0.121	0.122	0.130
Number of SHGs	1,566	1,564	1,564	1,563
Fixed Effects	SHG	SHG	SHG	SHG
HH Controls	No	No	No	Yes

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. Sample is restricted to mixed caste SHGs.

Comparing between column 2 and 3 in table 5, one can conclude that the observed negative correlation between caste and SHG position in column 2 is possibly driven by SC and ST members on average being less educated compared to the higher caste

members in the group. The negative correlation between caste and SHG position thus becomes insignificant once we control for members education. We do find significant differences in education levels of members from different caste groups. On average, SC and ST members have around 2.62 years of education, compared to around 3.76 years for other members in the group, note that this difference in education is statistically significant.

In addition, table 7 presents the estimation results for the likelihood of holding a particular position; accordingly, the dependent variable in column (1) of table 7, for instance, takes a value 1 if the member is a President in the SHG and 0 otherwise. Disaggregated analysis is useful to understand if the above results vary across different office positions. From table 7, we do find that there are significant differences across these positions and the most notable difference is for the case of President. From column (1) in table 7, the estimated coefficient for caste is negative and significant for the case of President even after controlling for other member level characteristics, whereas the same is not significant in case of other positions in the SHG. The magnitude of the estimate coefficient of SC and ST is -0.013, SC and ST members thus have a 1.3 percent lower likelihood of becoming a President compared to members from other caste group. What this implies is that if there are two members with everything else (including age, education, participation in income generating activities, husband characteristics) equal, the one from the SC and ST group will have a lower likelihood of being elected as the President compared to another member who is not from these caste groups.

Table 7: Estimation results for position in SHG (Disaggregated by Position)

	(1) President	(2) Vice President	(3) Treasurer	(4) Bookkeeper
Caste - SC/ST	-0.0127** (0.00595)	0.00591 (0.00595)	0.00317 (0.00556)	-0.00331 (0.00404)
Member Educ (Between 5 to 8 years)	0.0876*** (0.00891)	0.0701*** (0.00880)	0.0491*** (0.00813)	0.0334*** (0.00552)
Member Educ (Between 8 to 12 years)	0.106*** (0.00946)	0.118*** (0.00958)	0.0935*** (0.00905)	0.147*** (0.00782)
Member Educ (More than 12 years)	0.119*** (0.0172)	0.0907*** (0.0159)	0.114*** (0.0164)	0.271*** (0.0172)
Age	9.39e-05 (0.000238)	-0.00105*** (0.000235)	-0.000143 (0.000232)	-0.000260* (0.000153)
Married or separated	0.00672 (0.00870)	0.0205*** (0.00742)	0.0153* (0.00785)	0.00186 (0.00517)
Engaged in income gen activities	0.00848 (0.00796)	0.0197** (0.00772)	0.0163** (0.00740)	0.00920 (0.00609)
Husband Educ (Between 5 to 8 years)	0.0186** (0.00774)	0.0121 (0.00747)	0.0187*** (0.00714)	0.00646 (0.00467)
Husband Educ (Between 8 to 12 years)	0.0359***	0.0291***	0.0334***	0.0256***

	(1) President (0.00795)	(2) Vice President (0.00797)	(3) Treasurer (0.00767)	(4) Bookkeeper (0.00525)
Husband Educ (More than 12 years)	0.0461*** (0.0137)	0.0204 (0.0129)	0.0359*** (0.0130)	0.0285** (0.0114)
Engaged in Agricultural on own land	0.0191** (0.00790)	0.00627 (0.00751)	-0.00562 (0.00715)	0.000361 (0.00596)
Religion - Hindu	0.0116 (0.0126)	0.00962 (0.0139)	0.00347 (0.0134)	-0.00837 (0.00891)
Constant	0.0154 (0.0192)	0.0438** (0.0190)	0.0205 (0.0190)	0.00936 (0.0128)
Observations	16,864	16,864	16,864	16,864
R-squared	0.032	0.032	0.025	0.120
Number of SHGs	1,563	1,563	1,563	1,563
Fixed Effects	SHG	SHG	SHG	SHG
HH Controls	Yes	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. Sample is restricted to mixed caste SHGs.

