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THE ROLE OF ACCOUNTANTS IN INDIAN MICROFINANCE GROUPS: A TRADE-OFF BETWEEN FINANCIAL AND NON-FINANCIAL BENEFITS

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The Role of Accountants in Indian Microfinance Groups: A Trade-off between Financial and Non-Financial Benefits

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Abstract

Self-Help Groups (SHGs) create a platform that allows women to meet on a weekly basis to save and to take loans if needed. Strict records of all saving and lending is important, both to avoid conflicts in the group and to obtain access to bank loans. Accounting is done either internally by a group member or externally by another villager. Economic theory suggests that repeated interaction between individuals can help to build social capital. However, in the context of these SHGs, the presence of an, often male, external accountant might hamper this process. Using first hand data on SHGs in Northern India, I find that repeated interaction is more likely to create non-financial benefits in the form of mutual assistance and collective action when there is no external involvement. However, these benefits come at a cost, as SHGs with internal accountants distribute financial benefits more unequally and the accountants themselves receive larger shares than the other members of the groups. I provide evidence that the larger shares cannot be explained as a compensation for better financial performance, but that some form of elite capture occurs. Although this implies that an internal accountant is more expensive than an external accountant, there is no evidence that groups with internal accountants are less stable. Members are not more likely to leave groups, possibly because the loss in financial benefits is outweighed by the gain in non-financial benefits.

1 Introduction

The microfinance sector in India has emerged as the largest in the world. Self-Help Groups (SHGs) formed by the government or NGOs are the dominant form. They covered about 97 million households by March 2010. SHGs enable the poor to build the capacity to save, so members can pool their resources, create a group fund and give out small loans to one another. These loans are mainly used to smooth consumption, to reduce vulnerabilities and to finance existing livelihoods. Once SHGs develop into creditworthy institutions, they open savings accounts in commercial banks and can apply for bank loans. These bank loans are mainly used for livelihood and business investments. By March 2010, almost 7 million SHGs held savings with banks, to a total value of 62 billion Rs. ($ 1.3 billion), and 4.9 million SHGs had total outstanding loans worth 280 billion Rs. ($ 5.7 billion) (NABARD, 2011).[1]

Due to high transaction costs and a lack of collateral, most SHG members do not have individual access to formal financial institutions. SHGs act as intermediaries, which help members to save and borrow. An accurate record of all savings and lending in the group is important to avoid conflicts, and also to get access to formal bank loans. Indeed, SHGs' credit ratings are based on their books, which are kept by accountants. Accountants can be either *internal* (a group member) or *external* (another villager). Although the group is jointly responsible for credit appraisal and for enforcing saving and repayment discipline, selecting an accountant is an important decision, as his/her work plays a key role in the functioning of the group. Even though the SHG programme provides financial services to almost one out of three Indian households, there is not much known about the organization of SHGs. To the best of my knowledge, this is the first paper analyzing the important role of accountants.

The paper uses data from a study of 1,679 women only SHGs, with a total of 26,971 members. The accountant strategy pursued by the NGO, which created these SHGs, varied geographically in a plausibly exogenous fashion. In Jharkhand, the practice of a cluster accountant system, where the same, external accountant serves several groups, developed. In Orissa and Chhattisgarh the groups were asked whether one of the members could help in keeping the books. I exploit this, using an instrumental variables strategy, to study differences between groups with internal versus external accountants.

Economic theory suggests that repeated interaction between individuals can help to build social capital. Some experimental evidence is given by Feigenberg et al. (2011). They show that microfinance clients are more likely to develop friendships and social ties if they meet more frequently. However, they suggest that, since the scope of the meetings is financial mediation, microfinance mainly affects economic cooperation. I find evidence of two forms of cooperation

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[1] For female SHGs only, NABARD gives the following details: 5.3 million SHGs held savings with banks, to a total value of 45 billion Rs., and 3.9 million SHGs had total outstanding loans worth 230 billion Rs.

that go beyond economic motives. First, 56% of the SHGs in the study provided assistance to at least one of their members. The most important examples are assisting a member in visiting a doctor and solving conflicts within a member's household. Second, 46% of the groups undertook collective actions aiming to solve problems affecting their villages. The collective actions include visiting a government officer to request a solution, or intervening directly. For instance, excessive alcohol consumption, especially among men, is a problem that appears in many villages. This can often lead to tensions within households, which SHGs would address by visiting an officer to request the suspension of alcohol licences, or by organizing anti-alcohol campaigns or talking to alcohol-producing households.

There are two reasons why groups with external accountants might be less likely to spend time on non-financial issues. First, the external accountant is hired to keep the books. If groups start discussing non-financial issues, the meetings take longer and the opportunity cost of being the accountant increases. Therefore, the external accountant might prefer the meetings to remain short and concentrated on financial issues only. Second, external accountants are mainly men and my survey evidence suggests that the non-financial issues are often related to women topics. The external accountant might reveal the issues discussed to the villagers in question, being very likely, for example, to know relatives of SHG members. By revealing the group's intentions for undertaking action, the external accountant reduces the probability of success, which in turn might reduce the probability the group spends time on non-financial issues.[2] Indeed, I find that SHGs with internal accountants are about 20 percentage points more likely to provide mutual assistance and about 19 percentage points more likely to undertake collective actions. Hence, the first contribution of this paper is that repeated interaction is more likely to strengthen social capital when there is no external involvement.

The higher probability of non-financial benefits in groups with internal accountants might come at a financial cost. Apart from group and bank loans, the financial value of groups also consists of profits as members pay interest on loans. The external accountant is not a group member and therefore does not receive a share of loans or profits, while internal accountants do.[3] I find that groups with internal accountants distribute the financial benefits more unequally: the Gini coefficients on the allocation of the bank loans and profits increase by approximately 17 and 15 percentage points respectively. Within group regressions suggest that the accountant receives 10% of bank loans and 8% of profits which are respectively 43% and 14% larger than an equal share of 7% for all members. I consider three explanations for this phenomenon, which, to a certain extent, I can test empirically.

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[2]This argument is close to Glass (2004), who models outsourcing under imperfect protection of intellectual property.

[3]The external accountant could receive a share indirectly, for example through a family member belonging to the group.

First, given that both the group's financial value and the distribution are known to all group members, the internal accountant might simply be compensated for a better financial performance. Indeed, if a group with an internal accountant generates a higher financial value than a group with an external accountant, it can attribute a larger share to the internal accountant without reducing the amounts that other members receive. Therefore, I compare the probability that SHGs obtain a bank loan, and the sizes of the bank loans, profits and group loans between SHGs with internal accountants and external accountants. As I do not find significant differences, I conclude that groups with internal accountants do not generate higher value than groups with external accountants, which reduces the plausibility of this explanation.

A second explanation is related to elite capture. Elite capture occurs if powerful members - like the accountant - take a large share of the resources. An unequal distribution, however, does not necessarily implies that elite capture has occurred. If members have a different marginal utility of money, an equal distribution of loans is not necessarily the optimal one. However, given that the choice between an external and an internal accountant is mainly driven by the NGO's strategy, there is no reason why members of a group with an internal accountant should be more different from each other than members of a group with an external accountant. Due to the special training that the internal accountant received, she has a particular authority in the SHG, that is obviously related to the group's finances. Several results suggest that I cannot exclude the possibility that the internal accountant uses her position to take some extra benefits, i.e. that some form of elite capture occurs. Firstly, I find that internal accountants, who are - just like external accountants - paid for keeping the books, still receive an extra share of bank loans and profits. Secondly, I compare the total amount allocated among the members with the size of bank loans. If SHGs allocate group funds along with the bank loan, the group savings can be used at the discretion of the internal accountant and she can take an even larger share. Indeed, in SHGs which allocate group funds along with the bank loan, the internal accountant's share increases by 5.5 percentage points. This is 79% more than what she would have received under an equal distribution. Thirdly, family members of the internal accountant receive a slightly larger share too.

The final possibility is that the value of the group cannot be measured in financial terms only. Although an internal accountant seems more expensive than an external one, there is no evidence that SHGs with an internal accountant are less stable. Members are just as likely to leave groups with internal accountants as external accountants in the months that follow the distribution of bank loans and profits. Hence, the lower financial benefits seem not to increase the rate of exit, suggesting that the non-financial benefits might be compensating them.[4]

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[4]It is not rare that members leave SHGs (21%) and join other groups after leaving (23%).

This paper makes several contributions. First, it complements the literature on the returns to repeated social interaction by focusing on non-financial cooperation. Second, it is related to the literature on the importance of rules and organization in informal groups.[5] Finally, my findings also contribute to the empirical literature on elite capture.[6]

The paper is organized as follows. Section 2 describes the SHGs created by the NGO PRADAN, the data set, the financial and non-financial benefits of SHGs and the selection of accountants. Section 3 gives the empirical methodology used. Section 4 provides the descriptive statistics. Section 5 examines whether there are differences in the provision of non-financial benefits, in the financial performance and in the distribution of funds between groups with internal accountants and groups with external accountants. It also examines whether there is an indication of elite capture in groups with internal accountants, and finally suggests there might be a trade-off between financial and non-financial benefits. Section 6 contains a robustness check. Section 7 concludes.

2 Background

2.1 SHGs created by PRADAN

PRADAN (Professional Assistance for Development Action) was established in Delhi in 1983. The NGO aims to promote and strengthen the livelihoods of socio-economically disadvantaged communities. The creation of SHGs is put forward as an effective starting point. To form groups, field teams firstly use secondary information to select villages where no other NGO has worked before. Next, they organize a village meeting where they introduce SHGs as groups of women which meet on a weekly basis to save and to give flexible loans at a reasonable interest

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[5]Among others, this literature includes Anderson and Francois (2008) who study what features of self-sustaining groups make some choose informal structures of governance, while others choose formal ones; Feigenberg et al. (2011) who show that the meeting frequency of microfinance groups is associated with increases in social interaction and lower default; and Field et al. (2011), who study the impact of the term structure of microfinance loans on business investments, profits and default.

[6]Platteau (2009) overviews this literature and considers two different forms. In the first one, if preferences are heterogeneous, village elite impose their own interests and objectives while negotiating projects with external funding agencies. My story fits in the second form: the powerful take a larger share of the external resources provided to the community. This holds especially for bank loans, which might be partially subsidized. More specifically, my results are close to Platteau and Gaspart (2003), who find that leaders were allowed a disproportionate share of benefits in the form of over-invoicing and falsifying accounts, as villagers believed that their situation would not have improved without the efforts of the leaders. I argue that SHG members do not experience an unequal distribution as unfair because, thanks to having an internal accountant, it is more likely that the group also provides non-financial benefits.

rate. They motivate interested women to form groups of 10 to 20 members (PRADAN, 2005). The formation process follows the guidelines of the National Bank for Agriculture and Rural Development (NABARD, 1992) and the Reserve Bank of India (Reserve Bank of India, 1999).

PRADAN does not act as a microfinance institution (MFI), but links the SHGs with banks. This is possible because of the well developed banking infrastructure in India. With a bank branch available for every 15,000 rural households, India has one of the largest banking networks in the world (Fisher and Sriram, 2002).

2.2 Data set

The data set consists of 1,679 SHGs and 26,971 women who, at some point, have been members of these groups. All SHGs which have been formed since the start of the program by five field teams in three different states are surveyed, independent of whether the groups are still actively meeting or not. The field teams are close, but not contiguous, as can be seen from Figure 3 in the appendix. Table 1 overviews the number of SHGs and members in the data set divided by state, district and survey period.[7]

Table 1: Overview data set

State	District	Number of SHGs	Number of Members	Survey Period
Orissa	Mayurbhanj and Keonjhar	532	8,599	May - June 2006
Chhattisgarh	Raigarh	570	8,312	January - February 2007
Jharkhand	Koderma and Hazaribagh	577	10,060	March - April 2008

2.3 The financial and non-financial benefits of SHGs

The main objective of SHGs is financial intermediation. Firstly, SHGs build the capacity to save so members can pool their resources, create a group fund and give out small loans to one

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[7]Some observations are missing for four reasons: **(1)** In the Hazaribagh district, 33 inactive groups refused to sit with the research team. We asked them selected questions at the group level, but did not receive any member level information. **(2)** We do not have village level information for 5 SHGs. **(3)** A first analysis of the Orissa and Chhattisgarh data revealed that some important information, like the allocation of bank loans and profits within the group, was missing. Hence, before moving to the final state, the Orissa (September - October 2007) and Chhattisgarh (November - December 2007) SHGs were revisited with a complementary questionnaire. Due to problems with a private firm in Orissa, it was not possible to re-survey 63 groups. In Chhattisgarh one SHG is not revisited. The complementary questions are available for all SHGs in Jharkhand. **(4)** Some groups received bank loans, or distributed profits, but they lost the records of how the money was distributed.

another (henceforth *group loans*). Secondly, SHGs can open a savings account with a nearby commercial bank and apply for a bank loan (henceforth *bank loans*). As bankers are willing to lend to SHGs only if they believe that doing so will be profitable, groups have to build reputations through strict saving and lending practices.

Table 2 overviews the types of declared expenses by source of financing. I use information on 23,768 group loans and on 18,911 bank loans. Two important observations can be made. First, bank loans give the opportunity to borrow larger amounts. Second, different sources of finance are used for different purposes: only 22.3% of group loans are declared to be used for business investments, compared to 80.8% of bank loans.[8]

Table 2: Purpose and amounts of group and bank loans

Declared purpose	Group loans		Bank loans	
	% of total number of loans taken	Median amount per loan taken (Rs.)	% of total number of loans taken	Median amount per loan taken (Rs.)
HOUSEHOLD NEEDS	77.7	600	19.2	2,000
Medical expenses	39.0	500	5.3	2,000
Consumer durables	21.6	700	4.8	1,300
Marriage/family events	11.6	1,000	6.4	2,500
Other personal use	3.7	1,000	1.1	2,000
Food consumption	1.8	500	1.6	1,000
BUSINESS INVESTMENTS	22.3	1,000	80.8	2,000
Purchase farm inputs	8.0	700	31.8	1,250
Business	3.3	2,000	23.3	2,500
Purchase livestock	2.4	1,600	15.5	3,000
Building repair or improvement	6.2	1,500	7.9	3,000
Machine purchase or repair	1.0	2,100	1.4	6,000
Education	1.4	1,000	0.9	1,600

For group loans, I use data from Chhattisgarh and Jharkhand only, as I do not have this information for Orissa. For the bank loans I have information available for the three states.

