

Self Help Groups: Use of modified ROSCAs in Microfinance

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Abstract

The paper documents the group lending mechanism used by a typical micro-finance lender in Haryana, India. The mechanism had three interesting features. Firstly, the groups were initially formed as Rotating, Saving and Credit Associations. This enabled the lender to screen the groups. Second, there was significant heterogeneity within the group in terms of income and educational achievements. Third, the relatively wealthy individuals dominated the decision making process in the group and were able to obtain a disproportionate amount of credit allocated to the group.

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1 Introduction

The stated objective of Microfinance is to be able enhance the lives of the poor by giving the access to them financial services, not yet available to to them. India's National Bank of Agriculture and Rural Development (NABARD) puts it as "provision of thrift, credit and others financial services and products of very small amounts to the poor in rural, semi-urban or urban areas, enabling them to raise their income levels and improve (their) living standards." (NABARD, 2000)

There is considerable evidence that the poor often have access to credit, however expensive it may be, through the informal money market. The range of available market instruments for saving, with lucrative returns, is more limited.

Besley (1995, pg. 2128) cites the case of *susu* men or informal bankers used by market women in Africa. The women who deposit their savings with them "earn negative rate of interest in exchange for safe keeping."

There are traditional institutions like Rotating, Saving and Credit and Associations (ROSCAs) which allow the poor to save. The problem, though, is lack of universal access to these institutions. ROSCAs, for instance, are not as ubiquitous as the informal money markets. Options of saving, with returns comparable to cost of borrowing in the informal money market, are more limited.

There are two obvious ways in which an intervention can improve the lives of the poor. First, by bring down the cost of financial intermediation associated with the poor and second, by allowing the poor also to obtain returns from the process of financial intermediation. Practically, it would entail, not just giving the poor access to credit, at a rates lower than the informal money market rate, but also giving them options to save, with returns comparable to the cost of borrowing.

Literature in microfinance suggests that institutional innovations, like lending to jointly-liable groups, has allowed the poor to get access to credit at favourable terms. This allows them to invest in a greater range of socially viable projects and smoothen

their consumption to a greater extent.

The literature, hitherto, has overlooked the obvious benefits of involving savers in group lending. Every impoverished person is a potential saver and there are distinct benefits of involving poor in their role as savers. Apart from the obvious advantage of improving their welfare, there is, as we see in what follows, additional advantage of using them to solve the informational problems associated with lending to the poor.

The poor often have no collateral to offer and, for reason obvious, can be made to bear very little liability of failure, when they borrow. Group lending works by giving their peers the requisite incentives to solve the informational problems associated with this kind of lending. Conceivably, the sharper the incentives peer have, to screen, monitor and audit the borrowers, easier it is to solve the information problems. In what follows, we document a variation of the *simple* group lending arrangement, as it is being practised in the Indian state of Haryana and other part of India. The poor, in this arrangement, are involved in dual roles as both borrowers and savers.

Using a case-study approach, we analyse the practices of a successful microfinance operator in the Indian state of Haryana. The operator is part of, and works under the guidelines of the Self Help Group Linkage Programme, Government of India's ambitious microfinance initiative .

Self Help Group¹ (SHG) Linkage Programme is a programme designed to encourage microfinance operators (MfO) and Non-Governmental Organisations (NGO) to enter and fulfill gaps in the rural financial markets across the country. Our objective is to look at the ground level group lending arrangement that result from the guidelines of this programme.

We document the practices of a particular operator and analyse, in minutiae, the actual group lending arrangement used by this operator to solve the information problems associated with lending to the poor. The SHG programme invariably creates a hi-

¹The Self Help Groups are groups formed by the microfinance operator for the purposes of lending. They are, as we see further on, different from the the simple borrower only groups. They are formed along the lines of a modified Rotating, Saving and Credit Association.

erarchy of relationships. We look at the measures built into the programme to prevent moral hazard problems associated with NGO's action.

Further, through a limited survey of the group members from five groups in the area, we build up a profile of the groups and its members. We use the information to look at the inter-group and intra-group heterogeneity as well as suggest a source of intra-group dynamics. We use the information gathered during the survey to build a picture of the local informal money market in the area and compare it to the terms offered by the SHG programme.

The primary purpose of the exercise is to study the microfinance intervention in a small area of Haryana, in its entirety. Starting with the programme at the national level, we document the role of each participant in the credit chain, down to the individual group member. As we profile the individual group members, their economic environment and their group interactions we also look at the NGO's incentives to intervene.

In Section 2 we look at the advantages of using a modified form of ROSCA as a base for building groups. Section 3 gives background information about the India's SHG Linkage Programme, Section 4 has a description of the data and section 5 presents the some results from the survey. In section 6 we look at the process of building groups and in section 7 we discuss how the group lending arrangement in the SHG Linkage Programme solves the information problems associated with lending to the poor. The conclusions are presented in Section 8.

2 Rotating, Saving and Credit Association

It is difficult to pin-point the origin of Rotating savings and credit association (henceforth ROSCA). Various incarnations of roscas have been existence in different parts of the world with local names like *Totine* in Cameroon and Senegal, *Esusu* in Nigeria, *Stokvel* in South Africa, *Bishi* and *Chit Fund* in India. (Bouman, 1994)

Besley et al. (1993) rightly suggest that "rosca constitute one of a number of institutions ... whose existence is pervasive in developing economics." What has made it a pervasive as well as enduring institution is its simple and intuitive rules which make very little demand on the intellectual capability of the participants. This levels the playing field for participants from all background and intellectual capability.

In its pure form, ROSCA is a group of people contributing an pre-agreed amount to a saving pot each period. The pot accumulated each period is then allocated to a winner, who is determined either randomly or by a bidding process. The ROSCA continues with the winner of the pot excluded from receiving the pot in the future. It terminates after each member has received the pot once.

The obvious advantage of ROSCA is that it gives each members access to other member's saving. For instance, if a members desires to acquire an indivisible good, by joining the ROSCA, she can expect to attain it earlier than if she had chosen to save all by herself. (Besley et al., 1993) The obvious limitation of a ROSCA is that the saving pot is only as deep as the pockets of its members. In its pure form, even though the ROSCA is an invaluable traditional institution that allows the poor to smooth their consumption, its scope as tool for alleviating poverty remains severely constrained.