For the results presented in table 8 and 9, instead of combining the SC and ST members into one group, we have disaggregated the SHG members by different caste groups and as above the comparison group or the omitted category is the non-SC and ST group, which includes members from the General and OBC households. In table 8 we present the estimation results for holding any position and number of positions held in the SHG, while the estimation results for individual office bearer positions are presented in table 9. Similar to the results presented above, once we control for the background characteristics, from table 8 we find that the estimated coefficients for the two indicator variables - SC, and ST are insignificant. Whereas for the individual office bearer positions we do find that ST members have a significant lower likelihood of becoming a SHG President or Bookkeeper. The estimated coefficients for the SC members are not significant.

Table 8: Estimation results for position in SHG (Disaggregated by identity)

	(1) Number of positions in SHG	(2) Number of positions in SHG
Caste - SC	0.00375 (0.0138)	0.00375 (0.0138)
Caste - ST	-0.0227 (0.0193)	-0.0227 (0.0193)
Constant	0.0948** (0.0377)	0.0948** (0.0377)
Observations	16,864	16,864
R-squared	0.130	0.130
Number of SHGs	1,563	1,563
Fixed Effects	SHG	SHG
HH Controls	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. Sample is restricted to mixed caste SHGs. Estimated specification is similar to the specification used in column (4) of table 6.

Table 9: Estimation results for position in SHG (Disaggregated by Position and Identity)

VARIABLES	(1) President	(2) Vice President	(3) Treasurer	(4) Bookkeeper
Caste - SC	-0.00752 (0.00723)	0.00921 (0.00725)	-0.000942 (0.00687)	0.00300 (0.00465)
Caste - ST	-0.0183** (0.00924)	0.00253 (0.00908)	0.00592 (0.00873)	-0.0129* (0.00702)
Constant	0.0195 (0.0193)	0.0465** (0.0192)	0.0162 (0.0190)	0.0126 (0.0130)
Observations	16,864	16,864	16,864	16,864
R-squared	0.032	0.032	0.025	0.120
Number of SHGs	1,563	1,563	1,563	1,563
Fixed Effects	SHG	SHG	SHG	SHG
HH Controls	Yes	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. Sample is restricted to mixed caste SHGs. Estimated specification is similar to the specification used in column (4) of table 6.

We also analyze if the above results differ by SHG characteristics including - 1. SHG age, 2. proportion of SC and ST members in the group, and 3. formation type (whether formed by internal or external community resource persons). Estimation results based for the heterogeneity analysis are presented in table 10, 11 and 12. From these tables, we find no difference in the above results across SHGs of different characteristics.

Table 10: Heterogeneity based on SHG age

VARIABLES	(1) Any position in SHG	(2) President	(3) Vice President	(4) Book Keeper	(5) Treasurer
Caste - SC/ST	-0.00141 (0.0155)	-0.00916 (0.0104)	0.0131 (0.00991)	0.00195 (0.00752)	-0.00257 (0.00923)
SC/ST X SHG Age	-0.000638 (0.00329)	-0.000878 (0.00216)	-0.00178 (0.00194)	-0.00131 (0.00157)	0.00142 (0.00186)
Observations	16,865	16,865	16,865	16,865	16,865
R-squared	0.112	0.032	0.032	0.120	0.025
Number of SHGs	1,563	1,563	1,563	1,563	1,563
Fixed Effects	SHG	SHG	SHG	SHG	SHG
HH Controls	Yes	Yes	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. The sample is restricted to mixed caste SHGs only. The above specification additionally controls for member's education, age, marital status, engagement in income generating activities, religion and husband's characteristics as well.

Table 11: Heterogeneity based on proportion of SC and ST members in SHG

VARIABLES	(1) Any position in SHG	(2) President	(3) Vice President	(4) Book Keeper	(5) Treasurer
Caste - SC/ST	0.00662 (0.0190)	-0.00282 (0.0125)	0.0152 (0.0133)	-0.0125 (0.00857)	0.000606 (0.0125)
SC/ST X Prop. of SC/ST	-0.0202 (0.0333)	-0.0188 (0.0231)	-0.0176 (0.0227)	0.0175 (0.0154)	0.00489 (0.0213)
Observations	16,865	16,865	16,865	16,865	16,865
R-squared	0.112	0.032	0.032	0.120	0.025
Number of shgid	1,563	1,563	1,563	1,563	1,563
FE	SHG	SHG	SHG	SHG	SHG
HH Controls	Yes	Yes	Yes	Yes	Yes
SHGs	Mixed	Mixed	Mixed	Mixed	Mixed

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. The sample is restricted to mixed caste SHGs only. The above specification additionally controls for member's education, age, marital status, engagement in income generating activities, religion and husband's characteristics as well.