SHGs also generate "profits". Members pay interest on loans and are fined when they arrive late or do not attend meetings.[9] Some SHGs derive extra profits from group activities, such as providing midday meals in schools.

As explained in the introduction, I study two benefits of SHGs that go beyond economic motives. First, there is the aspect of mutual assistance: 56% of the groups gave assistance to one of the members. Second, 46% of the SHGs visited a government officer or intervened

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[8]The importance of loans for household needs is in line with Collins et al. (2009), who also conclude that the demand for microcredit extends well beyond the need for micro-enterprise credit.

[9]Members do not pay fines in case of circumstances beyond one's control, like for example illness of a family member.

directly to solve problems affecting their village. In the area where the survey is conducted, women rarely visited an officer before they joined an SHG. If the group decides to undertake action, on average 75% of the members join.

2.4 Internal versus external accountants

The paper uses an instrumental variables approach, based on the different *accountant strategies* followed at the field locations where the survey is conducted.

PRADAN started its SHG activities in the state of **Jharkhand** in the early '90s. As they did not find literate women in a number of SHGs, and as there was a request for employment by villagers, the practice of a cluster accountant system - where the same accountant serves several groups - developed.[10] The motivation was that accountants could earn an attractive amount of money if they serve several groups. Their stability would be increased and some employment would be created. This made it difficult for women to become external accountants, as it is not usual for them to travel alone between villages. Thus, external accountants were, and are, predominantly male. Even if newly created SHGs have educated members, the field teams in Jharkhand recommend external accountants. The group accepts the recommendation in most, but not all, cases.[11]

The approach is different in the survey districts of **Orissa and Chhattisgarh**, where bookkeeping for a group is initially done by a PRADAN employee. Once the functioning of the group is clear to all members, the employee asks whether one of the members is interested in becoming the accountant. This women has to follow a short period of training and her abilities are tested. Being the accountant does not involve any work outside the meetings, as different members, who are not the accountant, should keep the records and the cash box.

Descriptive statistics on internal versus external accountants are given in Table 3. 822 (50.2%) of the SHGs have an internal accountant and 814 (49.8%) an external one. But, as external accountants serve several groups, I have information on 473 *different* external accountants only. External accountants are mainly men who do not necessarily live in the village where the meetings take place.[12] They are more likely to be paid and are paid slightly more than internal accountants.

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[10]A cluster consists of several villages. All villages within a cluster are served by the same PRADAN executive.

[11]Members might for example prefer a person of a particular caste.

[12]Indeed I shall refer to the external accountant as "he" even though there can be female external accountants.

Table 3: Internal versus external accountants

	External	Internal	Difference
Number of accountants	473	814	
Accountant is a woman (%)	22.6	100.0	77.4***
	(0.42)	(0.0)	(1.5)
Average education level (years)	9.5	9.0	0.5***
	(2.4)	(2.1)	(13.0)
Average age	30.9	29.4	1.5***
	(10.6)	(7.0)	(0.49)
Average distance to the village (km)	0.5	0.0	0.5***
	(2.5)	(0.0)	(0.09)
Accountant is paid (%)	58.9	15.0	43.9***
	(49.3)	(35.7)	(2.4)
Salary per week if accountant is paid (Rs.)	11.2	8.8	2.4***
	(6.5)	(5.8)	(0.72)

Standard deviations are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1

3   Empirical methodology

3.1   Group level: instrumental variables

Consider the following OLS regression to estimate how having an internal accountant affects group level performance variables, such as obtaining a bank loan or not:

$$y_i = \alpha_1 + \alpha_2 A_i + \alpha_3 G_i + \epsilon_i \tag{1}$$

A_i is a dummy indicating whether group i has an internal accountant and G_i are control variables for the SHG. Groups can have an internal accountant only if one of the members is literate. About the educational requirements, PRADAN says "*The accountant needs to have enough numerical skills and literacy to write the RMTS[13] and simple minutes. Anyone who has the literacy and numeracy skills equivalent to a Class V pass person should be able to do this.*" This condition being fulfilled does not necessarily imply that groups choose internal accountants. For example, a disagreement about who of the literate members should do the bookkeeping might lead to an external accountant. As I cannot control for these types of group characteristics, OLS regression estimates are likely to be inconsistent. To address this problem, I develop an instrumental variables strategy based on the different accountant

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[13]RMTS stands for Regular Meeting Transaction Statement, it is the book provided by PRADAN in which the financial transactions are written down during the meetings (savings, loans, reimbursements, etc.)

strategies that PRADAN followed at the field locations where the survey is conducted. In **Jharkhand**, the practice of a cluster accountant system, where the same accountant serves several groups, developed. In **Orissa and Chhattisgarh** the groups were asked whether one of the members could help in keeping the books (See Section 2.4).

The difference in approach should lead to a higher probability of having an internal accountant in Orissa and Chhattisgarh than in Jharkhand. Figure 1 shows the percentage of internal accountants by the education level of the highest educated group member at the inception of the SHG. I look at the highest educated member only, as having one well educated member is a sufficient condition to consider an internal accountant. The probability of having an internal accountant is indeed always higher in Orissa and Chhattisgarh than in Jharkhand.

Figure 1: Percentage of SHGs having an internal accountant per highest education level in the group at the moment of the inception of the SHG
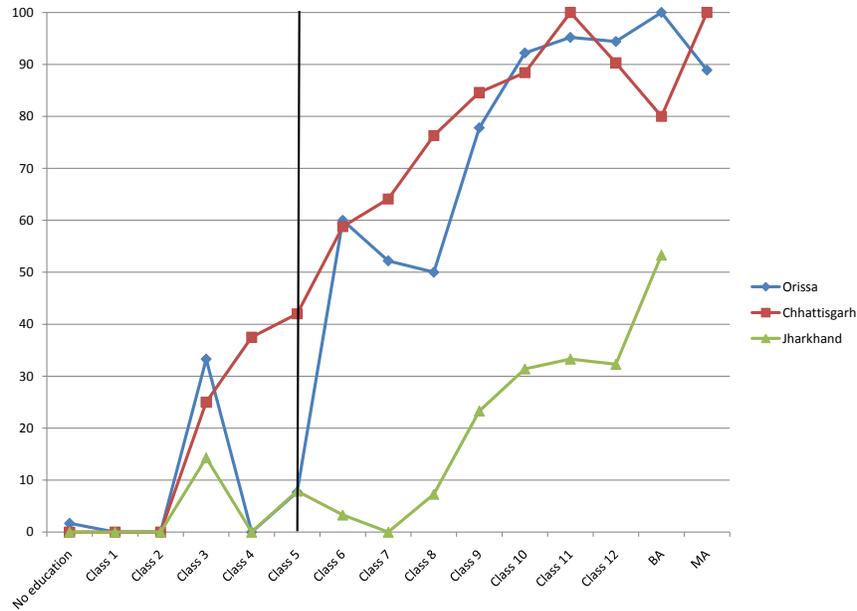
The graph shows that the threshold of having finished primary education (class 5), as PRADAN advised, is not a strict requirement for becoming the accountant.[14] If the highest

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[14]For Chhattisgarh, the upward trend seemingly starts from class 3 and for Orissa from class 6. Still, I keep the threshold at class 5. Firstly, only few groups have class 3 and class 4 as the highest education level (25 in

educated member at least finished primary school, 21.4% of the groups do not have an internal accountant in Orissa and Chhattisgarh and 19.8% do have one in Jharkhand. Furthermore, some members became the group accountant without having finished primary school: 5.8% of these groups have an internal accountant in Orissa and Chhattisgarh, and 0.4% in Jharkhand.[15] As PRADAN provides training and tests their skills, these members should be able to keep the books. Therefore, I also use a less demanding educational requirement, namely that the group can have an internal accountant if one member is able to read and write. Figure 2 shows that, conditional on having a member being able to read and write, SHGs in Jharkhand are much less likely to have an internal accountant.

Figure 2: Percentage of SHGs having an internal accountant if at least one member could read and write at the moment of the inception of the SHG
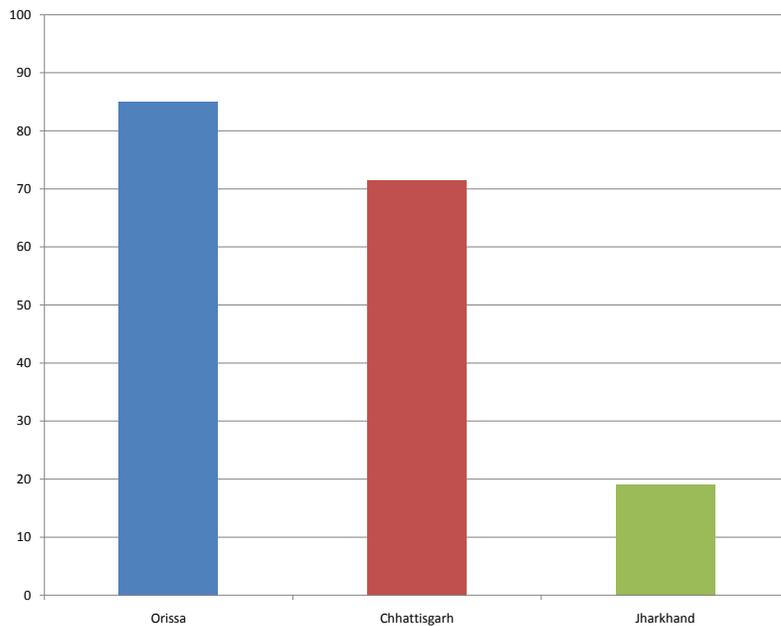
To obtain a consistent estimator of α in (1), I have two different instruments for which I

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total) as opposed to class 5 (114 groups). Secondly, primary schools, which are available in most villages, teach up to class 5. A change of school and likely even of the village where school is attended might be necessary to start middle school (class 6 to 8). This might discourage parents from sending their girls for education above class 5 and motivated PRADAN to put the qualification level "so low".

[15]For example, some muslims did not receive formal education, but were educated at home.

run the following first stages:[16]

$$A_{i1} = \beta_1 + \beta_2(I_{OR/CH_i} * I_{education>=5_i}) + \beta_3 I_{OR_i} + \beta_4 I_{CH_i} + \beta_5 I_{education>=5_i} + \beta_6 G_i + \zeta_i$$
$$A_{i2} = \gamma_1 + \gamma_2(I_{OR/CH_i} * I_{readwrite_i}) + \gamma_3 I_{OR_i} + \gamma_4 I_{CH_i} + \gamma_5 I_{readwrite_i} + \gamma_6 G_i + \eta_i$$

The first instrument $(I_{OR/CH_i} * I_{education>=5_i})$ is the interaction of a dummy indicating that group i is created in Orissa or Chhattisgarh and a dummy indicating that the highest educated member has at least 5 years of education. The second instrument $(I_{OR/CH_i} * I_{readwrite_i})$ replaces the educational requirement by that of having at least one member being able to read and write. These regressions are given in Table 12 in the appendix. I use the parameters to predict whether the group has an internal accountant $\hat{A}_i$, and estimate consistent estimators for

$$y_i = \delta_1 + \delta_2\hat{A}_{i1} + \delta_3 I_{OR_i} + \delta_4 I_{CH_i} + \delta_5 I_{education>=5_i} + \delta_6 G_i + \theta_i$$
$$y_i = \kappa_1 + \kappa_2\hat{A}_{i2} + \kappa_3 I_{OR_i} + \kappa_4 I_{CH_i} + \kappa_5 I_{readwrite_i} + \kappa_6 G_i + \nu_i$$

The assumption underlying my analysis is that absent the difference in accountant strategy, and conditional on the independent variables, the outcomes across SHGs which have at least one member who finished primary education (who can read and write) and SHGs which do not have such a member would not have been systematically different across Orissa/Chhattisgarh and Jharkhand. The exclusion restriction is threatened if field teams brought in other differences that influence the outcomes of interest differently across states and depending on education, so that the state and education regressors cannot control for it. This is unlikely to be the case, especially given the nature of the dependent variables of interest.

For the exclusion restriction to hold, the dummies the instrument consists of cannot be excluded from the regressions. Education plays a role for the outcomes of interest, but other measures *at the moment the group applies for a loan or distributes profits* might be more important than the condition "having at least one educated member (or one member who can read and write) *at the start* of the SHG".[17] Therefore, I also run the regressions including extra measures for education, namely the mean education and the fraction of members who

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[16]I do not combine both instruments as they are highly correlated.

[17]I differentiate between the characteristics of the group *at the moment the group applies for a loan or distributes profits* and *at the start of the SHG*, because the bank loan is not obtained until on average 20 months and the first profits are not distributed before on average 2 years. By then the composition of the group might have changed, as some members join and others leave.

A possible worry is that an internal accountant might attract other educated villagers to join the group and that the less educated ones might leave. To exclude this possibility, I compare the fraction of educated members at the moment the group is created and at the moment the group received a bank loan. The difference is not statistically significant.

can read and write.

Other group controls included are the fraction of scheduled castes, other backward castes and forward castes in the group (the excluded category is the fraction of scheduled tribes), the caste category fragmentation index, mean land (in acres), mean age, the average number of children members have, the fraction of members who have a relative in the group, the fraction of members who are separated from their husband, the total number of members, and finally, the squared total number of members. I also included some village controls, namely the distance to the closest commercial bank, the fraction of households having an adult member who can read and write, and the number of other SHGs in the same village.

3.2   Member level: group fixed effects

To investigate the probability that the accountant herself takes a larger share of the financial benefits, I run SHG fixed effects regressions of the member's share in the bank loan and profits on a dummy indicating whether the member is a group accountant and on other member characteristics.

4   Descriptive statistics

4.1   Group level

The group level descriptive statistics, organized by state, are given in Table 4. As the accountant strategy was similar in Orissa and Chhattisgarh, I provide their descriptive statistics together. There are 1,632 groups in the sample.