2.1 Modifications in ROSCA

The NGO starts the process of group building by initiating a modified form of Rotating Saving and Credit Association (ROSCA) among the individuals it is targeting. The size of the group varies between 15 to 20.²

In the modified Rotating and Saving Credit Association (mROSCA), the group members contribute a small agreed amount every month³ just like its pure form. The first modification is that the saving pot is allowed to accumulate for approximately six month and during which there is a moratorium on borrowing from it. After six months, mem-

²The targeted individual maybe in close knit rural communities or in an less cohesive, urban community

³We estimate it is approximately one days wage in our sample

bers can borrow from it, at a rate of interest specified by the NGO and any amount borrowed has to be repayed back in 10 installments over a period of 10 months. The interest earned by the group funds loaned, is shared equally by all the members of the group.

Borrowing, when it starts, is sequential and the sequence in which members get loans is decided by the group. In the early stage of a group's life, sequential nature of borrowing is simply due to the limited amount of accumulated saving the group has available to lend.

As impatient borrowers wait for an opportunity to borrow, they monitor and if need be, audit the current borrower(s) aggressively. Lending sequentially plays an important role in binding the individuals together in a group. If all the borrowers had been able to borrow from the saving pot within a given time frame, the group would have a greater chance of disbanding, like in the case of pure a ROSCA.

The sequential nature of lending induces a higher level of peer monitoring which binds the group members, as they wait for benefits due in the future. Of course, in the process of waiting, they also obtain reasonable returns on their savings. We found that the returns on saving was comparable to the cost of borrowing from the informal money market.

If the group is successfully able to manage *internal* group loans during this early stage, the NGO links the group to *external* sources of credit. These external sources of credit could be either a subsidised government lending programme or credit from a public bank. NGO's remuneration for building the groups is tied to repayment of the external loans. Part of the interest payment made by the borrowers on the amount owed (external credit) goes to the NGO.

The external loans are physically transacted through the local public bank branch and not through the NGO. This prevents the moral hazard problem associated with the task of channelling subsidised funds to the poor. The NGO is not allowed to take up any task of financial intermediation. They are not allowed to even accept the group's saving

for the purposes of safe-keeping. The group is required to directly deposit its saving into the group's account at the local bank.

The NGO uses the mROSCA to tie-up a number of individuals into a group. In the second significant modification to the pure form of ROSCA, the NGO uses the mROSCA as a platform to channel externally sourced credit to the group of impoverished individuals. The group then extends this credit to its individual members. Since the external credit is lent to the group, the group as a whole is held responsible for timely repayments as well as jointly liable in case of a delay or default of repayment.

This overcomes one of the principal limitations of a pure ROSCA, i.e. volume of credit available to its members. The mROSCA now is a fully functioning financial entity. The groups members are able to borrow far greater amount than the sum of its participant's savings. An appropriate analogy would be with a firm which is able to borrow much more than its principal constituents are worth. (that is the aggregated value of physical and human capital in the firm)

2.2 Advantages of a Modified ROSCA

Lending to mROSCA has four significant advantages over lending to conventional group composed solely of borrowers.

The first advantage is that it gives the NGO an opportunity to *actively* screen the group, rather inexpensively, before extending externally sourced credit to the group. As we noted above, the SHG Linkage Programme gives the NGO strong incentives to screen the groups by tying in its remuneration with the repayment of the externally sourced loans.

Practically, the active screening process involves an individual from the NGO attending the weekly groups meeting regularly and observing the characteristics exhibited by the group over a period of time. These characteristics could be group's ability to self govern or their ability to resolve the disputes arising within the group. It could also be observing group member's socially connectedness or their intrinsic cohesiveness.

It effectively allows the NGO to mimic the local moneylender and screen the group before linking it to the external sources of credit. The cost of *active* screening is a fraction of the cost the NGO would have bear to get the same information in the absence of the mROSCA.⁴

The second advantage is that, it allows the NGO to impose *full* and *immediate* joint liability. In a group composed solely of borrowers, actual implementation of joint liability takes the form of denying the group members future loans. (Ghatak and Guinnane, 1999, pg. 214) In a mROSCA, the repayments due are deducted automatically from the group's savings deposited in the bank account. The borrowers and the group have the responsibility of ensuring that repayment are deposited on time in the bank account. By paying late, the borrower jeopardise the non-borrower's accumulated saving. Any delayed repayment bites the non-borrowers fully and immediately making all group members jointly liable.

Of course, full and immediate joint liability can be only implemented if the group has at least some non-borrowers at any given time. The programme, as we see below, uses the structure of the credit contract to ensure that there are always some non-borrowers in the group.

The third advantage of mROSCA is the the sequential nature of borrowing, it induces within the group. In the initial stages of group's life, the limited savings of the group ensures that only single (or very few) borrower(s) gets the opportunity to borrow. Thus, the paucity of funds ensure that the members borrow in a sequence.

The group, on its own, decides the sequence in which the borrowers can obtain credit. Members wait impatiently in queue for an opportunity to borrow. They monitor and audit the present borrower(s) aggressively to ensure that they get an opportunity to borrow. This is crucial in binding the group and preventing it from failing as an institution in its early stages of its life.

⁴As we point out later, *passive* screening is not possible because the MfO or the NGO cannot influence the rate of interest the charged on external credit. This is the result of disentangling the task of financial intermediation and institution building.

As is obvious, in a mROSCA, at any given time, a non-borrower or passive saver has more at stake as compared to a borrower. Delinquent behaviour by the present borrower(s) jeopardises, not just her opportunity to borrow in the future, but also her present accumulated saving in the group. Thus, the sequential nature of borrowing in mROSCA favourably influences that high rate of group survival during the early stages of its life.

After the group has been linked to external source of credit, the tight inflexible structure of repayment ensures that the group always has a high proportion of non-borrowers or passive savers. According to the credit contract offered in the SHG programme, the loan has to be fully repaid in the 10 months and the repayment start immediately. The short window of repayment rules out projects with relatively long gestation periods. Members borrow either to meet their consumption needs or to finance investment projects with extremely short gestation periods. Since the repayment starts and is often expected to be completed before the benefits of the investment project accrues, it serves to ensure that members borrow according to their pre-investment means to repay.

The tightly structured repayment influences the demand for loans in two ways. It curtails the range of profitable projects viable under the conditions. (Jain and Mansuri, 2003, pg. 255) It also ensures that members only take loans they can service before the benefits from the investment accrues. This reduces the frequency with which of member's submit demand for loans as well as limits the amounts members borrow. The low frequency of demand for loans along with the short repayment window ensures that at any given moment there are only a small number of borrowers in the group.