Table 12: Heterogeneity based on who formed the SHG

	(1) Any position in SHG	(2) President	(3) Vice President	(4) Book Keeper	(5) Treasurer
SC/ST X External CRP	0.000855 (0.0316)	-0.0137 (0.0203)	0.0283 (0.0200)	0.0122 (0.0142)	-0.0103 (0.0202)
SC/ST X Internal CRP	0.000460 (0.0254)	-0.0233 (0.0162)	0.0221 (0.0167)	0.00871 (0.0112)	-0.00782 (0.0160)
Caste - SC/ST	-0.00404 (0.0232)	0.00662 (0.0146)	-0.0136 (0.0152)	-0.0116 (0.0102)	0.00996 (0.0147)
Observations	16,513	16,513	16,513	16,513	16,513
R-squared	0.112	0.032	0.031	0.121	0.025
Number of SHGs	1,529	1,529	1,529	1,529	1,529
Fixed Effects	SHG	SHG	SHG	SHG	SHG
HH Controls	Yes	Yes	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. The sample is restricted to mixed caste SHGs only. The above specification additionally controls for member's education, age, marital status, engagement in income generating activities, religion and husband's characteristics as well. The omitted category includes SHGs that were self-formed by the members.

6.2 Caste based differences in participation and benefits in mixed caste SHGs

Further, tables 13, 14 and 15 present the estimated coefficient for the variable on caste for outcomes relating to participation in and benefits derived from the SHG respectively. The results are broadly the same as discussed in the descriptive analysis. Regarding attendings meetings and frequency of savings, we find that the estimated coefficient for the caste variable is significant and negative, which suggests that after controlling for various member characteristics, members from the SC and ST group on average attend

a lower number of meetings and save fewer number of times with the SHG. With regard to the amount saved, although the estimated coefficient is negative, it is not statistically significant. In terms of loans from the SHG, like the descriptive analysis, we find that members from the SC and ST community are more likely to have demanded loans and received a larger number of loans from the SHG, but the amount of loan received is significantly lower compared to other members in the group.

Regarding support towards starting an enterprise, from table 15 we do find that the estimated coefficient for the variable on caste is negative and significant. This suggests that SC and ST members have a lower likelihood of receiving support from the SHG for starting an enterprise, although the magnitude of estimated coefficient is quite low. Finally, for SHG trainings, from the descriptive analysis we found that SC and ST members are more likely to have received a training from the SHG. From table 15, however, we find that the estimated coefficients on the training related variables are not statistically significant.

Table 13: Estimation results for participation in SHGs

VARIABLES	(6) No. of meetings attended	(7) No. of times saved	(8) Log amount saved in last 1 year	(9) Log cumulative amount saved
Caste - SC/ST	-0.308** (0.136)	-0.229* (0.139)	-0.00281 (0.0159)	-0.0117 (0.0125)
Observations	16,865	16,865	16,865	16,865
R-squared	0.005	0.004	0.002	0.002
Number of SHGs	1,563	1,563	1,563	1,563
Fixed Effects	SHG	SHG	SHG	SHG
HH Controls	Yes	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. The sample is restricted to mixed caste SHGs only. The above specification additionally controls for member's education, age, marital status, engagement in income generating activities, religion and husband's characteristics as well.

Table 14: Estimation results for benefits from SHGs - 1

	(1) Ever demanded loan	(2) Ever received loan	(3) No. of loans received	(4) No. of loans received (last 1 year)	(5) Log total loan received
Caste - SC/ST	0.0253*** (0.00605)	0.00219 (0.00203)	0.197*** (0.0616)	0.0506*** (0.0177)	-0.0338* (0.0203)
Observations	16,864	13,199	12,893	16,446	12,893
R-squared	0.004	0.001	0.003	0.002	0.009
Number of SHGs	1,563	1,425	1,401	1,549	1,401
Fixed Effects	SHG	SHG	SHG	SHG	SHG
HH Controls	Yes	Yes	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. The sample is restricted to mixed caste SHGs only. The above specification additionally controls for member's education, age, marital status, engagement in income generating activities, religion and husband's characteristics as well.