In terms of demographic characteristics, members are, on average, more educated in Orissa and Chhattisgarh. They are mainly scheduled tribes, as compared to other backward castes in Jharkhand. As the NGO started working in Jharkhand, groups have been meeting for a longer time. This should not hamper the analysis, as I mainly consider the composition of the group at the moment it received a first bank loan or distributed profits, which is, on average, within the first two years.

4.2   Member level

Table 5 provides descriptive statistics by accountant status for the 15,659 members who belong to a group at the moment of the first bank loan distribution. Accountants receive a larger share of the bank loan and profits, are better educated and own slightly more land.

Table 4: Descriptive statistics at the group level

	Jharkhand	Orissa + Chhattisgarh	All	Difference
Number of groups	544	1,088	1,632	
(%)	(33.3)	(66.7)		
Dependent variables				
The group received a **bank loan** (%)	64.7	70.2	68.4	-5.5**
	(47.8)	(45.7)	(46.5)	(2.4)
Amount of bank loan per member (Rs.)	2,136	1,340	1,591	796***
	(2,461)	(1,299)	(1,788)	(113)
Gini coefficient of the bank loan allocation	62.0	25.9	37.9	36.1***
	(33.0)	(29.2)	(34.9)	(2.0)
The group distributed **profit** (%)	62.3	46.1	51.7	16.2***
	(48.5)	(49.9)	(50.0)	(2.6)
Amount of profit per year per member (Rs.)	187	126	151	61***
	(173)	(127)	(151)	(11)
Gini coefficient of the profit allocation	12.5	15.5	14.2	-3.0***
	(16.9)	(15.6)	(16.2)	(1.2)
Amount of **group loan** per year per member (Rs.)	1,016	569	714	447***
	(891)	(604)	(740)	(37.8)
Gini coefficient of the group loan allocation	64.8	47.0	52.8	17.8***
	(15.7)	(21.7)	(21.6)	(1.1)
Group members **helped** each other	75.2	45.9	56.0	29.3***
	(43.2)	(49.9)	(49.7)	(2.5)
The group visited a **government officer**	22.2	58.0	45.6	-35.8***
	(41.6)	(49.4)	(49.8)	(2.5)
Independent variables				
Mean education (years)	0.8	2.3	1.8	-1.5***
	(1.1)	(1.8)	(1.7)	(0.08)
Fraction of members who can read and write	10.7	30.3	23.8	-19.6***
	(14.0)	(22.1)	(21.8)	(1.0)
Fraction of members who are ST	0.2	53.2	35.6	-53.0***
	(4.3)	(38.5)	(40.2)	(1.7)
Fraction of members who are SC	31.0	12.7	18.8	18.3***
	(38.2)	(24.4)	(31.0)	(1.6)
Fraction of members who are OBC	64.2	32.6	43.1	31.6***
	(38.9)	(35.0)	(39.3)	(1.9)
Fraction of members who are FC	4.6	1.5	2.5	3.1***
	(16.2)	(6.1)	(10.7)	(0.6)
Caste category fragmentation	0.16	0.26	0.23	-0.1***
	(0.19)	(0.23)	(0.22)	(0.01)
Mean land (acres)	0.97	1.8	1.5	-0.8***
	(1.0)	(2.2)	(1.9)	(0.1)
Mean age	38.2	36.8	37.3	1.4***
	(6.0)	(5.2)	(5.5)	(0.29)
Fraction of members who have relative in group	39.4	48.7	45.6	-9.3***
	(22.9)	(28.3)	(27.0)	(1.4)
Fraction separated of husband	9.8	9.7	9.7	0.1
	(9.1)	(10.0)	(9.7)	(0.5)
Mean number of children	3.7	2.7	3.0	1.0***
	(0.75)	(0.62)	(0.83)	(0.04)
Number of group members	17.3	13.3	14.6	4.0***
	(3.5)	(3.1)	(3.8)	(0.2)
Average duration of group (years)	6.1	2.9	4.0	3.2***
	(3.8)	(1.7)	(3.0)	(0.14)

Standard deviations are given in parentheses. In the last column standard errors are given. *** p<0.01, ** p<0.05, * p<0.1

Table 5: Descriptive statistics at the member level by accountant status

	Not accountant of SHG		Accountant of SHG	All
	SHG with external accountant	SHG with internal accountant		
Number of members	8,350	6,819	490	15,659
(%)	(53.3)	(43.6)	(3.1)	(100.0)
Dependent variable				
Share in bank loan	6.3	6.8	11.3	6.6
	(10.2)	(8.0)	(15.3)	(9.6)
Share in profits	6.1	6.7	8.0	6.4
	(3.0)	(3.4)	(4.6)	(3.2)
Independent variables				
Education level (years)	0.73	2.2	8.9	1.6
	(2.1)	(3.5)	(2.3)	(3.2)
No education (%)	86.9	63.5	0.0	74.0
	(33.8)	(48.1)	(0.0)	(43.9)
Level of education between class 1 and class 4 (%)	4.2	11.8	2.0	7.5
	(20.2)	(32.3)	(14.2)	(26.3)
Level of education between class 5 and class 7 (%)	5.7	12.3	20.4	9.0
	(23.1)	(32.8)	(40.3)	(28.6)
Level of education between class 8 and class 11 (%)	2.8	11.4	67.6	8.6
	(16.6)	(31.8)	(46.9)	(28.0)
Level of education: class 12, BA or MA (%)	0.4	1.0	10.0	0.9
	(6.0)	(10.0)	(30.0)	(9.7)
Share in group education[a]	6.3	5.1	34.4	6.6
	(13.9)	(9.0)	(24.0)	(13.5)
Able to read and write (%)	10.5	29.0	100.0	21.4
	(30.6)	(45.4)	(0.0)	(41.0)
Family member of accountant (%)	6.1	10.8	0.0	8.0
	(24.0)	(31.1)	(0.0)	(27.1)
Caste category: ST (%)	21.4	43.8	37.7	31.6
	(41.0)	(49.6)	(48.5)	(46.5)
Caste category: SC (%)	24.2	14.6	13.3	19.7
	(42.8)	(35.3)	(34.0)	(39.8)
Caste category: OBC (%)	51.9	38.2	44.7	45.7
	(50.0)	(48.6)	(49.8)	(49.8)
Caste category: FC (%)	2.5	3.4	4.3	3.0
	(15.7)	(18.2)	(20.3)	(17.0)
Land (acres)	1.1	1.8	2.4	1.5
	(2.1)	(3.3)	(4.9)	(2.8)
Age	39.2	37.7	30.3	38.3
	(10.5)	(10.4)	(6.9)	(10.5)
At least one family relation in the group (%)	41.3	48.1	51.2	44.6
	(49.2)	(50.0)	(50.1)	(49.7)
Separated from husband (%)	10.8	9.9	3.9	10.2
	(31.0)	(29.9)	(19.3)	(30.3)
Number of children	3.6	2.8	2.0	3.2
	(1.8)	(1.6)	(1.4)	(1.8)

[a]The member's years of education divided by the total number of years of education of all the group members.

5 Results

5.1 Non-financial benefits

Table 6 gives the impact of the most important independent variables.[18] The columns (1) and (2) show the OLS regressions with a different specification for education. The 2SLS regressions using the requirement that a member should have finished primary education to become the accountant are given in the columns (3) and (4). The results when using the requirement that a member should be able to read and write are given in the columns (5) and (6).

Table 6: Non-financial benefits

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Mutual assistance between members						
Accountant is internal	0.0824***	0.0871***	0.1961*	0.2210*	0.1848*	0.2042*
	(0.0304)	(0.0304)	(0.1130)	(0.1307)	(0.1069)	(0.1208)
At least one member finished	-0.0156		-0.0597	-0.0514		
primary education	(0.0333)		(0.0489)	(0.0452)		
Mean education (years)				-0.0161		
				(0.0164)		
At least one member can read and write		-0.0312			-0.0699	-0.0635
		(0.0341)			(0.0476)	(0.0450)
Fraction members who can read and write						-0.0897
						(0.1076)
N	1,570	1,570	1,570	1,570	1,570	1,570
SHG undertook collective actions						
Accountant is internal	0.1177***	0.1223***	0.1835*	0.1798	0.1913*	0.1988*
	(0.0301)	(0.0300)	(0.1105)	(0.1268)	(0.1039)	(0.1167)
At least one member finished	0.0249		-0.0007	-0.0019		
primary education	(0.0333)		(0.0495)	(0.0464)		
Mean education (years)				0.0024		
				(0.0153)		
At least one member can read and write		0.0105			-0.0168	-0.0143
		(0.0340)			(0.0487)	(0.0467)
Fraction members who can read and write						-0.0348
						(0.1032)
N	1,570	1,570	1,570	1,570	1,570	1,570

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Group controls included are the fraction of scheduled castes, other backward castes and forward castes in the group, the caste category fragmentation index, mean land, mean age, the fraction of members who have a relative in the group, the fraction of members who are separated from their husband, the average number of children members have, the total number of members, the squared total number of members, the years the group has been meeting and finally the squared number of years. The village controls included are the distance to the closest commercial bank, the fraction of households having an adult member who can read and write and the number of other SHGs in the same village. Finally, two dummies indicate whether the group is created in Orissa or Chhattisgarh.

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[18]The full regressions are given in the Tables 13 and 14 in the appendix.

SHGs with internal accountants are about 20 percentage points more likely to provide mutual assistance and about 19 percentage points more likely to undertake collective actions aiming to solve problems affecting their village. The different variables controlling for the educational attainment of the group are not significant. Hence, groups indeed do more than financial mediation, but it occurs more often when the group has an internal accountant, i.e. when there is no external involvement.

5.2 Financial performance

To study the financial performance of SHGs, I look at bank loans, profits and group loans (See Section 2.3).

For bank loans, I look at the impact of having an internal accountant (as opposed to an external accountant) on the probability of obtaining a bank loan and on the total amount received per member. Access to banks appears to be the same in different states, as indeed it should be according to the NABARD guidelines.[19] As mentioned before, the accountant's records play an important role as the bankers look at them to judge the group's financial status. NABARD laid down that the size of the first bank loan cannot exceed four times the total savings of the group at the time of the application.[20] Hence, the credit line is determined by the savings behavior of all group members. Whether the bank is willing to lend the maximum amount allowed will depend on the accuracy of the bookkeeping, on the contact with the SHG representatives and on the internal policy of the bank.[21] As the total amount received is likely to depend on the number of members in the group, I focus on the size of the bank loan per member.

For profits, I look at the impact of an internal accountant on the probability of having it distributed at least once and on the total amount a member received per year. SHGs decide whether they keep the profit in the group box or distribute it among their members. I observe a large variation in the number of weeks a group has been meeting before they distribute profits for the first time. Therefore, to obtain a profitability per member that is comparable across groups, I divide the total amount distributed by the number of members at the moment of the distribution and by the time since the inception of the group. It is important to remark that these group level results are not necessarily informative. Groups might have lower profits because they gave some financial support to one of the members.[22] The group level results

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[19]96.7% of the groups are in villages where at least one SHG opened a savings account in a commercial bank and 89.8% are in villages where at least one group obtained a bank loan.

[20]Independent of whether the money is on the savings account or with the members as group loans.

[21]I only observe the final amount received (not what the group asked for or *could* have received).

[22]For example, a group gave money to a member who had problems in repaying, to take an ill child to the

are presented, because I look at the allocation within SHGs in the next subsection.[23]

The first role of SHGs is building the capacity to save, so members can create a group fund and provide small loans to one another. Therefore, all groups provide loans from the group fund, and I focus on the total amount received per member only. The only information I obtained is the total number and total amount of group loans each member took over the year preceding the survey, or, for a member who left the group, the year preceding her leaving day.

Table 7 gives the impact of the most important independent variables.[24] Three important observations can be made. Firstly, groups with internal accountants and external accountants seem not to differ in terms of financial performance. Having an internal accountant has no significant impact on the probability of obtaining a bank loan or on the average amount received per member of bank loans, profits and group loans. However, groups with internal accountants are more likely to distribute profits.

In groups which did not obtain a bank loan or which did not distribute profits, the amount received per member is zero. This is a reasonable assumption for bank loans, but for profits it might be problematic, as most groups gather profit, but not all of them distribute it. The results do not change if I run a restricted sample, including only groups which obtained a bank loan or distributed profits. This is not surprising for bank loans, given there is no significant difference in the probability of obtaining a bank loan between groups with internal accountants and external accountants. Table 23, in the appendix, provides an extra robustness check based on a technique for Tobit models with dummy endogenous regressors which is developed in Angrist (2001).[25] The results are not quantitatively different.

Secondly, the mean education level and the fraction of members who can read and write increase the probability of obtaining a bank loan and the amount of group loans. Finally, the results of the instrumental variables approaches are not remarkably different from the results of the OLS estimates.

I conclude that groups with internal accountants do not generate a higher value than groups with external accountants. Hence, if the accountant is compensated based on financial

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hospital.

[23]Examining the allocation makes sense only if there are no differences in the amounts distributed between groups with internal accountants and groups with external accountants.

[24]The full regressions are given in the Tables 15, 16, 18, 19 and 21 in the appendix.

[25]I give the estimates using the condition that a member should have finished primary education to become the accountant. The estimates are computed using a two-step procedure. The first step is a probit regressing whether the accountant is internal on the instrument and independent variables. Next, I apply Tobit to the regression model, adding a Mills-ratio type endogeneity correction from the first stage.