The repayment structure allows the programme designers to influence the frequency of loan demand by the group members. This turns out to be useful because, at any given point in time, the non-borrowers or passive savers have more at stake in the group than borrowers. Thus, the fourth advantage of mRSOCA over the conventional borrower-only groups is the greater stake savers and non-borrowers have in the group. The higher

stakes help solve the information problems associated with lending to poor.

The SHG Linkage Programme is in probability unique among microfinance initiatives in being able to disentangle the task of the financial intermediation and institution (group) building. This helps deal with the moral hazard associated with NGO's action in channeling (subsidized) credit to the poor. The financial intermediation or the actual physical task of channeling the money to the group is undertaken by the public banking network in the country.⁵ The NGO just takes on the task of institution building. This entails forming the group and then preparing the group to transact through public banking network.

3 Economic Environment

3.1 Rural Banking in India

The nationalisation of India's fourteen major commercial banks in 1969 paved way for what came to be know as the social and development banking.

The objective of nationalisation was to increase rural access to banking services and target credit at some specific activities and certain disadvantaged groups. The Reserve Bank of India (RBI) pursued these objective by imposing ceilings on interest rates and setting specific targets for expansion of rural branches and sectoral allocation of credit.

In 1991, this policy was reversed after the Narsimhan Committee Report suggested "phasing out the directed credit programmes, deregulating the interest rates and revoking the branch licensing policy." (Narasimhan, 1991). It was felt that by encumbering the banking sector with social objectives, the state was restricting the banking sector from competing in the global economy.

India started the slow but steady process of the dismantling its social and development banking policy. By some accounts, the policy had enjoyed some success since

⁵As discussed below, there is a large public banking network in place in India which the SHG Linkage Programme uses

its inception in the late 1970s. “Between bank nationalization in 1969 and the onset of financial liberalization in 1990, bank branches were opened in over 30,000 rural locations which had no prior presence of commercial banks” and the “Indian rural branch expansion programme significantly lowered rural poverty.” (Burgess and Pande, 2004)

The 1990s saw a contracting rural banking network in line with the recommendation of the Narsimhan Committee Report. (See Table 1) To compensate for this, there was a need to find a new method of disbursing credit to the rural poor, which would be compatible with the spirit of deregulation initiated in the 1991.

The SHG Linkage Programme initiated by the National Bank of Agriculture and Rural Development’s (NABARD) emerged as a solution. The programme adhered closely to the principle espoused by other microfinance programmes, namely making timely credit available to the poor. The distinctive feature of the programme was that it incorporated the existing rural banking network.

Since 1999, India has seen a phenomenal rise in number of self help groups being formed and then linked to the conventional banking network under this programme. There was been a ten fold increase between 1999 and 2004 in the number of groups that have been linked by the SHG programme. (See Table 2)

3.2 Self Help Groups

The self help group starts life as a modified Rotating and Saving Credit Association (mROSCA). The NGO is responsible for initiating the group and then nurturing it till it matures. Once mature, the group is linked to external sources of credit by the NGO.

Since the group is initiated as a modified ROSCA, saving is imperative for every member. Given a tightly repayment structure, how often a member chooses to borrow depends on his ability to service the repayments. It is, of course possible that some members may choose not to borrow and just choose to participate in the group as savers only.

As we discuss above, the SHG mechanism allows the savers to play a useful role in

the group. They are able to augment the creditworthiness of the borrowers by their presence in the group. The dynamics of a self help group may, thus, be more complicated as compared to a dynamics of a group composed solely of borrowers.

Each group is led by two group leaders. The group leader are meant to be elected democratically from the group. We profile the group leaders and compare them to the rest of the group members.

The way the incentive are structured, the NGO finds it optimal to give the group leaders a fair amount of discretion. Even though, in principle, the group is supposed to make all its decisions democratically, the leaders have a fair amount of discretion in running the group. In the group meeting that I attended, I found that the group leader lead the discussions and influenced most decisions made in the meeting.

For instance, the members submit their demands for loans to the group at the weekly meeting. The group is supposed to decide who get the loan after the discussion. We found that these discussions were always led and often dominated by the group leader. The group leaders also had more information than the rest because they were invariably more educated than the rest and maintained the accounts. They also had more information because they represented the group in discussions with the NGO and the local bank.

It may be argued that under the SHG programme, the NGO virtually delegates the task of running the group to the group leader. Thus, group leaders have ample opportunity to abuse their power, if they so wish.

3.3 Cost of Credit

The SHG Linkage Programme result in a long credit chain. There are more participants in its credit chain as compared to microfinance programmes where the NGO undertakes the financial intermediation. The NGO, the public bank and the self help group are the significant participants in the credit chain.

Chavan and Ramakumar (2005) contend that in the SHG Linkage Programme, the practice of "margin (being) charged by each participant ... for covering transaction cost" in the credit chain, has led to significantly "higher cost of credit for the poor."

Once the self help groups are ready to be linked, the NGO arranges the external credit. These funds are then channeled to the self help group, which it then lends on to its individual members. The NGO charges a margin for its role in linking the group. In some cases, the self help group keeps a margin as well, which is then shared among all the group members. The groups we studied in Haryana did not follow this practice.

The primary sources of credit are NABARD refinanced loans from local public banks, government lending programmes like the Rashtriya Mahila Kosh (RMK) and loans from government agencies like the National Minorities Development Finance Corporation (NMDFC). At the time the study was undertaken, the NABARD's prime lending rate of was 6 per cent per annum.

We find that borrowing rate for group members was 24 per cent for internally financed group loans and between 18 to 24 per cent for externally financed loans. The groups was able to get the loans from RMK and NMDFC at 18% per annum. The NGO's margin was 6 per cent from RMK and 10 per cent from NMDFC sourced credit. In case of credit from public banks, the rates were negotiated at the time the credit was obtained.

According to Chavan and Ramakumar (2005), the cost of borrowing for SHG members across the country is in the range of 24 to 36 per cent per annum. Most studies like Harper (1998), Harper (2002), Gaiha (2001), Puhazhendi and Satyasai (2000) and Puhazhendi and Badatya (2002) come to the same conclusions. Only in exceptional cases, the cost of borrowing may be as high as 50 to 60 per cent per annum.

4 Data

The fieldwork for this study took place in August 2004 in the *tehsil* of Hathin⁶ in the Indian state of Haryana. The data was collected in the rural and urban area of Hathin. We interviewed 58 members from 7 self help group in the area.