Table 15: Estimation results for benefits from SHGs - 2

	(11) SHG support in toilet	(12) SHG support in enterprise	(13) Attended any training	(14) No. of training
Caste - SC/ST	0.00152 (0.00479)	-0.00851*** (0.00320)	-0.00883 (0.0121)	0.0213 (0.0175)
Observations	8,217	16,865	5,284	5,284
R-squared	0.004	0.003	0.075	0.066
Number of SHGs	1,293	1,563	498	498
Fixed Effects	SHG	SHG	SHG	SHG
HH Controls	Yes	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. The sample is restricted to mixed caste SHGs only. The above specification additionally controls for member's education, age, marital status, engagement in income generating activities, religion and husband's characteristics as well.

6.3 Does the composition of the leadership matters?

Finally, we examine whether the participation by and benefits accruing to the SC and ST members varies by the caste composition of the office bearers. In order to do this, we again estimated the above specification along with the interaction of the caste status with the number of office bearer positions held by SC and ST members in the group, estimation results for this specification are presented in table 16, 17 and 18. The estimated coefficient for caste status in this case will reflect the difference in the outcome for SC and ST members in groups that do not have any SC and ST member in office bearer position; whereas the sum of this coefficient with the estimated coefficient for the interaction variable will give us the difference in the outcomes for SC and ST members who belong to groups with at least one SC and ST member in office bearer position.

Regarding participation in the SHG, as above, the estimated coefficient for the indicator variable on caste is negative and significant, which suggests that SC and ST members in groups where there isn't any SC and ST office bearer are less likely to attend meetings or save with the group. On the other hand, the estimated coefficient for the interaction term is positive and significant for the number of meetings attended as well as frequency and amount of savings done by the members with the SHG, suggesting that participation by SC and ST members in the group is relatively better when SC and ST members are included in the office bearer positions. Similarly, for the case of benefits as well, we find that the outcomes for SC and ST members are relatively better when there is representation by SC and ST members in the office bearer positions, we find this for the loan demanded, amount of loan received, support received for enterprise and participation in training activities as well.

Table 16: Heterogeneity based on number of positions held (Participation in SHG)

	(1) No. of meetings attended	(2) No. of times saved	(3) Log amount saved in last 1 year	(4) Log cumulative amount saved
Caste - SC/ST	-1.007*** (0.213)	-0.834*** (0.208)	-0.0725*** (0.0237)	-0.0683*** (0.0214)
Caste - SC/ST x Number of Positions	0.493*** (0.139)	0.426*** (0.141)	0.0491*** (0.0168)	0.0398*** (0.0149)
Observations	16,865	16,865	16,865	16,865
R-squared	0.006	0.005	0.003	0.003
Number of SHGs	1,563	1,563	1,563	1,563
Fixed Effects	SHG	SHG	SHG	SHG
HH Controls	Yes	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. The sample is restricted to mixed caste SHGs only. The above specification additionally controls for member's education, age, marital status, engagement in income generating activities, religion, and husband's characteristics as well. Number of positions measures the number of office bearer positions held by SC, and ST members in the group.

Table 17: Heterogeneity based on number of positions held (benefits from SHGs - 1)

	(1) Ever demanded loan	(2) Ever received loan	(3) No. of loans received	(4) No. of loans received (last 1 year)	(5) Log total loan received
Caste - SC/ST	0.00870 (0.00992)	-0.00146 (0.00330)	0.199** (0.0833)	0.0511* (0.0301)	-0.105*** (0.0326)
Caste - SC/ST x Number of Positions	0.0117** (0.00564)	0.00258 (0.00220)	-0.00122 (0.0522)	-0.000308 (0.0156)	0.0503** (0.0208)
Observations	16,864	13,199	12,893	16,446	12,893
R-squared	0.005	0.001	0.003	0.002	0.010
Number of SHGs	1,563	1,425	1,401	1,549	1,401
Fixed Effects	SHG	SHG	SHG	SHG	SHG
HH Controls	Yes	Yes	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. The sample is restricted to mixed caste SHGs only. The above specification additionally controls for member's education, age, marital status, engagement in income generating activities, religion, and husband's characteristics as well. Number of positions measures the number of office bearer positions held by SC, and ST members in the group.