Table 7: Financial performance of SHGs with internal accountants versus external accountants

	OLS		2SLS – education		2SLS – read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
The SHG received a bank loan or not						
Accountant is internal	0.0214	0.0264	-0.1010	-0.1406	-0.1228	-0.1643
	(0.0274)	(0.0273)	(0.0938)	(0.1096)	(0.0874)	(0.1000)
At least one member finished	-0.0171		0.0311	0.0195		
primary education	(0.0293)		(0.0442)	(0.0414)		
Mean education (years)				0.0240*		
				(0.0135)		
At least one member can read and write		-0.0339			0.0260	0.0135
		(0.0297)			(0.0434)	(0.0414)
Fraction members who can read and write						0.1845**
						(0.0900)
N	1,632	1,632	1,632	1,632	1,632	1,632
Amount of bank loan received (per member)						
Accountant is internal	134.56	146.38	2.41	-122.55	-57.67	-198.96
	(110.89)	(110.65)	(401.84)	(466.16)	(375.35)	(423.69)
At least one member finished	55.32		107.07	73.43		
primary education	(126.76)		(232.16)	(217.61)		
Mean education (years)				73.70		
				(49.10)		
At least one member can read and write		18.26			99.66	59.36
		(131.40)			(227.85)	(216.73)
Fraction members who can read and write						617.60**
						(309.81)
N	1,632	1,632	1,632	1,632	1,632	1,632
The SHG distributed profit or not						
Accountant is internal	0.0387	0.0434*	0.2519***	0.2449**	0.1950**	0.1751*
	(0.0244)	(0.0246)	(0.0909)	(0.1035)	(0.0865)	(0.0974)
At least one member finished	0.0525*		-0.0308	-0.0331		
primary education	(0.0275)		(0.0437)	(0.0412)		
Mean education (years)				0.0046		
				(0.0127)		
At least one member can read and write		0.0391			-0.0209	-0.0267
		(0.0283)			(0.0428)	(0.0410)
Fraction members who can read and write						0.0899
						(0.0857)
N	1,570	1,570	1,570	1,570	1,570	1,570
Amount of profit received (per member per year)						
Accountant is internal	3.20	3.02	39.98	40.80	25.72	24.22
	(7.29)	(7.33)	(28.08)	(32.17)	(26.51)	(30.00)
At least one member finished	12.17		-2.19	-1.94		
primary education	(9.37)		(17.31)	(16.33)		
Mean education (years)				-0.52		
				(3.90)		
At least one member can read and write		13.16			4.21	3.80
		(9.77)			(17.04)	(16.32)
Fraction members who can read and write						6.59
						(25.64)
N	1,558	1,558	1,558	1,558	1,558	1,558
Amount of group loan received (per member)						
Accountant is internal	56.27	52.75	209.24	142.10	194.89	123.41
	(38.43)	(38.50)	(162.61)	(185.63)	(139.28)	(157.26)
At least one member finished	112.86**		52.43	33.95		
primary education	(53.35)		(99.86)	(94.77)		
Mean education (years)				40.17*		
				(21.29)		
At least one member can read and write		128.48**			71.64	55.39
		(55.79)			(92.73)	(89.87)
Fraction members who can read and write						285.70**
						(139.77)
N	1,605	1,605	1,605	1,605	1,605	1,605

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Group controls included are the fraction of scheduled castes, other backward castes and forward castes in the group, the caste category fragmentation index, mean land, mean age, the fraction of members who have a relative in the group, the fraction of members who are separated from their husband, the average number of children members have, the total number of members, and finally, the squared total number of members. The village controls included are the distance to the closest commercial bank, the fraction of households having an adult member who can read and write and the number of other SHGs in the same village. Finally, two dummies indicate whether the group is created in Orissa or Chhattisgarh.

measures of performance, we could not expect her to receive higher compensation than an external accountant. In the next section, however, I show that groups with internal accountants distribute bank loans and profits more unequally than groups with external accountants. Within group regressions suggest that the accountant receives a larger share.

5.3 Allocation within SHGs

5.3.1 The group level

To measure the inequality in the distribution of financial benefits, I calculate the Gini coefficient. Table 8 shows that groups with internal accountants allocate bank loans and profits more unequally. The Gini coefficient of the bank loan allocation increases by approximately 17 percentage points and of the profit allocation by about 15 percentage points. There is no difference for group loans.[26] [27]

For bank loans and for profits, the regressions are conditional on the group having obtained a bank loan or having distributed profits. This strategy should be fine for bank loans, given there is no significant difference in the probability of obtaining a bank loan between groups with internal and external accountants. Furthermore, in Section 5.2 I demonstrated the robustness of my results to various specifications.

The OLS estimates suggest that groups with internal accountants allocate more unequally, but the impact is not significant. In Jharkhand, the choice of an internal accountant - when an external one is recommended - might reflect a particular level of consensus within the group. Indeed, an SHG will refuse a recommended person and put one of its own members forward only if a minimum level of consensus is reached. Hence, an unequal distribution of benefits within those groups would be surprising, and might dampen the effect on the coefficients in the OLS regressions.

5.3.2 The member level

The group level results suggest that SHGs with internal accountants distribute bank loans and profits more unequally. Using SHG fixed effects, I take a look at the within group distribution to examine whether the accountant receives a larger share or not. The results are given in Table 9 for bank loans and in Table 10 for profits. The share of the accountant is approximately 3 percentage points larger for bank loans and one percentage point for profits. This is a

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[26]The full regressions are given in the Tables 17, 20 and 22 in the appendix.

[27]The results are comparable when I use the standard deviation of the share each member received as the dependent variable. I use the standard deviation of the share, as I do not want the standard deviation to depend on the total amount the group received. The results are available from the author upon request.

Table 8: Gini coefficient of allocation within SHGs

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Bank loan allocation						
Accountant is internal	-0.0003	0.0005	0.1693**	0.1671*	0.1639**	0.1689*
	(0.0231)	(0.0233)	(0.0814)	(0.0985)	(0.0759)	(0.0890)
At least one member finished	0.0826***		0.0155	0.0150		
primary education	(0.0268)		(0.0470)	(0.0442)		
Mean education (years)				0.0012		
				(0.0130)		
At least one member can read and write		0.0811***			0.0147	0.0158
		(0.0276)			(0.0464)	(0.0445)
Fraction members who can read and write						-0.0192
						(0.0822)
N	1,038	1,038	1,038	1,038	1,038	1,038
Profit allocation						
Accountant is internal	0.0030	0.0024	0.1421***	0.1592***	0.1360***	0.1550***
	(0.0153)	(0.0154)	(0.0442)	(0.0515)	(0.0431)	(0.0492)
At least one member finished	0.0085		-0.0381	-0.0317		
primary education	(0.0167)		(0.0244)	(0.0228)		
Mean education (years)				-0.0117*		
				(0.0068)		
At least one member can read and write		0.0103			-0.0352	-0.0281
		(0.0169)			(0.0242)	(0.0230)
Fraction members who can read and write						-0.1015**
						(0.0481)
N	801	801	801	801	801	801
Group loan allocation						
Accountant is internal	0.0025	0.0023	-0.0030	-0.0173	-0.0083	-0.0262
	(0.0139)	(0.0138)	(0.0471)	(0.0549)	(0.0483)	(0.0554)
At least one member finished	-0.0180		-0.0158	-0.0194		
primary education	(0.0147)		(0.0183)	(0.0172)		
Mean education (years)				0.0083		
				(0.0064)		
At least one member can read and write		-0.0179			-0.0136	-0.0175
		(0.0147)			(0.0203)	(0.0194)
Fraction members who can read and write						0.0703
						(0.0448)
N	1605	1605	1605	1605	1605	1605

Robust standard errors are given in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$
Group controls included are the fraction of scheduled castes, other backward castes and forward castes in the group, the caste category fragmentation index, mean land, mean age, the fraction of members who have a relative in the group, the fraction of members who are separated from their husband, the average number of children members have, the total number of members, and finally, the squared total number of members. The village controls included are the distance to the closest commercial bank, the fraction of households having an adult member who can read and write and the number of other SHGs in the same village. Finally, two dummies indicate whether the group is created in Orissa or Chhattisgarh.

relatively large additional share. If the division was equal, the average member would have received 7%. So, the accountant receives 43% more bank loans and 14% more profits than she otherwise would.

Education, whether measured as the number of years obtained (column (1)), the level of education (column (2)), the member's years of education divided by the total number of years of all the group members (column (3)), or as being able to read and write (column (4)) has a positive impact on the share in the bank loan and in the profits.[28] Members who belong to the higher castes (FC) also get a larger share.

5.4   Elite capture in SHGs with internal accountants?

The more unequal distribution and the extra share the accountant receives cannot be explained by a better financial performance. In this Section, I try to find any indication of whether the accountant uses her position to take some additional benefits.

Firstly, one might argue that the accountant is granted a larger share of the bank loan or profits as a skill premium, i.e. as an allowance for the work done. This would imply that she receives what she is entitled to. When the PRADAN employee asks whether a member can be the accountant, she also introduces the possibility to pay her a salary. However, most internal accountants keep the books without being compensated (see Table 3). But, as all members have to be available for all meetings (they are fined if they are not) and as being the accountant does not involve any work outside the meetings, her opportunity cost of being the accountant is nil. External accountants are mostly paid, as there might be a positive opportunity cost of the time spent in the group. However, if the internal accountant feels she should be paid for her effort, she can discuss this with the group. Hence, if the disproportionate share is considered a reward for work done, I would expect accountants who are paid for their service - just like external accountants - not to receive an extra share (or at least to get a smaller extra share). I test this hypothesis in the regressions shown in the columns (5) in Tables 9 and 10. The estimated effect of being paid as an accountant is not significant.

Next, for bank loans, I compare the total amount allocated among the members with the size of the loan. When members apply for a bank loan, the amount received is partially decided by the bankers and might be lower than what they expected. Members can also increase the amount available in the bank loan fund by drawing money from group savings. Once the SHG decides to allocate group funds along with the bank loan, group savings can be used at the

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[28]For the level of education, I use 5 categories. The omitted one is not having obtained formal education. The other 4 categories are not having finished primary education (class 1 to 4), having finished primary education (class 5 to 7), having finished middle school (class 8 to 11) and having finished higher secondary school (class 12, B.A. or M.A).

Table 9: Share in bank loan (SHG fixed effects estimates)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Member is accountant	0.0255***	0.0280***	0.0305***	0.0316***	0.0237***	-0.0102	0.0269***
	(0.0079)	(0.0081)	(0.0078)	(0.0078)	(0.0086)	(0.0108)	(0.0079)
Education level (years)	0.0029***				0.0029***	0.0029***	0.0029***
	(0.0004)				(0.0004)	(0.0004)	(0.0004)
Level of education:		0.0154***					
between class 1 and class 4		(0.0031)					
Level of education:		0.0194***					
between class 5 and class 7		(0.0034)					
Level of education:		0.0220***					
between class 8 and class 11		(0.0045)					
Level of education:		0.0514***					
class 12, BA or MA		(0.0164)					
Share in group education			0.0456***				
			(0.0101)				
Able to read and write				0.0181***			
				(0.0027)			
Accountant is paid					0.0100		
* member is accountant					(0.0209)		
Group exhausted bank loan						0.0375**	
* member is accountant						(0.0147)	
Group allocated extra						0.0550***	
* member is accountant						(0.0187)	
Family member of accountant							0.0107***
							(0.0034)
Caste category: SC	0.0004	0.0001	0.0012	0.0005	0.0004	0.0002	0.0000
	(0.0032)	(0.0032)	(0.0033)	(0.0032)	(0.0032)	(0.0032)	(0.0032)
Caste category: OBC	0.0035	0.0032	0.0045*	0.0038	0.0035	0.0031	0.0030
	(0.0026)	(0.0026)	(0.0026)	(0.0026)	(0.0026)	(0.0026)	(0.0026)
Caste category: FC	0.0236**	0.0231**	0.0261***	0.0247***	0.0236**	0.0233**	0.0228**
	(0.0092)	(0.0092)	(0.0092)	(0.0092)	(0.0092)	(0.0092)	(0.0092)
Land (acres)	0.0006	0.0006	0.0008*	0.0007	0.0006	0.0006	0.0006
	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Age	0.0018***	0.0017***	0.0014***	0.0015***	0.0018***	0.0018***	0.0018***
	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)
Squared age	-0.0000***	-0.0000***	-0.0000**	-0.0000**	-0.0000***	-0.0000***	-0.0000***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
At least one family relation	0.0002	0.0002	0.0003	0.0002	0.0002	0.0002	-0.0007
in the group	(0.0020)	(0.0020)	(0.0020)	(0.0020)	(0.0020)	(0.0020)	(0.0020)
Separated from husband	-0.0088***	-0.0087***	-0.0088***	-0.0089***	-0.0088***	-0.0088***	-0.0087***
	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)
Number of children	0.0018***	0.0018***	0.0017***	0.0017***	0.0018***	0.0018***	0.0018***
	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)
Constant	0.0114	0.0117	0.0214**	0.0174	0.0115	0.0112	0.0116
	(0.0111)	(0.0110)	(0.0106)	(0.0109)	(0.0111)	(0.0111)	(0.0111)
N	15,623	15,623	15,623	15,623	15,609	15,623	15,623

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 10: Share in profit (SHG fixed effects estimates)

	(1)	(2)	(3)	(4)	(5)	(6)
Member is accountant	0.0091***	0.0096***	0.0098***	0.0094***	0.0097***	0.0096***
	(0.0026)	(0.0025)	(0.0025)	(0.0025)	(0.0029)	(0.0026)
Education level (years)	0.0004***				0.0004***	0.0003**
	(0.0001)				(0.0001)	(0.0001)
Level of education:		0.0049***				
between class 1 and class 4		(0.0018)				
Level of education:		0.0026**				
between class 5 and class 7		(0.0012)				
Level of education:		0.0041***				
between class 8 and class 11		(0.0014)				
Level of education:		0.0017				
class 12, BA or MA		(0.0043)				
Share in group education			0.0060**			
			(0.0030)			
Able to read and write				0.0033***		
				(0.0011)		
Accountant is paid					-0.0039	
* member is accountant					(0.0051)	
Family member of accountant						0.0037**
						(0.0016)
Caste category: SC	0.0002	0.0002	0.0003	0.0001	0.0002	0.0000
	(0.0019)	(0.0019)	(0.0019)	(0.0019)	(0.0019)	(0.0019)
Caste category: OBC	0.0024	0.0024	0.0025	0.0023	0.0024	0.0022
	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)
Caste category: FC	0.0057**	0.0056**	0.0060**	0.0055*	0.0057**	0.0055**
	(0.0028)	(0.0028)	(0.0028)	(0.0028)	(0.0028)	(0.0028)
Land (acres)	0.0003	0.0003	0.0003*	0.0003	0.0003	0.0003
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Age	0.0007***	0.0007***	0.0006***	0.0007***	0.0007***	0.0007***
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Squared age	-0.0000***	-0.0000***	-0.0000***	-0.0000***	-0.0000***	-0.0000***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
At least one family relation	0.0022***	0.0023***	0.0022***	0.0022***	0.0022***	0.0020***
in the group	(0.0007)	(0.0007)	(0.0007)	(0.0007)	(0.0007)	(0.0006)
Separated from husband	-0.0013	-0.0013	-0.0013	-0.0013	-0.0013	-0.0012
	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)
Number of children	0.0005***	0.0005***	0.0005***	0.0005***	0.0005***	0.0005***
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Constant	0.0423***	0.0416***	0.0435***	0.0420***	0.0422***	0.0423***
	(0.0041)	(0.0041)	(0.0041)	(0.0041)	(0.0041)	(0.0041)
N	12,558	12,558	12,558	12,558	12,558	12,558

Robust standard errors are given in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

discretion of the accountant, and she can take an even larger share.[29] If this is the case, I expect the accountant to take a larger share if the bank loan is completely allocated (66.5% of the groups), but the largest share if some group funds are allocated along with the bank loan (17.4% of the groups). I do not have priors about the difference between the share of the accountant and the share of the other members if the bank loan is not completely allocated (16.1% of the groups). Column (6) in Table 9 shows that the accountant's share increases by 3.8 percentage points if the amount is exactly allocated and by 5.5 percentage points if group funds are used to increase the total amount. The last result implies the accountant almost doubles her share (as the average share per member is 7% in case of an equal distribution). Remarkable, there is no significant difference between the share of the accountant and the share of the other members if the bank loan is not completely distributed.