4.1 Lending Programme

The groups had been formed by Society of Promotion of Youth and Masses (SPYM), a New Delhi based NGO working in the area for the last eight years. They manage 300 groups in the area, with a presence in all 84 villages of Hathin. SPYM works with “women-only” groups and so all our interviewees were women. The groups had between 16 and 18 members each. The age of the groups ranged from 18 to 32 months.⁷

In our sample, two groups are from the the urban town of Hathin. The *tehsil* takes its name from the name of the town. Even though the town of Hathin has virtually no amenities that would in principle qualify it as a urban area, we found that it did have significant inward migration from the nearby villages. The groups in the town of Hathin were more varied in their backgrounds and ethnic identity than groups from the surrounding villages. In contrast, groups from the surrounding villages were almost homogenous in respect of ethnic and religious background.

In five groups of the seven groups, we were able to interview 7 or more members of the group. Off these, in two groups we were to interview 14 members. In the remaining two groups in the village of Kondal, we were no only able to interview 3 members each. Given that we were able to interview the group leaders, we use this information when we compare the profile of the group leaders to the profile of group members. We were able to interview 8 members from another group in the same village which had close linkages with this group. Thus all these interviews put together tell us something useful

⁶The *tehsil* of Hathin is part of district Faridabad. For the purpose of administration, a state is divided into districts which is divided further into *tehsil*.

⁷The focus of the study was on studying relatively young groups. The objective was to look at the dynamics in the early stages of group's life.

about the group leaders in that village. Of course, for group wise analysis, we use data from only 54 interviews and exclude the two under-represented groups.

4.1.1 The Area

Hathin is in the semi-arid area in the south of Haryana. Wheat and mustard are the main crops grown in the area. According to the Census held in 2001, Hathin has a population of 203,867 of which 94.65 percent lives in the rural area. The rural literacy rate is 61.7 per cent among men and 23.75 per cent among women. The urban literacy rate is higher at 83.28 per cent for men and 57.64 per cent for women.

The main occupation in Hathin is agriculture with 70.2 per cent of male workers and 84.2 per cent of female workers associated with agricultural sector. Of this, 33.6 per cent of the female worker and 17.4 per cent of the male workers are agricultural labourers.

4.1.2 The Communities

Jats and the *meos* are the main communities in this area. *Jats* tend to be landowners and are a relatively wealthy community. The *meos* are a poorer community and most work as agricultural labourers.

Of the three villages we looked at, the groups members were all *jats* in village of Kondal and all *meos* in the villages of Guraksar and Khuluka. Kondal had no agricultural labourers whereas Guraksar had 42.86 per cent and Khuluka had 85.71 per cent. In Hathin, one group had 28.57 per cent and other group had no agricultural labourers. (See Table 7)

4.1.3 Potential Investment Projects

There were number of dairies in the area which either exist as cooperatives or are privately owned. Thus, the residents of the area, have the requisite infrastucture in place, which enables them to access the market with their dairy produce. Consequently, buf-

falo seems to be the main class of assets that households in our sample own, apart from land. In the interviews, when asked about owned assets, they were the two that were mentioned in most cases.

A buffalo could cost anywhere between Rs 3,000 to 15,000. The more expensive the buffalo, the more milk it produced per day. The milk could be sold to the local dairy at anywhere between Rs 5 to Rs. 7 per litre. Even though there may be other viable investment projects, the group members in our sample, without exception chose to invest in buffalos. As we analyse in the section 7, the SHG lending mechanism restricts the borrower's range of investment projects to ones that have a very short gestation period. The buffaloes suit this purpose given that the borrowers could buy buffaloes that were able to produce milk from the day they were bought.

4.2 Fieldwork

The group members were interviewed in the location of the weekly meeting. We found that the meetings were usually held at a group leader's residence. We tried to follow-up interviews with visit to the house. This was to visually confirm the information given by the interviewee. With a few exceptions, in most cases the members let me into their houses without any hesitation.

The interview tried to elicit responses regarding household income, household demographics and participation or role of the respondent in the group. They were asked about the usage of borrowed funds. They were also asked if played a role in the ensuring that other group members fulfilled their financial responsibilities to the group. (See the Questionnaire)

Since I had gained access to interviewee's through the group's parent NGO, in some instances, the members were diffident about revealing their household's financial situations. On such occasions, I tried to corroborate the information with help from other group members.

5 Results

5.1 Demographics

The typical members of in our sample study was young to middle aged with mean age of 38.14 years. The husbands tended to be marginally older with a mean age of 38.93 years. The average size household was 6.44 with 3.91 dependents. An average of 3.96 children per woman, suggests that the typical member lived in a nuclear set up with children as their main dependents. (See Table 6)

The mean household income per year was Rs. 34,038. This varied significantly across locations and groups. Off the two groups in the town of Hathin, Poornima⁸ was distinctly poorer than Shrikant with respective mean incomes of Rs. 23,714 and Rs 38,333. Shrikant's members were also more educated than Poornima with respective mean years of schooling of 4.38 and 2.29 years. This pattern held for the husbands from the two groups as well. (See Table 6 and 7)

As we mentioned above, both Hathin groups Poornima and Shrikant had been formed simultaneously. The two groups had been initiated concomitantly by three *groups initiators*⁹. There maybe have been some self selection effects at play here with the better educated and better off women grouping together in Shrikant. As we discuss in Section 6, with the inflexible and tight repayment structures prescribed in the SHG programme, the poor women maybe perceived as risky in terms of being able to adhere to regular repayment. We interviewed both group at the same location under identical conditions. Any systematic selection bias in our interviews should have identical impact on the two groups.

There had been no problems with late repayment in the two groups. In 18 months since the group was formed, Poornima has lent 14 times to its members with an average loan amount of Rs. 7,986. In the same period, Shrikant has lent 15 times with an average

⁸Each group adopts a name which when it is formed and this name is used in all the paperwork to refer to this group.

⁹see section 6.1.2 for a discussion on *group initiators*

loan amount of Rs. 6,600.

In household income terms, Rahim (village Khuluka) was the worst off and Chahat (village Kondal) best off with respective mean household incomes of Rs. 21,500 and Rs.38750.

5.1.1 Education

In terms of the education, Shrikant (Hathin) was the most capable with a mean of 4.38 years of schooling whereas Rahim (Khuluka) was the least capable with 0.38 years of education.

Overall the levels of education was dismal with ordinary member (excluding group leader) having a mean of 1.74 years of schooling. The ordinary member's spouse education level was not much higher at 4.06 years of schooling. Compared to this, the group leaders and spouses were more educated than the rest of the members. The group leaders had an average of 7.5 and their husbands and a average 9.78 years of schooling. (Table 6)

5.2 Group Leaders

The group leaders had a higher mean income and formal education, as well as more educated husband, as compared to rest of the group members. In four out of five groups, they also obtained a large proportion of total group credit in its first 18 months of its existence.