Table 18: Heterogeneity based on number of positions held (benefits from SHGs - 2)

	(1) SHG support in toilet	(2) SHG support in enterprise	(3) Attended any training	(4) No. of training
Caste - SC/ST	0.00338 (0.00770)	-0.0190*** (0.00591)	-0.0706*** (0.0174)	-0.0602*** (0.0227)
Caste - SC/ST x Number of Positions	-0.00133 (0.00435)	0.00739** (0.00311)	0.0467*** (0.0102)	0.0617*** (0.0131)
Observations	8,217	16,865	5,284	5,284
R-squared	0.004	0.003	0.078	0.069
Number of SHGs	1,293	1,563	498	498
Fixed Effects	SHG	SHG	SHG	SHG
HH Controls	Yes	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. The sample is restricted to mixed caste SHGs only. The above specification additionally controls for member's education, age, marital status, engagement in income generating activities, religion, and husband's characteristics as well. Number of positions measures the number of office bearer positions held by SC, and ST members in the group.

7. Conclusion

Caste forms an important social institution in the Indian context, instances of discrimination based on caste are well documented. Lower caste households are also more likely to belong to the marginalized and disadvantaged group. Elite capture in previous livelihood programs has excluded the marginalized households from deriving benefits from such programs. NRLM, through its mandate for social inclusion, aims to ensure that the marginalized and disadvantaged households are not excluded from the development process. NRLM's social inclusion mandate requires targeted mobilization and representation of disadvantaged households in the management positions of the SHGs.

Using member level data from SHGs established under the NRLM program, in this paper, we test for the existence of caste-based differences in office bearer positions for mixed caste SHGs. For our analysis, we use SHG level fixed effects to compare members from the same SHG. Controlling for various member level characteristics, we find no significant differences in the likelihood of holding an office bearer position across members from different caste groups; this implies that given everything else is equal, SC and ST members have an equal likelihood of holding an office bearer position in a mixed caste SHG as compared to other members in the same SHG. However, we also find that SC and ST members do face a disadvantage in becoming a leader or President of the SHG. Although these differences are smaller in magnitude, they remain statistically significant even after controlling for background characteristics of the member. Besides the difference in office bearer positions, we also examine caste-based differences in participation and benefits received by members from different caste groups. We do find some significant differences, especially in the case of the amount of money saved and loans received from the SHG, but these differences are small in terms of their

magnitude. We also find evidence that the representation of SC and ST members in office bearer positions improves the participation and benefits accruing to SC and ST members in the group. SC and ST members in groups where SC and ST members hold office bearer positions attend more meetings, save more with the SHG and have received a larger amount of loan compared to SHGs where there is no SC and ST member in the office bearer position.

Overall, it seems that the NRLM program has been successful in ensuring adequate representation from disadvantaged groups in key positions in the SHG. Note that this is important for both program implementation and empowerment of the disadvantaged members in the SHG. From a program perspective, adequate representation of the disadvantaged group in the decision-making body is needed to ensure that the program remains inclusive and that SHGs are responsive to the needs and requirements of all members in the group, particularly those from disadvantaged households. Regarding empowerment, these office-bearers might emerge as role models and empower other members in the group, especially for those with similar characteristics as the office bearer. Besides, they might also serve as a link between the members and other local-level institutions, such as the gram panchayat and banks, and thus help members raise concerns with the panchayat members or access social security schemes; this is more likely if the office bearer and members have a shared identity.

Appendix A: Tables

Table A1: State wise composition of SHGs (Using MIS Data)

	Mixed Groups		Other Groups		Total SHGs (in 2019)	% Mixed Group in Analytical Sample
	Number	Percentage	Number	Percentage		
Bihar	2,030,166	29.25	4,910,367	70.75	6,940,533	36.65
Chhattisgarh	728,085	46.13	850,330	53.87	1,578,415	44.25
Jharkhand	389,813	30.84	874,104	69.16	1,263,917	30.37
Madhya Pradesh	965,703	33.37	1,928,051	66.63	2,893,754	38.69
Maharashtra	1,263,173	31.42	2,756,958	68.58	4,020,131	27.42
Odisha	1,343,862	34.56	2,545,170	65.44	3,889,032	31.21
Rajasthan	255,677	24.41	791,834	75.59	1,047,511	13.86
Uttar Pradesh	912,512	30.81	2,049,656	69.19	2,962,168	31.41
West Bengal	2,302,763	30.48	5,251,709	69.52	7,554,472	42.62

We define a Mixed Group SHG as one that has at least one member from each of the following two type of households - 1. SC and ST (including other minority), and 2. General and OBC. While the remaining SHGs are classified as Other Groups. Data used for analysis is from the NRLM MIS 2019.