Finally, I examine whether family members of the accountant receive more. Column (7) in Table 9 and column (6) in Table 10 show that family members receive an extra 1.1 percentage point share of the bank loan and 0.4 of profits.

5.5   The trade-off between financial and non-financial benefits

As the group's financial performance and the allocation of loans and profits are common knowledge among members, one might expect that members at the bottom of the distribution induce a conflict or leave the group in case of disagreement. As 21% of the members leave SHGs, it is definitely not a rare event, and a significant portion of those who left, join another group (23%).

Table 11 shows that the percentage of members leaving the SHG within 6 months after the bank loan or the profit distribution is not significantly different between groups with internal accountants and external accountants (I obtain the same results after 3 months and 1 year).[30]

The possibility that the accountant uses her position to take some extra financial benefits cannot be excluded, but this does not induce more members to leave groups with internal accountants as compared to groups with external accountants. This might be because the loss in financial benefits is outweighed by the gain in non-financial benefits.

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[29]The accountant is best informed about the financial situation of the group. Therefore, she can more easily propose and judge the possibility to allocate group funds along with the bank loan. But at the same time, she is constrained, as she is largely responsible for the solvency of the group. In the data set, all SHGs which repaid the first bank loan, repaid it on time.

[30]The full regressions are given in the Tables 24 and 25 in the appendix.

Table 11: Percentage of members leaving the SHG within 6 months after the bank loan or profit distribution

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Percentage of members leaving after the bank loan distribution						
Accountant is internal	0.0046	0.0049	-0.0075	-0.0043	-0.0103	-0.0083
	(0.0036)	(0.0036)	(0.0116)	(0.0136)	(0.0114)	(0.0130)
At least one member finished	0.0006		0.0054	0.0060		
primary education	(0.0034)		(0.0039)	(0.0037)		
Mean education (years)				-0.0016		
				(0.0016)		
At least one member can read and write		-0.0003			0.0059	0.0063*
		(0.0035)			(0.0039)	(0.0038)
Fraction members who can read and write						-0.0071
						(0.0115)
N	1,115	1,115	1,115	1,115	1,115	1,115
Percentage of members leaving after the profit distribution						
Accountant is internal	0.0077	0.0076	0.0053	0.0115	0.0047	0.0102
	(0.0058)	(0.0058)	(0.0132)	(0.0155)	(0.0128)	(0.0149)
At least one member finished	0.0062		0.0070	0.0093		
primary education	(0.0048)		(0.0069)	(0.0066)		
Mean education (years)				-0.0042*		
				(0.0023)		
At least one member can read and write		0.0064			0.0074	0.0094
		(0.0048)			(0.0068)	(0.0064)
Fraction members who can read and write						-0.0292
						(0.0187)
N	801	801	801	801	801	801

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Group controls included are the fraction of scheduled castes, other backward castes and forward castes in the group, the caste category fragmentation index, mean land, mean age, the fraction of members who have a relative in the group, the fraction of members who are separated from their husband, the average number of children members have, the total number of members, and finally, the squared total number of members. The village controls included are the distance to the closest commercial bank, the fraction of households having an adult member who can read and write and the number of other SHGs in the same village. Finally, two dummies indicate whether the group is created in Orissa or Chhattisgarh.

6 Robustness check on a restricted sample

As mentioned in Section 2.4, a PRADAN employee writes the records during the first SHG meetings. As groups are not told about the accountant before their creation, it seems unlikely that early SHGs are formed by women who wanted to become the accountant in order to use their position to influence the group's decisions.[31] Conversely, SHGs created later on, within the same village, know that the selection of an accountant is an integral part of forming a

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[31]Another reason why villagers are unlikely to know about the functioning of SHGs in advance, is PRADAN's choice of villages where no other NGO worked before.

group. As a robustness check, I only keep groups that were created in the first 9 months of PRADAN activities in the village. This choice is based on the normal evolution of an SHG: a group is expected to open a bank account 9 months after its creation. Hence, groups normally do not have contact with banks within the first 9 months. It is also unlikely that they distributed profits before.

The government has been providing subsidized loans through various schemes to a restricted sample of SHGs.[32] As it is hard to predict whether these groups would have taken a bank loan if they had not received the subsidy, for the regressions on bank loans, I also exclude groups whose first external fund was in the form of a subsidy.

For bank loans, my robustness check drops 845 observations (51,6%), for profits 780 observations (49,6%) and for group loans 793 observations (49,3%). The only result that changes significantly is the impact on the probability that the SHG distributes profit: groups with internal accountants are no longer more likely to distribute profit. The results are available from the author upon request.

7 Conclusions

This paper shows that the gain in non-financial cooperation, thanks to repeated interaction between individuals, might be hampered when there is external involvement. This implies that internal accountants provide an extra benefit for SHGs, but that benefit might come at a cost: there is evidence that some form of elite capture by the accountant occurs. Therefore, SHG members seem to face a trade-off between their share in the financial benefits and an environment that strengthens the occurrence of non-financial benefits in the form of mutual assistance and collective actions.

An interesting policy test might be providing an accountant training for several group members, as this would permit an alternation of the function between members. This is possible only when enough members passed primary education or are able to read and write. For the women in my data set, this holds for respectively 19.9% and 22.6% only. If it turns out that this helps equalizing the opportunities of microfinance, it is another incentive to reverse the remarkable neglect of elementary education in India, as discussed by Drèze and Sen (2002).

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[32]The subsidy comes through various institutions and in different forms. It varies from having to pay back 96% of the total amount received to being freed completely.

8 Appendix

8.1 Study Area

Figure 3: Study Area
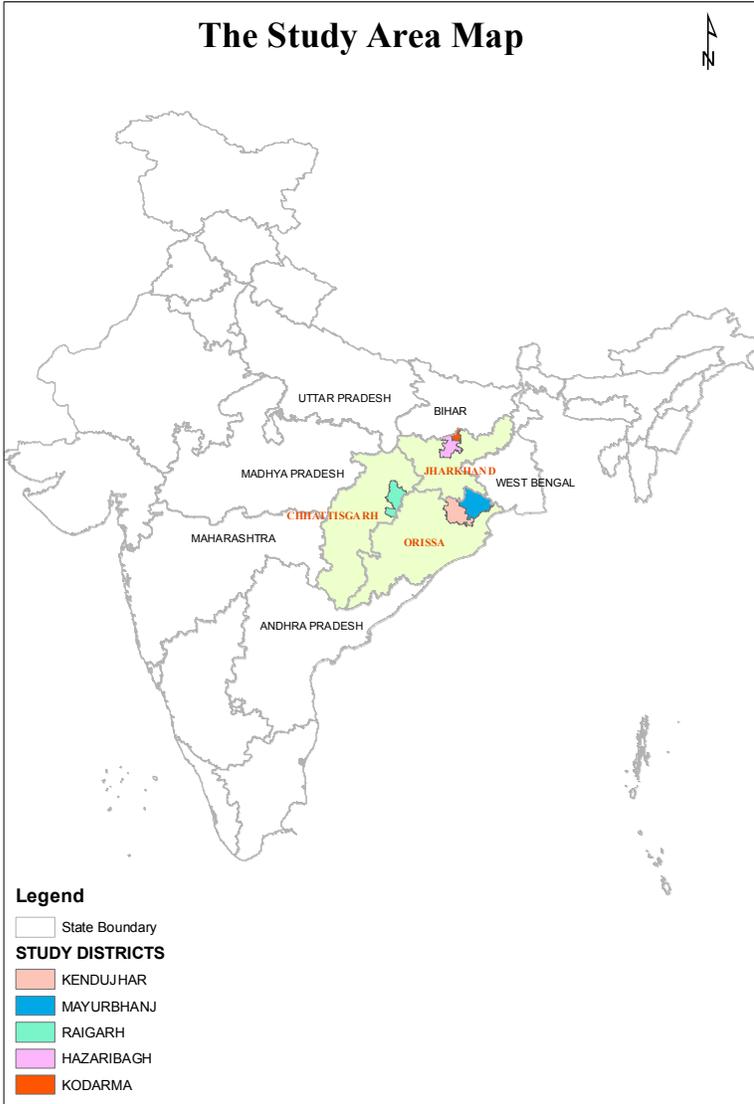
8.2 First stage regressions

Table 12: First stage regressions

	2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)
Instrument	0.5606***	0.4891***	0.6155***	0.5526***
	(0.0350)	(0.0363)	(0.0290)	(0.0312)
At least one member educated class 5 or above	0.1326***	0.0813***		
	(0.0249)	(0.0245)		
Mean education (years)		0.0753***		
		(0.0083)		
At least one member can read and write			0.1294***	0.0870***
			(0.0251)	(0.0253)
Fraction members who can read and write				0.4470***
				(0.0631)
Fraction of members who are SC	0.0163	-0.0665	0.0229	-0.0355
	(0.0429)	(0.0429)	(0.0421)	(0.0426)
Fraction of members who are OBC	0.0539	-0.0698*	0.0609*	-0.0289
	(0.0343)	(0.0370)	(0.0340)	(0.0365)
Fraction of members who are FC	0.3186***	0.0510	0.3262***	0.1134
	(0.1104)	(0.1118)	(0.1104)	(0.1113)
Caste category fragmentation	-0.0473	-0.0392	-0.0497	-0.0435
	(0.0490)	(0.0475)	(0.0486)	(0.0478)
Mean land (acres)	0.0045	-0.0028	0.0052	-0.0007
	(0.0044)	(0.0046)	(0.0044)	(0.0046)
Mean age	-0.0030	0.0002	-0.0028	-0.0005
	(0.0019)	(0.0019)	(0.0019)	(0.0019)
Fraction of members who have relative in group	0.0563	0.0513	0.0654*	0.0589*
	(0.0354)	(0.0342)	(0.0350)	(0.0343)
Fraction separated of husband	-0.0744	-0.0397	-0.0472	-0.0337
	(0.1038)	(0.1003)	(0.1034)	(0.1020)
Mean number of children	-0.0422***	-0.0052	-0.0459***	-0.0226
	(0.0156)	(0.0156)	(0.0157)	(0.0156)
Total members	0.0008	-0.0009	0.0033	0.0036
	(0.0164)	(0.0158)	(0.0163)	(0.0160)
Squared total members	-0.0000	0.0001	-0.0001	-0.0001
	(0.0005)	(0.0005)	(0.0005)	(0.0005)
Orissa	0.0722*	-0.0099	0.0191	-0.0187
	(0.0421)	(0.0418)	(0.0380)	(0.0380)
Chhattisgarh	-0.0274	-0.0299	-0.0962**	-0.1049***
	(0.0422)	(0.0404)	(0.0371)	(0.0364)
Number of PRADAN SHGs in village	0.0024	0.0025	0.0023	0.0022
	(0.0020)	(0.0020)	(0.0020)	(0.0020)
Distance to the bank (km)	0.0006	0.0006	0.0004	0.0005
	(0.0019)	(0.0019)	(0.0019)	(0.0020)
Fraction of households in village which have	0.0634	0.0181	0.0770*	0.0472
a member who can read and write	(0.0434)	(0.0423)	(0.0437)	(0.0427)
Constant	0.1784	0.0535	0.1507	0.0474
	(0.1555)	(0.1496)	(0.1551)	(0.1516)
N	1,632	1,632	1,632	1,632
F	257.1	181.6	451.1	313.0