The mean household income for the group leaders and rest of the members was Rs. 41,769 and Rs. 31,525 respectively. As mentioned above, groups leaders were more educated than the rest of the members with 7.5 years schooling. Their husbands, with 9.78 years of education, were more educated as well. (Table 6)

The groups leaders, in all groups other than Chahat¹⁰, undertook a significant pro-

¹⁰Chahat group leaders told me that they were members of other older groups in the village and had preferred to borrow from there because they could borrow larger amounts in the that group

portion of total credit disbursed during the first 18 months of group's existence. In Sahil they account for more than half and in Poornima and Rahim, more than a quarter of the of total credit extended by the group. In Shrikant the group leaders obtained a little more than a tenth of the total credit.

This is not surprising, given group leader's higher incomes and thus, superior repayment capability.¹¹ Though, it does suggest a source of intra-group heterogeneity which the literature in microfinance has as yet not addressed.

We know that the group leaders were also the group initiator. The preferential treatment they get in obtaining credit maybe the members way of compensating them for effort expended in forming the group. The only group where members seem dissatisfied and complained about the group leader was in Sahil. The group leaders in this case had obtained 52.03% of total credit allocated. In my house visits, three members complained that their demand for loan had been unfairly rejected.

It is difficult to determine whether this constitutes evidence of *elite capture*. It certainly suggests elite involvement in the process of group lending. In Sahil (Guraksar), Mariam, the president of the group and Akhtari, the secretary of the group were both daughter-in-laws of the village *sarpanch* (village head). Mariam also had two proxy members in the group and she made the necessary financial contribution on their behalf. She, along with other group leaders, had obtained 52.03 per cent of all credit extended by the group in the 18 months of its existence.

She was the person who had initiated the group. It is significant to note that in spite of being unpopular among the group members, she had remained the leader and not been changed. The possible explanation could be that, she played an critical role in making the group viable. She was more educated than the rest and seemed more adept at dealing with the NGO than the rest of the group.

It is clear group leaders live in more educated household and thus are critical to the group's successful adoption of practices required to access the external sources of

¹¹See Section 7.3.3

credit. Agents from the respective external agencies are known to visit the NGO to inspect the accounts of the group before lending to a group for the first time. Credit is sanctioned only if they are satisfied that the group has been transacting the internal loans effectively.

5.3 Information Environment

In the villages, when asked about their peer's activities, the members seemed very well informed. In Khulukha, members claimed that they even knew about each other's household expenditure. This was not surprising given that, 12 of the 17 members belonged to the same extended family. In other villages, they were aware of other member's asset holdings.

Most members live in proximity to each other. In the circumstances, once the borrower had declared her intention in the weekly meetings, diverting the borrowed funds would certainly not go unnoticed. The cost in terms of time and effort, for members to verify the usage of the funds, would be negligible. It seemed difficult to divert even a small portion of the funds without the consent of the group.

As discussed in section 4.1.3 and section 7.3, the range of potential profitable investment projects is limited to buying buffaloes. Thus, there are just three or four discrete options of buffalos types available to the borrower. Spending less than the borrowed amount on a buffalo, given that most members were well aware of the buffalos types and their respective cost, would not go unnoticed. With extensive knowledge members display on types of buffalos available in the area, it would not be difficult monitor the usage of borrowed funds.

The cost of monitoring is negligible in this context, not entirely due to the fact that members belong to a tight-knit community. It is driven down by limiting the number of potentially *profitable* projects (section 7.3) available to the borrower. If a member borrowed for something radical, say buying a new innovative agricultural implement, like of which had never before been seen in the community, conceivably then, monitoring

the usage of funds would be much more costly¹² and inefficient¹³.

In Hathin, even though the members were well acquainted with each other, they were not privy to each others household expenditure or asset holdings. Very few members interacted with each other beyond the weekly meetings. They did not seem aware of each others credit needs or usage of borrowed funds.

In Poornima, a borrower confided in me that she had lied about the purpose of her loan when she had borrowed. She told the group that she needed a loan to buy a buffalo, even though she needed it to invest in her husband's shop. She claimed that she had lied because it increased her chances of getting the loan.

The fact that no one had discovered that she had diverted her funds tells us that the cost of monitoring the usage of funds is either not insignificant or she had colluded with members who may have monitored her inexpensively. Of course, since she has made all her repayments on time, the group members had no opportunity to audit her.

5.4 Local Informal Money Market

In our study, we asked self help group members, if they has participated in the local informal and formal money market. Off 58 respondents, 24 said that they had and the results are given in Table 9. Since, there is no perceptible relationship between the size and the cost of the loans, in any of the categories, Table 9 reports unweighed means.

It must be noted the rates in this area, especially in the informal money market, are quoted in per months terms and not per year terms. This may be a convention followed to make interest calculations easier for the borrowers. The respondents gave us per month figures which we have converted to per year figures.

The cost of borrowing varied from 0% to 36% per annum and the amounts borrowed varied from Rs. 1,000 to Rs 150,000. Relatives turn out to be the most abundant source of credit with the mean borrowing of Rs. 37,889. This was least inexpensive category

¹²in terms of acquiring knowledge related to the new projects

¹³in terms of probability with which the monitor is able to discover the truth

of credit at 9.8% per annum. All loans from the local money lender were at 36% per annum.

The village of Kondal is an exception to the pattern, where the respondents had borrowed relatively large amounts from the relatives. If we exclude the Kondal member's loans from their relatives, the range of remaining loans shrink to between Rs. 1000 and Rs. 20,000.

The loans taken from the self help groups were in the range of the Rs. 1,000 and Rs. 25,000 with most loans concentrated between Rs. 2,000 and Rs 10,000. The cost of credit from the self help group, at 24% for internal loans and 18% for external loans, is less expensive than the local money lender but more expensive than from the relatives.

Rawal and Mukherjee (2005) conducted a survey to determine agricultural labourer's access to credit in two districts of the Haryana. They found that most of their subjects had borrowed at either 24% or 36% per annum, which is line with our findings.

5.5 Group's Net Worth

We compared total saving accumulated by the group¹⁴ with the total amount owed by the group members at any given point in time.

The idea was to identify the length of time it took for the group to be able to borrow an amount greater than its accumulated saving pot. This the time when the lenders to the group actually start taking a risk by lending to the group. This is also the time when the group starts leveraging its accumulated saving (and its social capital) to actually start *borrowing* as groups from the external credit agencies.