Table A2: Estimation results for position in SHG

	(1) Number of positions in SHG	(2) Number of positions in SHG	(3) Number of positions in SHG	(4) Number of positions in SHG
Caste - SC/ST	-0.0569*** (0.0121)	-0.0301*** (0.0115)	-0.0358*** (0.0115)	-0.0134 (0.0116)
Highest Educ in group		0.517*** (0.0209)	0.472*** (0.0213)	0.392*** (0.0238)
Age			-0.00581*** (0.000459)	-0.00426*** (0.000479)
Married or separated			0.0702*** (0.0167)	0.0417** (0.0163)
Engaged in income gen activities			0.0174 (0.0168)	0.0431** (0.0170)
Husband Educ (Between 5 to 8 years)				0.104*** (0.0150)
Husband Educ (Between 8 to 12 years)				0.222*** (0.0152)
Husband Educ (More than 12 years)				0.264*** (0.0268)
Engaged in Agricultural on own land				0.0291* (0.0165)
Religion - Hindu				0.0135 (0.0245)
Constant	0.333*** (0.00644)	0.211*** (0.00766)	0.374*** (0.0291)	0.223*** (0.0376)
Observations	17,818	17,679	17,679	16,864
R-squared	0.002	0.078	0.089	0.109
Number of SHGs	1,566	1,566	1,566	1,563
FE	SHG	SHG	SHG	SHG
SHGs	Mixed	Mixed	Mixed	Mixed

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. Sample is restricted to mixed caste SHGs.

Variable highest education in group is an indicator variable and it takes a 1 value 1 if the member has highest education level in the group and 0 otherwise.

Table A3: Estimation results for position in SHG (Disaggregated by Position)

	(1) President	(2) Vice President	(3) Treasurer	(4) Book Keeper
Caste - SC/ST/Minority	-0.0152** (0.00593)	0.00286 (0.00596)	0.00204 (0.00557)	-0.00308 (0.00397)
Highest Educ in group	0.0813*** (0.0112)	0.0464*** (0.0106)	0.0826*** (0.0105)	0.182*** (0.0109)
Age	-0.000654*** (0.000233)	-0.00192*** (0.000230)	-0.000697*** (0.000224)	-0.000984*** (0.000154)
Married or separated	0.00685 (0.00867)	0.0201*** (0.00747)	0.0149* (0.00782)	-0.000124 (0.00528)
Engaged in income gen activities	0.00622 (0.00798)	0.0167** (0.00773)	0.0142* (0.00739)	0.00598 (0.00607)
Husband Educ (Between 5 to 8 years)	0.0349*** (0.00764)	0.0290*** (0.00743)	0.0283*** (0.00709)	0.0120** (0.00478)
Husband Educ (Between 8 to 12 years)	0.0619*** (0.00755)	0.0617*** (0.00745)	0.0523*** (0.00725)	0.0463*** (0.00520)
Husband Educ (More than 12 years)	0.0751*** (0.0127)	0.0590*** (0.0119)	0.0593*** (0.0118)	0.0709*** (0.0106)
Engaged in Agricultural on own land	0.0212*** (0.00792)	0.00841 (0.00756)	-0.00377 (0.00718)	0.00322 (0.00594)
Religion - Hindu	0.0103 (0.0126)	0.00849 (0.0138)	0.00289 (0.0135)	-0.00818 (0.00911)
Constant	0.0535*** (0.0193)	0.0903*** (0.0189)	0.0458** (0.0189)	0.0338*** (0.0130)
Observations	16,864	16,864	16,864	16,864
R-squared	0.025	0.021	0.022	0.115
Number of SHGs	1,563	1,563	1,563	1,563
FE	SHG	SHG	SHG	SHG
SHGs	Mixed	Mixed	Mixed	Mixed

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors clustered at the SHG level in parentheses. Sample is restricted to mixed caste SHGs.

Variable highest education in group is an indicator variable and it takes a 1 value 1 if the member has highest education level in the group and 0 otherwise.

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