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1

8.3 Non-financial benefits

Table 13: Mutual assistance between members

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Accountant is internal	0.0824***	0.0871***	0.1961*	0.2210*	0.1848*	0.2042*
	(0.0304)	(0.0304)	(0.1130)	(0.1307)	(0.1069)	(0.1208)
At least one member finished	-0.0156		-0.0597	-0.0514		
primary education	(0.0333)		(0.0489)	(0.0452)		
Mean education (years)				-0.0161		
				(0.0164)		
At least one member can read and write		-0.0312			-0.0699	-0.0635
		(0.0341)			(0.0476)	(0.0450)
Fraction members who can read and write						-0.0897
						(0.1076)
Fraction of members who are SC	0.1165**	0.1164**	0.1065**	0.1228**	0.1068**	0.1175**
	(0.0498)	(0.0498)	(0.0501)	(0.0509)	(0.0501)	(0.0502)
Fraction of members who are OBC	0.0978**	0.0988**	0.0859*	0.1100**	0.0880**	0.1042**
	(0.0428)	(0.0428)	(0.0440)	(0.0465)	(0.0439)	(0.0451)
Fraction of members who are FC	-0.0467	-0.0420	-0.0791	-0.0294	-0.0704	-0.0340
	(0.1231)	(0.1231)	(0.1297)	(0.1301)	(0.1289)	(0.1288)
Caste category fragmentation	-0.0166	-0.0153	-0.0122	-0.0131	-0.0115	-0.0121
	(0.0596)	(0.0596)	(0.0594)	(0.0595)	(0.0594)	(0.0595)
Mean land (acres)	-0.0038	-0.0037	-0.0051	-0.0037	-0.0049	-0.0039
	(0.0047)	(0.0047)	(0.0046)	(0.0048)	(0.0047)	(0.0047)
Mean age	-0.0055**	-0.0057**	-0.0053*	-0.0058**	-0.0055**	-0.0059**
	(0.0028)	(0.0028)	(0.0028)	(0.0028)	(0.0028)	(0.0028)
Fraction of members who have	-0.0131	-0.0130	-0.0176	-0.0176	-0.0174	-0.0171
relative in group	(0.0448)	(0.0448)	(0.0447)	(0.0448)	(0.0447)	(0.0447)
Fraction separated of husband	0.2471*	0.2433*	0.2499*	0.2429*	0.2439*	0.2415*
	(0.1313)	(0.1315)	(0.1318)	(0.1322)	(0.1318)	(0.1320)
Mean number of children	0.0513**	0.0505**	0.0560***	0.0498**	0.0548***	0.0514**
	(0.0204)	(0.0204)	(0.0211)	(0.0209)	(0.0210)	(0.0208)
Number of members	0.0018	0.0024	0.0007	0.0014	0.0012	0.0013
	(0.0209)	(0.0209)	(0.0207)	(0.0209)	(0.0207)	(0.0208)
Squared number of members	-0.0000	-0.0001	-0.0000	-0.0000	-0.0000	-0.0000
	(0.0007)	(0.0007)	(0.0007)	(0.0007)	(0.0007)	(0.0007)
Orissa	0.0360	0.0365	-0.0224	-0.0067	-0.0135	-0.0065
	(0.0516)	(0.0516)	(0.0758)	(0.0693)	(0.0734)	(0.0703)
Chhattisgarh	-0.2648***	-0.2627***	-0.3131***	-0.3099***	-0.3032***	-0.2985***
	(0.0523)	(0.0524)	(0.0697)	(0.0685)	(0.0676)	(0.0658)
N	1,570	1,570	1,570	1,570	1,570	1,570

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Other group controls included are the years the group has been meeting and the squared number of years. Other village controls are the distance to the bank, the fraction of households having an adult member who can read and write and the number of PRADAN SHGs in the village.

Table 14: SHG undertook collective actions

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Accountant is internal	0.1177***	0.1223***	0.1835*	0.1798	0.1913*	0.1988*
	(0.0301)	(0.0300)	(0.1105)	(0.1268)	(0.1039)	(0.1167)
At least one member finished	0.0249		-0.0007	-0.0019		
primary education	(0.0333)		(0.0495)	(0.0464)		
Mean education (years)				0.0024		
				(0.0153)		
At least one member can read and write		0.0105			-0.0168	-0.0143
		(0.0340)			(0.0487)	(0.0467)
Fraction members who can read and write						-0.0348
						(0.1032)
Fraction of members who are SC	0.1444***	0.1454***	0.1386***	0.1362***	0.1386***	0.1427***
	(0.0483)	(0.0483)	(0.0490)	(0.0493)	(0.0490)	(0.0491)
Fraction of members who are OBC	0.0679	0.0696*	0.0610	0.0574	0.0620	0.0682
	(0.0419)	(0.0418)	(0.0433)	(0.0453)	(0.0432)	(0.0444)
Fraction of members who are FC	-0.1142	-0.1091	-0.1329*	-0.1404*	-0.1291	-0.1150
	(0.0726)	(0.0724)	(0.0801)	(0.0812)	(0.0795)	(0.0815)
Caste category fragmentation	0.0648	0.0661	0.0674	0.0675	0.0688	0.0685
	(0.0566)	(0.0565)	(0.0564)	(0.0564)	(0.0564)	(0.0564)
Mean land (acres)	-0.0091*	-0.0089*	-0.0098**	-0.0100**	-0.0098**	-0.0094**
	(0.0047)	(0.0047)	(0.0048)	(0.0047)	(0.0048)	(0.0047)
Mean age	0.0023	0.0022	0.0025	0.0025	0.0023	0.0022
	(0.0026)	(0.0026)	(0.0026)	(0.0026)	(0.0026)	(0.0026)
Fraction of members who have	-0.0322	-0.0317	-0.0349	-0.0348	-0.0348	-0.0346
relative in group	(0.0440)	(0.0440)	(0.0438)	(0.0438)	(0.0439)	(0.0439)
Fraction separated of husband	-0.0733	-0.0753	-0.0717	-0.0707	-0.0748	-0.0758
	(0.1237)	(0.1237)	(0.1220)	(0.1220)	(0.1220)	(0.1219)
Mean number of children	-0.0041	-0.0050	-0.0014	-0.0004	-0.0020	-0.0033
	(0.0197)	(0.0197)	(0.0201)	(0.0201)	(0.0201)	(0.0201)
Number of members	0.0465**	0.0472**	0.0458**	0.0457**	0.0464**	0.0464**
	(0.0228)	(0.0229)	(0.0228)	(0.0228)	(0.0229)	(0.0229)
Squared number of members	-0.0012	-0.0012*	-0.0012	-0.0012	-0.0012	-0.0012
	(0.0007)	(0.0007)	(0.0007)	(0.0007)	(0.0007)	(0.0007)
Orissa	0.6038***	0.6042***	0.5701***	0.5677***	0.5689***	0.5716***
	(0.0470)	(0.0470)	(0.0744)	(0.0683)	(0.0715)	(0.0688)
Chhattisgarh	0.3788***	0.3798***	0.3508***	0.3504***	0.3512***	0.3530***
	(0.0468)	(0.0469)	(0.0671)	(0.0657)	(0.0644)	(0.0626)
N	1,570	1,570	1,570	1,570	1,570	1,570

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Other group controls included are the years the group has been meeting and the squared number of years. Other village controls are the distance to the bank, the fraction of households having an adult member who can read and write and the number of PRADAN SHGs in the village.

8.4 Bank Loans

Table 15: The SHG received a bank loan or not

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Accountant is internal	0.0214	0.0264	-0.1010	-0.1406	-0.1228	-0.1643
	(0.0274)	(0.0273)	(0.0938)	(0.1096)	(0.0874)	(0.1000)
At least one member finished	-0.0171		0.0311	0.0195		
primary education	(0.0293)		(0.0442)	(0.0414)		
Mean education (years)				0.0240*		
				(0.0135)		
At least one member can read and write		-0.0339			0.0260	0.0135
		(0.0297)			(0.0434)	(0.0414)
Fraction members who can read and write						0.1845**
						(0.0900)
Fraction of members who are SC	0.1198***	0.1197***	0.1307***	0.1053**	0.1345***	0.1116**
	(0.0437)	(0.0437)	(0.0444)	(0.0446)	(0.0443)	(0.0445)
Fraction of members who are OBC	0.1239***	0.1250***	0.1370***	0.0995**	0.1418***	0.1072***
	(0.0379)	(0.0378)	(0.0391)	(0.0402)	(0.0390)	(0.0396)
Fraction of members who are FC	0.3738***	0.3788***	0.4078***	0.3341***	0.4210***	0.3463***
	(0.0848)	(0.0847)	(0.0933)	(0.0940)	(0.0938)	(0.0948)
Caste category fragmentation	0.0925*	0.0938*	0.0889*	0.0899*	0.0895*	0.0902*
	(0.0509)	(0.0509)	(0.0510)	(0.0512)	(0.0512)	(0.0514)
Mean land (acres)	-0.0096	-0.0095	-0.0082	-0.0104	-0.0077	-0.0099
	(0.0087)	(0.0086)	(0.0085)	(0.0091)	(0.0083)	(0.0092)
Mean age	0.0025	0.0023	0.0023	0.0031	0.0021	0.0029
	(0.0024)	(0.0024)	(0.0024)	(0.0025)	(0.0025)	(0.0025)
Fraction of members who have	0.0358	0.0357	0.0406	0.0411	0.0423	0.0422
relative in group	(0.0399)	(0.0399)	(0.0402)	(0.0403)	(0.0405)	(0.0406)
Fraction separated of husband	-0.1876*	-0.1919*	-0.1940*	-0.1855*	-0.1971*	-0.1933*
	(0.1091)	(0.1091)	(0.1091)	(0.1088)	(0.1092)	(0.1094)
Mean number of children	-0.0030	-0.0038	-0.0087	0.0016	-0.0109	-0.0032
	(0.0186)	(0.0186)	(0.0190)	(0.0190)	(0.0190)	(0.0189)
Number of members	0.0751***	0.0757***	0.0764***	0.0757***	0.0776***	0.0777***
	(0.0204)	(0.0204)	(0.0203)	(0.0202)	(0.0204)	(0.0203)
Squared number of members	-0.0020***	-0.0020***	-0.0020***	-0.0020***	-0.0020***	-0.0020***
	(0.0007)	(0.0007)	(0.0007)	(0.0007)	(0.0007)	(0.0007)
Orissa	0.3930***	0.3935***	0.4568***	0.4325***	0.4710***	0.4556***
	(0.0438)	(0.0437)	(0.0642)	(0.0588)	(0.0610)	(0.0586)
Chhattisgarh	0.4008***	0.4031***	0.4518***	0.4489***	0.4637***	0.4555***
	(0.0438)	(0.0438)	(0.0576)	(0.0571)	(0.0550)	(0.0538)
N	1,632	1,632	1,632	1,632	1,632	1,632

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Other group controls included are the years the group has been meeting and the squared number of years. Other village controls are the distance to the bank, the fraction of households having an adult member who can read and write and the number of PRADAN SHGs in the village.

Table 16: Amount of bank loan received per member

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Accountant is internal	134.56	146.38	2.41	-122.55	-57.67	-198.96
	(110.89)	(110.65)	(401.84)	(466.16)	(375.35)	(423.69)
At least one member finished	55.32		107.07	73.43		
primary education	(126.76)		(232.16)	(217.61)		
Mean education (years)				73.70		
				(49.10)		
At least one member can read and write		18.26			99.66	59.36
		(131.40)			(227.85)	(216.73)
Fraction members who can read and write						617.60**
						(309.81)
Fraction of members who are SC	23.10	24.94	35.86	-43.17	46.73	-30.73
	(156.88)	(156.33)	(149.15)	(150.76)	(148.76)	(146.36)
Fraction of members who are OBC	26.11	30.08	40.25	-74.16	53.08	-62.32
	(124.33)	(124.16)	(125.67)	(125.84)	(124.86)	(122.79)
Fraction of members who are FC	651.26	664.75	686.49	464.18	720.17*	472.33
	(415.29)	(414.61)	(433.49)	(425.98)	(432.32)	(433.15)
Caste category fragmentation	404.86	407.87	401.62	403.63	402.95	404.55
	(257.28)	(257.30)	(254.22)	(254.77)	(254.66)	(255.28)
Mean land (acres)	1.75	2.19	3.28	-3.31	4.74	-2.62
	(15.79)	(15.61)	(16.17)	(17.52)	(15.91)	(17.95)
Mean age	30.94***	30.64***	30.72***	33.11***	30.33***	33.04***
	(10.12)	(10.12)	(10.11)	(10.19)	(10.11)	(10.24)
Fraction of members who have	151.78	152.90	156.70	158.83	161.46	161.64
relative in group	(159.32)	(159.43)	(161.26)	(162.23)	(161.63)	(162.24)
Fraction separated of husband	-637.33	-643.53	-643.55	-618.88	-649.58	-637.55
	(401.51)	(401.19)	(404.05)	(402.96)	(401.97)	(402.38)
Mean number of children	83.97	81.63	77.90	108.86	71.99	97.71
	(63.30)	(63.30)	(65.47)	(67.15)	(65.38)	(66.40)
Number of members	-62.20	-60.19	-61.18	-62.77	-58.22	-57.31
	(215.43)	(215.24)	(215.16)	(214.24)	(215.29)	(214.43)
Squared number of members	2.01	1.95	1.98	2.06	1.90	1.93
	(7.34)	(7.34)	(7.33)	(7.30)	(7.33)	(7.30)
Orissa	-338.26	-337.19	-269.85	-341.25	-231.97	-281.56
	(224.20)	(224.25)	(267.75)	(247.35)	(260.62)	(250.66)
Chhattisgarh	-552.85**	-549.54**	-498.28**	-504.12**	-467.48*	-493.11**
	(230.12)	(230.51)	(249.32)	(247.89)	(244.07)	(240.58)
N	1,632	1,632	1,632	1,632	1,632	1,632

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Other village controls are the distance to the bank, the fraction of households having an adult member who can read and write and the number of PRADAN SHGs in the village.