We found that the it took a average of 12.6 months for a group to reach a stage where the total credit exceeded the total saving. Rahim (Khuluka) took the longest at 18 months and Shrikant (Hathin) took the shortest time at 8 months. Shrikant's sister group, Poornima took 12, Chahat (Kondal) took 15 and Sahil (Guraksar) took 10 months.

¹⁴this did not include the interest income of the group

5.6 Size of the Loans

Of the 77 loans taken in the five groups, 15 loans were less than Rs. 3,000 and 16 were greater than Rs. 15,000. There were 44 medium sized loans with 21 loans between Rs. 5,000 and Rs. 10,000 and 23 loans between Rs. 10,000 and Rs. 15,000. (See Table 3) The mean for the loans stood at Rs. 8555.84 with the median and mode at Rs. 10,000.

5.7 Responses on Social Sanction

When asked about the what actions the group would take if a member was late in her payment, the initial reaction was defensive. They immediately started denying that something like that has ever happened in their group.¹⁵ There was obviously some pride associated with group's ability to self-govern efficiently. The response in the first instance was always muted.

On a bit of persistent questioning, the group leaders became more forthcoming. They said that they would encourage at first, but if that failed, would make repeated house visits. When asked if they would bring outside influence, like village elders, to bear upon the delinquent members, the response on almost all occasions was an emphatic no.

We found that only one group had instated a penalty system for late payment. This was the group Sahil in Guraksar where, as we reported earlier, the group leader Mariam was very unpopular. A member was penalised Rs.10 a day, if she was either late in her repayment or in depositing her monthly mandatory saving amount.

Though, there was variation in the response of other group members, none were as emphatic as the group leaders. Some had rhetorical answers that resonated with the community development officer post-meeting lecture every week. There were others, who seemed less enthusiastic about getting involved in a spat with someone else in the group. The only discernible pattern was the group leaders were a little more descriptive as well as assertive in their responses as compared to the rest of the members.

¹⁵The particular response may be explained by the fact that group members had a lingering suspicion that I was some kind of an auditor.

5.8 Targeting

In the study, we try look for evidence of NGO's attempt to target the poor. The guidelines of the programme do specify that the the NGO targets the poor. The NGO claimed that it did not allow any member of household that owned more than $1\frac{1}{2}$ acre of land to join the group. We found no evidence that the NGO had tried to implement this principle in practice.

There are reasons why explicit targeting may not have been optimal in the area covered by the NGO. The typical member of the group had minimal education. None, except the group leaders, had the requisite education or numeracy skill required to maintain accounts for the group, operate its bank account and represent the group.

For linking the group to externally sourced credit, the NGO has to satisfy the lending agency that the group can administer itself efficiently. The lending agency satisfies itself by scrutinising the accounts maintained by the groups. A representative from the self help group also has to operate a bank account in one of the local bank branches. The group leaders had the requisite educational skills to carry out these tasks.

By being part of the group, the group leaders are able to use their skills for the benefits of the group and increase the group's "effective literacy." Basu and Foster (1998) define the concept of "effective literacy" as a measure that takes into account the "intra-household externality arising from the presence of a literate member" in the household. In this case, it is the intra-group externality arising from the presence of a numerate person in the group.

This gives us another reason why group lending may be optimal for lending to the poor. It is an efficient mechanism to share literacy and numeracy amongst the poor, which along with being scarcest resource amongst the poor, is also the critical resource needed to uplift the poor.

We find that, in our study, the economically better off group leaders were also the group initiators. If an explicit attempt was made to strictly target the poor, the group

leaders would not be able to join the group.

Further, if the NGO was obliged to exclude them, then the cost of micro-managing the group would have to be borne by the NGO. This would not only include providing the requisite support for the group to maintain its accounts but also facilitating the group's representatives' interaction with the local bank. This would ensure that forming groups, amongst the poor in the present area, would become non-viable under the present system of financial incentives.

5.9 Elite Capture

In the study, we find that the groups have a mix of better-off and poor women in the group. It is significant that the better off occupy the leadership positions. The relevant question is whether group lending arrangement, encouraged by the SHG Programme, is susceptible to "elite capture."¹⁶

In a recent study in Kenya, Kremer and Gugerty (2004) finds that funding the local disadvantaged women's organisation started changing the group's composition. The groups started attracting young, better-educated and more capable women into the group. Further, men and these better educated women moved into the key leadership positions, thus weakening the role of the disadvantaged within the group itself.

On the surface, it would seem that we observe something similar in our study. The better educated take up the leadership positions in the group and dominate the process within the group. The subtle difference is that in this case, the better off seem to develop a client-patron relationship with the poor in the group.

Each group has only two better-off and better-educated women who lead the group. The leaders, while forming the group, seem to ensure that they were the only ones with the superior educational skills in the group. This maybe be to put themselves in the best position to extract rent from the rest of the group. The rent could take the form of preferential treatment in obtaining credit in the group or some other form of side

¹⁶This is with the proviso that the study was extremely limited in extent

payment in cash or kind.

Elite capture of the groups is prevented by a combination of two factors. The first one being that the terms of credit available through the self help group is comparable to the terms available in the informal market. The second factor is that it takes a long period, almost a year, for the group to graduate to loans of amount that may interest the elite within the village. The effort required may not square off with the benefits. Similarly, the opportunity to save would have been lucrative to the elite if members saved a significant amount per month. In this case, the mandatory monthly saving was a little more than the daily wage of an agricultural labourer. Thus, the only relatively better-off women in the group were the group leaders. These women were only marginally better-off as compared to the rest of the group.

6 Mechanism of Institution Building

As mentioned above, the SHG linkage programme effectively separates the roles of institution building and financial intermediation. The NGO undertakes the process of institutions building and the public banking network undertakes the financial intermediation.

The NGO, initiates the process of group formation. Once the groups is formed, it is nurtured by the NGO. Once the group matures, the NGO links these group to the sources of credit through the public banks. By saving and borrowing through the public banks, the group are able to generate a credit history. The public bank is then free to expand the range of financial services it offers the group.

6.1 Group Formation

The NABARD guidelines suggest that the group should have between 15 to 20 members. There are no laid down rules that the NGO is obliged to adhere to in forming a group. A NGO is free to initiate the process of the group formation in any part of the country. As

we see below, there are built-in incentives in the programme to encourage the NGO to form groups across the country.

The NGO in Hathin had assigned a community development officer for each village in the *tehsil*. Once the decision to form a group had been made, the officer initiated a dialogue with women in the village. In their interviews, the community development officers said that their effort was to find the key person in the village who would undertake the initiative required to form a group.

The NGO said that they tried to form groups that were homogenous and cohesive. In reality, the local person, who takes the initiative, has fair amount of the discretion in creating the group. We found that, in most groups, even though most members used to lived fairly close to each other, there were always a few members who lived a significant distance away. These members were, without, exception, related or socially connected to the person initiating the group.

6.1.1 the Poor

The NGO stressed that their objective was to target the poor. The NGO claimed that it excluded households that owned more than $1\frac{1}{2}$ acre of land from joining the group. We found that the NGO had made no effort to verify the land holdings of group members or their household. There were 6 members in our sample who owned more than $1\frac{1}{2}$ acre of land in our sample. Given that the community development officer was frequently present during the interview, there may have been under-reporting in this regard.

6.1.2 The Group Initiator

To identify the *group initiators* in the group, we asked each interviewee to specify how they had found out about the group. In the town of Hathin, the two group, Poornima and Shrikant, had been initiated simultaneously. Both started functioning as groups on the same the day in February 2002. Mantosh, Kamlesh and Shimla were joint initiators of the two groups. We found the almost everyone in the group said that they knew one

or more of them and were asked by them to join the group. These three went on to become key functionaries in their respective groups.

Similarly in *meo* village of the Guraksar we found that Mairiam, the daughter-in-law of the *Sarpanch* (head of the village) was the key person, who had initiated the group. In Sahil, the group initiated by Mariam in Guraksar, 7 out of 16 members were closely related to her. The group included Mariam's 14 year old unmarried¹⁷ daughter and her 18 year old daughter-in-law. When pressed by me, Mariam conceded these two were only passive members in the group and she used to make the financial contribution on their behalf.

In the *jat* village of Kondal, the respondents said that the group has been initiated jointly by the local community development officer and the owner of a milk dairy in the area. Given that that members frequently borrowed for the purpose of buying buffalos, the dairy-owner's incentive in initiating the group may have been to augment his milk supply from the village.

In *meo* village of Khuluka, all respondents of the group Rahim said that that they had been contacted by the local community development officer. In this group, 12 of the 17 members of the group belonged to same extended family.

6.2 The Nurturing Phase

Once the group has been formed, it enters the *nurturing* phase. This is the critical phase of institution building where the NGO encourages the group to develop group specific rules which would help them administer themselves in the future. Since failures in the initial stages can be fatal, the groups start with some simple rules regarding saving. The group moves into the borrowing and repayment phase after 6 months.

From NGO's perspective, in the nurturing phase, the NGO invests resources into the group without any returns. The NGO bears the cost of frequent visits from the community development officer. The NGO is able to obtain returns on its investment only if

¹⁷she was the only unmarried person in our sample

the group matures. To be more specific, the NGO gets its returns only if it is able to link the group to external credit lines.

The self help groups adopts a name once it is formed and all its accounts are maintained under this name. The group meets once a week to discuss its affairs. Group's first task is to decide on the group leaders. There are two two key functionaries in the group, the president (*adhyaksha*) and the secretary (*sachiv*) of the group. We refer to them collectively as group leaders.

6.2.1 Role of Group Leaders

The role of the group leaders is loosely defined as someone who undertakes the responsibility of ensuring that the group functions efficiently. In practical terms, the group leaders help conduct the meetings, resolve disputes, maintain accounts and operate the group's bank account at the local public bank on behalf of the group.

In our sample of of 58, the ordinary members had an average of 1.74 years of schooling or formal education where as the group leaders had an average of 7.5 years of schooling. Similarly, the husbands of the ordinary members in the sample had an average of 4.06 years of schooling where as the leader's husbands had 9.78 years of schooling. (See Table 6)

Someone in the group needs to undertake the responsibility of maintaining the accounts. Even though, it is not one of the prescribed task of the group leaders we found that the group leaders had taken on the responsibility of maintaining the accounts.

The person who maintains the account has easy access to all the financial information of the group. Given the average level of numeracy, in the event of a dispute within the group, the accountant's interpretation of the financial information maybe crucial. The accountant can, if she can exert leverage over other members of the group. One of the conceivable ways in the which the accountant can exploit this leverage within the group is by getting a preferential treatment in obtaining credit from the group.

The group opens an account in the nearest branch of a public bank after it has been

formed. The account is opened by the group leaders on behalf of the group. The two group leaders automatically become the two signatories for the bank account.

As evidence of power the group leader wields in the group, we found an instance where a group members had been excluded after the group has been formed, at the group leader's insistence. In the group Chahat (village Kondal) we found that a relative of the group leader (secretary), had been excluded from the group a few months after the group had started. When I questioned the secretary of the group, she admitted that she fallen out with her relative around the time the relative had excluded from the group and played a part in the getting her excluded from the group. This was corroborated by three other members of the group.

6.2.2 Turnover of the Group Leaders

The group is free to decide on group leaders and the NGO suggests that groups change their leaders every year. In our sample, we found that no group had changed its leadership¹⁸¹⁹. We found that at least in one of the five groups, there was significant dissatisfaction with the leadership. Mariam, the group president of Sahil (village Guraksar) was very unpopular with the group. Yet there has been no move to attempt to dislodge her from the position.

Given that the group leaders were more educated than the rest of the group members, they may be playing a critical role in group by sharing their ability to maintain accounts and deal with the outside agencies on behalf of the group. It was clear from our sample that the average group member was hardly educated with 1.74 years schooling and incapable of dealing with the bank directly or maintain accounts. it may be argued that one of the important roles that groups play is optimally sharing the most scarce skill among the impoverished, that of literacy and numeracy.

¹⁸It may be noted that the local public bank branches dislike change in group leadership since it requires them to change the signatories for a group.

¹⁹Being a signatory for the group bank account entails travelling to the bank at a regular frequency. When asked, most members said that they would be reluctant in undertaking this task.

6.2.3 Saving

Each member of the group deposits a fixed amount in the saving pot of the group every month. The mandatory monthly saving is determined before the group starts. Three groups has mandatory saving of Rs 50 and one of Rs. 100 per month. Sahil (village Guraksar) has started with Rs 50 per month but changed to Rs 100 per month from January, 2004. Assuming a 6 day working week, the average per working day income of households in our sample is Rs 109.10. In the sample, we did not come across any instance of members being late in their deposits. All the members in the sample had been extremely regular in depositing. This is because of the strong enforcement mechanism which we discuss in section 7.