Table 17: Gini coefficient of bank loan allocation within SHG

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Accountant is internal	-0.0003	0.0005	0.1693**	0.1671*	0.1639**	0.1689*
	(0.0231)	(0.0233)	(0.0814)	(0.0985)	(0.0759)	(0.0890)
At least one member finished	0.0826***		0.0155	0.0150		
primary education	(0.0268)		(0.0470)	(0.0442)		
Mean education (years)				0.0012		
				(0.0130)		
At least one member can read and write		0.0811***			0.0147	0.0158
		(0.0276)			(0.0464)	(0.0445)
Fraction members who can read and write						-0.0192
						(0.0822)
Fraction of members who are SC	-0.0474	-0.0458	-0.0673*	-0.0684*	-0.0660	-0.0640
	(0.0374)	(0.0374)	(0.0403)	(0.0387)	(0.0401)	(0.0390)
Fraction of members who are OBC	0.0100	0.0110	-0.0160	-0.0176	-0.0145	-0.0115
	(0.0321)	(0.0320)	(0.0346)	(0.0340)	(0.0342)	(0.0338)
Fraction of members who are FC	0.0992	0.1004	0.0360	0.0331	0.0398	0.0461
	(0.0801)	(0.0801)	(0.0811)	(0.0820)	(0.0803)	(0.0814)
Caste category fragmentation	-0.0478	-0.0479	-0.0382	-0.0383	-0.0384	-0.0385
	(0.0443)	(0.0443)	(0.0456)	(0.0456)	(0.0456)	(0.0456)
Mean land (acres)	0.0103	0.0105	0.0089	0.0088	0.0090	0.0092
	(0.0076)	(0.0077)	(0.0073)	(0.0073)	(0.0073)	(0.0075)
Mean age	-0.0014	-0.0014	-0.0014	-0.0014	-0.0014	-0.0015
	(0.0019)	(0.0019)	(0.0019)	(0.0020)	(0.0019)	(0.0020)
Fraction of members who have	-0.0496	-0.0500	-0.0584	-0.0583	-0.0581	-0.0581
relative in group	(0.0351)	(0.0351)	(0.0362)	(0.0362)	(0.0361)	(0.0361)
Fraction separated of husband	-0.0138	-0.0125	-0.0171	-0.0164	-0.0174	-0.0184
	(0.0920)	(0.0921)	(0.0926)	(0.0931)	(0.0925)	(0.0928)
Mean number of children	-0.0174	-0.0179	-0.0081	-0.0076	-0.0088	-0.0096
	(0.0172)	(0.0172)	(0.0177)	(0.0174)	(0.0176)	(0.0174)
Number of members	0.0262	0.0270	0.0247	0.0247	0.0251	0.0250
	(0.0165)	(0.0164)	(0.0170)	(0.0170)	(0.0169)	(0.0169)
Squared number of members	-0.0003	-0.0003	-0.0002	-0.0002	-0.0003	-0.0003
	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)
Orissa	-0.2372***	-0.2376***	-0.3292***	-0.3299***	-0.3256***	-0.3250***
	(0.0409)	(0.0410)	(0.0574)	(0.0542)	(0.0547)	(0.0538)
Chhattisgarh	-0.4306***	-0.4326***	-0.5052***	-0.5049***	-0.5023***	-0.5023***
	(0.0392)	(0.0393)	(0.0508)	(0.0522)	(0.0485)	(0.0486)
N	1,038	1,038	1,038	1,038	1,038	1,038

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Other village controls are the distance to the bank, the fraction of households having an adult member who can read and write and the number of PRADAN SHGs in the village.

8.5 Profits

Table 18: The SHG distributed profit or not

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Accountant is internal	0.0387	0.0434*	0.2519***	0.2449**	0.1950**	0.1751*
	(0.0244)	(0.0246)	(0.0909)	(0.1035)	(0.0865)	(0.0974)
At least one member finished	0.0525*		-0.0308	-0.0331		
primary education	(0.0275)		(0.0437)	(0.0412)		
Mean education (years)				0.0046		
				(0.0127)		
At least one member can read and write		0.0391			-0.0209	-0.0267
		(0.0283)			(0.0428)	(0.0410)
Fraction members who can read and write						0.0899
						(0.0857)
Fraction of members who are SC	0.0489	0.0505	0.0298	0.0252	0.0353	0.0248
	(0.0397)	(0.0398)	(0.0421)	(0.0415)	(0.0414)	(0.0405)
Fraction of members who are OBC	0.1163***	0.1183***	0.0934***	0.0865**	0.1010***	0.0849***
	(0.0314)	(0.0314)	(0.0335)	(0.0338)	(0.0329)	(0.0322)
Fraction of members who are FC	0.2295**	0.2346**	0.1692*	0.1547	0.1908*	0.1541
	(0.1057)	(0.1055)	(0.1008)	(0.1002)	(0.1021)	(0.1012)
Caste category fragmentation	0.0129	0.0142	0.0174	0.0176	0.0173	0.0174
	(0.0473)	(0.0473)	(0.0481)	(0.0480)	(0.0476)	(0.0474)
Mean land (acres)	-0.0019	-0.0016	-0.0043	-0.0047	-0.0035	-0.0046
	(0.0035)	(0.0036)	(0.0035)	(0.0035)	(0.0035)	(0.0034)
Mean age	-0.0021	-0.0022	-0.0017	-0.0015	-0.0019	-0.0014
	(0.0022)	(0.0022)	(0.0023)	(0.0023)	(0.0022)	(0.0022)
Fraction of members who have	-0.0099	-0.0090	-0.0154	-0.0155	-0.0136	-0.0141
relative in group	(0.0366)	(0.0367)	(0.0374)	(0.0373)	(0.0370)	(0.0368)
Fraction separated of husband	0.0472	0.0466	0.0552	0.0567	0.0493	0.0497
	(0.1098)	(0.1100)	(0.1118)	(0.1116)	(0.1108)	(0.1103)
Mean number of children	0.0254	0.0245	0.0332*	0.0351**	0.0303*	0.0338*
	(0.0170)	(0.0170)	(0.0176)	(0.0176)	(0.0173)	(0.0173)
Number of members	0.0340**	0.0348**	0.0313*	0.0308*	0.0328*	0.0320*
	(0.0169)	(0.0169)	(0.0169)	(0.0169)	(0.0168)	(0.0167)
Squared number of members	-0.0008	-0.0008	-0.0007	-0.0006	-0.0007	-0.0007
	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)	(0.0005)
Orissa	0.4530***	0.4533***	0.3436***	0.3392***	0.3753***	0.3688***
	(0.0398)	(0.0399)	(0.0604)	(0.0554)	(0.0584)	(0.0559)
Chhattisgarh	-0.0610	-0.0606	-0.1506***	-0.1518***	-0.1232**	-0.1280**
	(0.0425)	(0.0426)	(0.0564)	(0.0551)	(0.0546)	(0.0530)
N	1,570	1,570	1,570	1,570	1,570	1,570

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Other group controls included are the years the group has been meeting and the squared number of years. Other village controls are the distance to the bank, the fraction of households having an adult member who can read and write and the number of PRADAN SHGs in the village.

Table 19: Amount of profit per member per year

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Accountant is internal	3.20	3.02	39.98	40.80	25.72	24.22
	(7.29)	(7.33)	(28.08)	(32.17)	(26.51)	(30.00)
At least one member finished	12.17		-2.19	-1.94		
primary education	(9.37)		(17.31)	(16.33)		
Mean education (years)				-0.52		
				(3.90)		
At least one member can read and write		13.16			4.21	3.80
		(9.77)			(17.04)	(16.32)
Fraction members who can read and write						6.59
						(25.64)
Fraction of members who are SC	-0.12	0.21	-3.58	-3.04	-2.18	-2.98
	(11.42)	(11.38)	(11.74)	(11.57)	(11.78)	(11.44)
Fraction of members who are OBC	44.54***	44.66***	40.63***	41.40***	42.10***	40.92***
	(8.74)	(8.74)	(8.98)	(9.67)	(8.90)	(9.25)
Fraction of members who are FC	84.55*	84.42*	74.79	76.39*	78.26*	75.59
	(47.05)	(47.10)	(46.95)	(44.95)	(47.30)	(46.25)
Caste category fragmentation	11.29	11.25	11.88	11.85	11.59	11.61
	(15.96)	(15.95)	(15.96)	(16.00)	(15.86)	(15.86)
Mean land (acres)	-2.04**	-2.02**	-2.49**	-2.44**	-2.32**	-2.39**
	(0.99)	(0.98)	(1.09)	(1.09)	(1.05)	(1.08)
Mean age	1.23*	1.24*	1.30**	1.28*	1.28*	1.31**
	(0.66)	(0.66)	(0.66)	(0.66)	(0.66)	(0.66)
Fraction of members who have	9.68	9.79	8.81	8.82	9.16	9.13
relative in group	(10.20)	(10.20)	(10.26)	(10.27)	(10.20)	(10.19)
Fraction separated of husband	10.26	11.10	11.37	11.20	11.33	11.37
	(32.56)	(32.45)	(32.64)	(32.45)	(32.31)	(32.27)
Mean number of children	22.01***	22.02***	23.36***	23.16***	22.89***	23.14***
	(7.12)	(7.12)	(7.09)	(7.48)	(7.05)	(7.14)
Number of members	13.83***	13.79***	13.50***	13.54***	13.58***	13.53***
	(4.98)	(4.97)	(4.99)	(4.98)	(4.96)	(4.97)
Squared number of members	-0.37**	-0.36**	-0.35**	-0.36**	-0.36**	-0.36**
	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)
Orissa	13.74	13.68	-4.95	-4.48	2.13	1.68
	(12.19)	(12.21)	(17.70)	(16.08)	(17.19)	(16.51)
Chhattisgarh	-38.29***	-38.73***	-53.50***	-53.39***	-47.91***	-48.25***
	(13.80)	(13.91)	(17.33)	(16.93)	(16.90)	(16.45)
N	1,558	1,558	1,558	1,558	1,558	1,558

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Other village controls are the distance to the bank, the fraction of households having an adult member who can read and write and the number of PRADAN SHGs in the village.

Table 20: Gini coefficient of profit allocation within SHG

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Accountant is internal	0.0030	0.0024	0.1421***	0.1592***	0.1360***	0.1550***
	(0.0153)	(0.0154)	(0.0442)	(0.0515)	(0.0431)	(0.0492)
At least one member finished	0.0085		-0.0381	-0.0317		
primary education	(0.0167)		(0.0244)	(0.0228)		
Mean education (years)				-0.0117*		
				(0.0068)		
At least one member can read and write		0.0103			-0.0352	-0.0281
		(0.0169)			(0.0242)	(0.0230)
Fraction members who can read and write						-0.1015**
						(0.0481)
Fraction of members who are SC	0.0357	0.0357	0.0230	0.0371	0.0228	0.0364
	(0.0241)	(0.0241)	(0.0261)	(0.0250)	(0.0260)	(0.0253)
Fraction of members who are OBC	-0.0814***	-0.0815***	-0.0954***	-0.0766***	-0.0949***	-0.0756***
	(0.0168)	(0.0168)	(0.0187)	(0.0186)	(0.0186)	(0.0185)
Fraction of members who are FC	-0.1114**	-0.1118**	-0.1629***	-0.1308**	-0.1616***	-0.1247**
	(0.0464)	(0.0463)	(0.0574)	(0.0557)	(0.0568)	(0.0550)
Caste category fragmentation	0.1004***	0.1003***	0.0949***	0.0966***	0.0951***	0.0978***
	(0.0300)	(0.0300)	(0.0318)	(0.0322)	(0.0316)	(0.0320)
Mean land (acres)	0.0111**	0.0111**	0.0080	0.0092*	0.0081	0.0092*
	(0.0052)	(0.0052)	(0.0052)	(0.0053)	(0.0052)	(0.0053)
Mean age	-0.0015	-0.0015	-0.0015	-0.0020	-0.0015	-0.0021
	(0.0012)	(0.0012)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Fraction of members who have	-0.0236	-0.0236	-0.0209	-0.0201	-0.0211	-0.0202
relative in group	(0.0211)	(0.0211)	(0.0221)	(0.0224)	(0.0220)	(0.0223)
Fraction separated of husband	-0.0286	-0.0277	-0.0453	-0.0497	-0.0450	-0.0508
	(0.0601)	(0.0601)	(0.0628)	(0.0639)	(0.0627)	(0.0639)
Mean number of children	-0.0039	-0.0038	0.0037	-0.0023	0.0034	-0.0018
	(0.0092)	(0.0092)	(0.0098)	(0.0103)	(0.0097)	(0.0101)
Number of members	-0.0157	-0.0158	-0.0203*	-0.0202*	-0.0198*	-0.0203*
	(0.0107)	(0.0107)	(0.0104)	(0.0106)	(0.0105)	(0.0107)
Squared number of members	0.0007*	0.0007*	0.0008**	0.0008**	0.0008**	0.0008**
	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Orissa	-0.0009	-0.0009	-0.0760**	-0.0680**	-0.0731**	-0.0674**
	(0.0216)	(0.0216)	(0.0320)	(0.0300)	(0.0315)	(0.0305)
Chhattisgarh	-0.0235	-0.0236	-0.0771**	-0.0775**	-0.0753**	-0.0708**
	(0.0262)	(0.0262)	(0.0314)	(0.0317)	(0.0311)	(0.0307)
N	801	801	801	801	801	801

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Other village controls are the distance to the bank, the fraction of households having an adult member who can read and write and the number of PRADAN SHGs in the village.

8.6 Group Loans

Table 21: Amount of group loan received per member

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Accountant is internal	56.27	52.75	209.24	142.10	194.89	123.41
	(38.43)	(38.50)	(162.61)	(185.63)	(139.28)	(157.26)
At least one member finished	112.86**		52.43	33.95		
primary education	(53.35)		(99.86)	(94.77)		
Mean education (years)				40.17*		
				(21.29)		
At least one member can read and write		128.48**			71.64	55.39
		(55.79)			(92.73)	(89.87)
Fraction members who can read and write						285.70**
						(139.77)
Fraction of members who are SC	-29.22	-26.81	-42.93	-85.10	-40.98	-75.41
	(76.04)	(75.92)	(77.19)	(77.62)	(77.21)	(77.41)
Fraction of members who are OBC	444.05***	444.39***	426.45***	363.90***	427.20***	374.74***
	(58.06)	(58.02)	(59.70)	(61.35)	(59.34)	(61.04)
Fraction of members who are FC	441.68**	439.02**	394.43**	269.53	394.12**	278.66
	(176.45)	(176.57)	(176.76)	(186.58)	(175.67)	(186.57)
Caste category fragmentation	-129.50*	-130.38*	-125.12	-123.03	-126.43	-124.97
	(78.47)	(78.31)	(78.52)	(78.31)	(78.16)	(77.95)
Mean land (acres)	-12.14**	-12.04**	-13.80***	-17.35***	-13.70***	-17.00***
	(5.08)	(5.07)	(5.32)	(5.54)	(5.30)	(5.65)
Mean age	4.14	4.27	4.37	5.67	4.48	5.70
	(3.69)	(3.70)	(3.68)	(3.78)	(3.68)	(3.75)
Fraction of members who have	-49.54	-48.74	-55.47	-54.51	-54.73	-54.32
relative in group	(58.80)	(58.76)	(58.35)	(58.02)	(58.29)	(58.08)
Fraction separated of husband	-383.99**	-376.20**	-378.46**	-364.83**	-373.41**	-367.98**
	(161.71)	(161.60)	(162.10)	(160.61)	(161.61)	(160.22)
Mean number of children	23.65	24.11	31.02	48.66*	31.17	43.14*
	(25.86)	(25.86)	(26.77)	(25.75)	(26.60)	(25.85)
Number of members	71.15**	70.90**	68.86**	67.58**	68.56**	68.85**
	(32.34)	(32.28)	(32.11)	(32.22)	(32.08)	(32.17)
Squared number of members	-1.83*	-1.83*	-1.77	-1.71	-1.76	-1.74
	(1.10)	(1.10)	(1.09)	(1.10)	(1.09)	(1.09)
Orissa	148.90**	148.22**	67.63	27.56	72.69	52.77
	(75.50)	(75.49)	(111.84)	(103.54)	(102.25)	(99.74)
Chhattisgarh	-245.79***	-250.36***	-311.58***	-315.81***	-310.14***	-319.59***
	(64.91)	(64.93)	(93.71)	(92.76)	(84.65)	(83.45)
N	1,605	1,605	1,605	1,605	1,605	1,605

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Other group controls included are the years the group has been meeting and the squared number of years. Other village controls are the distance to the bank, the fraction of households having an adult member who can read and write and the number of PRADAN SHGs in the village.

Table 22: Gini coefficient of group loan allocation within SHG

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Accountant is internal	0.0025	0.0023	-0.0030	-0.0173	-0.0083	-0.0262
	(0.0139)	(0.0138)	(0.0471)	(0.0549)	(0.0483)	(0.0554)
At least one member finished	-0.0180		-0.0158	-0.0194		
primary education	(0.0147)		(0.0183)	(0.0172)		
Mean education (years)				0.0083		
				(0.0064)		
At least one member can read and write		-0.0179			-0.0136	-0.0175
		(0.0147)			(0.0203)	(0.0194)
Fraction members who can read and write						0.0703
						(0.0448)
Fraction of members who are SC	-0.0041	-0.0046	-0.0036	-0.0125	-0.0034	-0.0120
	(0.0226)	(0.0226)	(0.0229)	(0.0234)	(0.0229)	(0.0232)
Fraction of members who are OBC	-0.0016	-0.0018	-0.0009	-0.0139	-0.0006	-0.0134
	(0.0173)	(0.0173)	(0.0180)	(0.0196)	(0.0180)	(0.0192)
Fraction of members who are FC	0.0102	0.0098	0.0118	-0.0137	0.0131	-0.0151
	(0.0454)	(0.0454)	(0.0468)	(0.0474)	(0.0467)	(0.0474)
Caste category fragmentation	0.0353	0.0352	0.0351	0.0355	0.0350	0.0352
	(0.0254)	(0.0254)	(0.0252)	(0.0252)	(0.0253)	(0.0252)
Mean land (acres)	-0.0049	-0.0049	-0.0048	-0.0056*	-0.0048	-0.0056*
	(0.0031)	(0.0031)	(0.0031)	(0.0030)	(0.0031)	(0.0029)
Mean age	0.0033***	0.0033***	0.0033***	0.0036***	0.0033***	0.0036***
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Fraction of members who have	0.0270	0.0269	0.0272	0.0275	0.0273	0.0274
relative in group	(0.0190)	(0.0190)	(0.0189)	(0.0189)	(0.0189)	(0.0189)
Fraction separated of husband	0.0272	0.0265	0.0270	0.0297	0.0263	0.0276
	(0.0589)	(0.0590)	(0.0587)	(0.0587)	(0.0588)	(0.0587)
Mean number of children	-0.0121	-0.0120	-0.0124	-0.0088	-0.0125	-0.0096
	(0.0087)	(0.0087)	(0.0090)	(0.0091)	(0.0090)	(0.0090)
Number of members	0.0291***	0.0290***	0.0292***	0.0290***	0.0292***	0.0293***
	(0.0112)	(0.0112)	(0.0112)	(0.0112)	(0.0112)	(0.0112)
Squared number of members	-0.0007*	-0.0007*	-0.0007*	-0.0007*	-0.0007*	-0.0007*
	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Orissa	-0.1949***	-0.1949***	-0.1920***	-0.2000***	-0.1892***	-0.1939***
	(0.0201)	(0.0201)	(0.0317)	(0.0291)	(0.0320)	(0.0309)
Chhattisgarh	-0.1043***	-0.1038***	-0.1019***	-0.1024***	-0.0994***	-0.1015***
	(0.0222)	(0.0222)	(0.0303)	(0.0302)	(0.0304)	(0.0299)
N	1605	1605	1605	1605	1605	1605

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Other village controls are the distance to the bank, the fraction of households having an adult member who can read and write and the number of PRADAN SHGs in the village.

8.7 Robustness check for amount received

Table 23: Amount of bank loan received per member and of profit received per member per year (robustness check using Tobit)

	BANK LOAN AMOUNT		PROFIT AMOUNT	
	OLS	2SLS	OLS	2SLS
	(1)	(2)	(3)	(4)
Accountant is internal	151.40	-488.16	6.22	78.53
	(154.53)	(520.64)	(14.71)	(50.35)
At least one member finished	22.40	134.82	27.25*	-0.37
primary education	(171.97)	(258.22)	(16.29)	(22.65)
Mean education (years)		124.32**		2.03
		(60.59)		(6.36)
Fraction of members who are SC	218.96	128.23	15.39	4.76
	(223.26)	(220.47)	(23.50)	(24.16)
Fraction of members who are OBC	206.66	62.24	76.17***	63.85***
	(179.19)	(183.92)	(18.53)	(19.60)
Fraction of members who are FC	1226.77**	974.52*	142.74**	116.28*
	(538.68)	(549.41)	(68.29)	(67.25)
Caste category fragmentation	564.64*	557.96*	20.28	20.13
	(339.40)	(337.73)	(29.40)	(29.37)
Mean land (acres)	-12.96	-19.18	-4.24	-5.76
	(31.41)	(33.10)	(3.17)	(3.53)
Mean age	57.80***	61.03***	4.11***	4.32***
	(14.68)	(14.83)	(1.23)	(1.23)
Fraction of members who have	219.60	240.16	7.51	5.34
relative in group	(223.24)	(226.21)	(19.54)	(19.49)
Fraction separated of husband	-959.52*	-935.77	61.88	66.68
	(579.06)	(582.07)	(61.72)	(61.69)
Mean number of children	182.30*	216.76**	45.25***	49.18***
	(95.41)	(100.35)	(12.79)	(13.62)
Number of members	94.19	96.38	38.02***	37.45***
	(258.38)	(259.64)	(9.96)	(9.89)
Squared number of members	-1.75	-1.74	-0.96***	-0.93***
	(8.72)	(8.75)	(0.31)	(0.31)
Orissa	167.20	273.26	94.05***	53.27*
	(281.94)	(313.72)	(24.74)	(29.77)
Chhattisgarh	-119.08	53.24	-109.21***	-140.51***
	(295.95)	(322.78)	(25.38)	(30.13)
N	1,632	1,632	1,558	1,558

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Other village controls are the distance to the bank, the fraction of households having an adult member who can read and write and the number of PRADAN SHGs in the village.

8.8 Percentage of members leaving the SHG

Table 24: Percentage of members leaving the SHG within 6 months after the bank loan distribution

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Accountant is internal	0.0046	0.0049	-0.0075	-0.0043	-0.0103	-0.0083
	(0.0036)	(0.0036)	(0.0116)	(0.0136)	(0.0114)	(0.0130)
At least one member finished	0.0006		0.0054	0.0060		
primary education	(0.0034)		(0.0039)	(0.0037)		
Mean education (years)				-0.0016		
				(0.0016)		
At least one member can read and write		-0.0003			0.0059	0.0063*
		(0.0035)			(0.0039)	(0.0038)
Fraction members who can read and write						-0.0071
						(0.0115)
Fraction of members who are SC	0.0127*	0.0128*	0.0141*	0.0155*	0.0146*	0.0153*
	(0.0077)	(0.0077)	(0.0080)	(0.0081)	(0.0080)	(0.0080)
Fraction of members who are OBC	0.0020	0.0021	0.0037	0.0058	0.0043	0.0054
	(0.0056)	(0.0056)	(0.0061)	(0.0061)	(0.0061)	(0.0062)
Fraction of members who are FC	0.0058	0.0061	0.0100	0.0139	0.0114	0.0137
	(0.0114)	(0.0114)	(0.0121)	(0.0119)	(0.0121)	(0.0121)
Caste category fragmentation	0.0042	0.0043	0.0039	0.0039	0.0039	0.0039
	(0.0074)	(0.0074)	(0.0073)	(0.0073)	(0.0073)	(0.0073)
Mean land (acres)	-0.0000	0.0000	0.0001	0.0002	0.0002	0.0002
	(0.0006)	(0.0006)	(0.0006)	(0.0006)	(0.0006)	(0.0006)
Mean age	0.0003	0.0003	0.0003	0.0002	0.0003	0.0002
	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Fraction of members who have	-0.0053	-0.0054	-0.0047	-0.0048	-0.0046	-0.0046
relative in group	(0.0055)	(0.0055)	(0.0053)	(0.0053)	(0.0053)	(0.0053)
Fraction separated of husband	0.0097	0.0095	0.0101	0.0094	0.0101	0.0098
	(0.0153)	(0.0153)	(0.0153)	(0.0154)	(0.0154)	(0.0154)
Mean number of children	-0.0004	-0.0004	-0.0011	-0.0019	-0.0014	-0.0017
	(0.0026)	(0.0026)	(0.0026)	(0.0027)	(0.0026)	(0.0027)
Number of members	0.0075***	0.0076***	0.0077***	0.0076***	0.0078***	0.0077***
	(0.0024)	(0.0024)	(0.0024)	(0.0024)	(0.0024)	(0.0024)
Squared number of members	-0.0002***	-0.0002***	-0.0002***	-0.0002***	-0.0002***	-0.0002***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Orissa	0.0103	0.0104	0.0168*	0.0176*	0.0185**	0.0186**
	(0.0064)	(0.0064)	(0.0095)	(0.0092)	(0.0094)	(0.0093)
Chhattisgarh	0.0182***	0.0183***	0.0231***	0.0225***	0.0243***	0.0242***
	(0.0062)	(0.0062)	(0.0081)	(0.0083)	(0.0082)	(0.0082)
N	1,115	1,115	1,115	1,115	1,115	1,115

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Other village controls are the distance to the bank, the fraction of households having an adult member who can read and write and the number of PRADAN SHGs in the village.

Table 25: Percentage of members leaving the SHG within 6 months after the profit distribution

	OLS		2SLS - education		2SLS - read and write	
	(1)	(2)	(3)	(4)	(5)	(6)
Accountant is internal	0.0077	0.0076	0.0053	0.0115	0.0047	0.0102
	(0.0058)	(0.0058)	(0.0132)	(0.0155)	(0.0128)	(0.0149)
At least one member finished	0.0062		0.0070	0.0093		
primary education	(0.0048)		(0.0069)	(0.0066)		
Mean education (years)				-0.0042*		
				(0.0023)		
At least one member can read and write		0.0064			0.0074	0.0094
		(0.0048)			(0.0068)	(0.0064)
Fraction members who can read and write						-0.0292
						(0.0187)
Fraction of members who are SC	0.0020	0.0021	0.0022	0.0072	0.0023	0.0062
	(0.0100)	(0.0100)	(0.0098)	(0.0107)	(0.0098)	(0.0105)
Fraction of members who are OBC	0.0014	0.0014	0.0016	0.0084	0.0017	0.0072
	(0.0065)	(0.0065)	(0.0066)	(0.0079)	(0.0066)	(0.0077)
Fraction of members who are FC	-0.0015	-0.0014	-0.0006	0.0109	-0.0004	0.0102
	(0.0154)	(0.0154)	(0.0153)	(0.0162)	(0.0153)	(0.0164)
Caste category fragmentation	0.0225**	0.0224**	0.0226**	0.0232**	0.0225**	0.0233**
	(0.0108)	(0.0108)	(0.0107)	(0.0106)	(0.0107)	(0.0106)
Mean land (acres)	0.0002	0.0002	0.0003	0.0007	0.0003	0.0006
	(0.0020)	(0.0020)	(0.0020)	(0.0020)	(0.0020)	(0.0020)
Mean age	0.0004	0.0004	0.0004	0.0002	0.0004	0.0002
	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Fraction of members who have	-0.0043	-0.0043	-0.0044	-0.0041	-0.0044	-0.0041
relative in group	(0.0069)	(0.0069)	(0.0068)	(0.0067)	(0.0068)	(0.0067)
Fraction separated of husband	0.0002	0.0004	0.0005	-0.0011	0.0008	-0.0009
	(0.0200)	(0.0200)	(0.0198)	(0.0199)	(0.0199)	(0.0200)
Mean number of children	-0.0022	-0.0022	-0.0023	-0.0045	-0.0023	-0.0038
	(0.0035)	(0.0035)	(0.0035)	(0.0035)	(0.0035)	(0.0035)
Number of members	-0.0085	-0.0086	-0.0085	-0.0084	-0.0085	-0.0086
	(0.0131)	(0.0131)	(0.0131)	(0.0132)	(0.0131)	(0.0131)
Squared number of members	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Orissa	-0.0146*	-0.0146*	-0.0134	-0.0105	-0.0130	-0.0114
	(0.0088)	(0.0088)	(0.0094)	(0.0092)	(0.0093)	(0.0093)
Chhattisgarh	0.0325***	0.0325***	0.0334***	0.0333***	0.0337***	0.0350***
	(0.0103)	(0.0103)	(0.0104)	(0.0103)	(0.0104)	(0.0104)
N	801	801	801	801	801	801

Robust standard errors are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Other village controls are the distance to the bank, the fraction of households having an adult member who can read and write and the number of PRADAN SHGs in the village.

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