According to the SPYM accounts, off the 300 group, 97 per cent of the groups had never had any problems of members being late in either depositing their savings or repaying their loans. In the rest there has been late payments but no known instance of default at either individual or group level. The only instances of group default was in 1996, when the NGO had initially started forming groups in the area. Since 1997, there was no instance of default.

Given the minimal level of schooling among the members and the range of ages (55 to 14 years in the sample), the simple practice of saving a fixed amount every month is easily grasped by even the least intellectually capable member of the group. This feature of ROSCA has made it an enduring institution down the ages and the SHG programme has successfully incorporated this feature in its mechanism.

6.2.4 Borrowing Internal Funds

Unlike ROSCAs, the SHG Linkage Programme encourage the groups to wait a few months before allowing its members to borrow from the the saving pot. Though, the SPYM advises its groups to wait for six month before it starts lending within the group, we found a fair amount of variation in the sample. Table 4 shows us that the five groups started

lending in the third, fourth, fifth, sixth and seventh month respectively.

On the average, the first loan was given out 4 months and second loan 5.6 months after the group started saving. This is in spite of the fact that the groups had surplus funds in their saving pot to lend during this period. Rather, we found that the groups total savings exceeds total borrowing for an average of 12.6 months. The group typically started by lending to one member. The number of borrowers increased very gradually. An average of 1.6 borrowers had borrowed after six months and after nine months this had gone up to just 3.4. An average 31.25 % and 55.66 % of group members had borrowed (sourced internally or externally) from the group after twelve months and eighteen months of group formation.

This sequential allocation of credit ensures that the members waiting in queue for credit monitor the present borrower intensively and internalise the cost of this monitoring. They not only monitor the usage of borrowed funds, they also audit the borrowers in case the borrower express inability to meet her repayment timely.

6.2.5 Repayment

The loan has to be repayed back in ten months in ten installments. the borrower repays back one tenth of the principal plus the interest accrued on the portion of the principal owed in each installment. So, if the borrower takes a loan of L his repayment in month t would be $[\frac{1}{10} + \frac{10-t}{10} \cdot r] \cdot L$.

The interest rates vary according to the source of the credit. Group's internal funds are lent out at 24 per cent per annum where as funds from RMK and NMDFC are lent out at 18 per cent per annum. The interest rates on loans that local branches of public banks extend to the groups are in a similar range and are negotiated in each instance.

If a members borrows Rs 5,000 from the group, her first monthly installment would be Rs 600 and each subsequent installment would be Rs 10 less than the last one till she pays off the loan in the tenth month. So, unless the investment starts giving a return of Rs 20 per day from the first month, the borrower would have to divert resources to pay

her installments.

In Rahim, which was the poorest group we looked, the mean monthly income of Rs 1791.66. Given that the first installment is almost a third of mean monthly income²⁰, it is evident the range of profitable projects for a member of this group is limited to ones that start bringing in immediate returns. Any project with a gestation period is not viable for an income-poor borrower in this programme.

Apart from borrowing to meet an emergency expenditure, the most commonly mentioned purpose for borrowing was to buy a buffalo. For an income-poor borrower, the advantage of investing in a buffalo is that there is virtually no gestation period and the buffalo starts producing milk almost immediately. The tightly structured repayment structure rules out any investment opportunity with a significant gestation period for the income-poor borrowers in the programme.

6.3 Maturity

If the group survives the saving and lending phase, the NGO starts the process of linking the group to external sources of credit. By being able to self-govern itself through the nurturing phase, the group proves its creditworthiness.

In this phase, the NGO links the group to external credit. Even though the credit that ensues is for specific individual members, the lending is done through the group. The external credit agency lends to the self-help group, which in turn lends it on to the individual member. Similarly, the repayment is made in each instance from the group account and the individual members pay into the group account. As we discuss in section 7, this allows the group to have full and immediate joint liability.

The whole group as a whole is held responsible in case of delayed payment or default. The repayment amount is deducted, every month, automatically from the group's bank account every month and in case of a delayed repayment, the group is left to deal with

²⁰The mean monthly income of members (excluding group leaders) is Rs 2627.08. The first installment of Rs 600 is 22.83 % of the mean monthly income.

the situation internally. We found that the group Sahil (village Guraksar) had instituted a late fee of Rs 10, though this was not a practice followed in any other group.

6.4 NGO's Incentives

When NGO channels the credit from an external source to the group, it is able to keep a margin. The margin gives NGO the requisite incentive to form groups and guide them through their nurturing phase.

For SPYM in Hathin the two main sources of external credit were Rashtirya Mahila Kosh (RMK) and National Minorities Development Finance Corporation (NMDFC). RMK, a government lending programme, makes credit available to the NGO at 6% per annum. We found that the group members pay 18% per annum on loans from RMK and the NGO keeps a margin of 12% on repayments. Similarly, the group borrowers pay 18% on credit from NMDFC and the NGO's is allowed to keep 10% of that. For every credit source, NGO's margin is clearly prescribed by the lending agency. This margin is the only compensation the NGO gets for its efforts in forming and nurturing groups.

The group maintains its own account with the local bank and the credit is made available through this account. Thus, the NGO cannot obtain a larger margin for itself than prescribed by the lending agency. Of course, it still does not stop the NGO from demanding further rents from the groups. If there are enough NGO working in the area, the monopolistic competition would drive tend to drive down these rents. In our study, we did not observe explicit evidence of NGO extracting rents from the groups in returns for making credit available.

In the SHG Linkage Programme, the NGO has no incentive to target the poor or prevent elite capture. Given the incentive scheme, the NGO's optimal strategy is to form and nurture groups with minimum number of visit from the community development officer. Consequently, the NGO finds it optimal to virtually sub-contract the process of group formation to the group initiators. The features in the programme that prevent *elite capture* is the length of time it takes for the group to graduate to maturity and

relatively restricted opportunity to save.

7 Solving the Information Problems

In this section we look at the distinctive features of the SHG linkage programme. Even though, it shares features with other other micro finance programmes, the use of mROSCA as a base for group formation makes it distinctive and gives it a distinctive edge in solving the information problems. In this section we discuss, the way in which the SHG programme deals with the information problems like adverse selection, moral hazard and auditing.

7.1 Joint Liability

The SHG mechanism allows the NGO to use the the group's accumulated saving implementing *full* and *immediate* joint liability among the group members. If a particular borrower fails to adhere to the strict repayment structure set out by the NGO, the group members are immediately and fully penalised in this mechanism.

The saving accumulated due to the mandatory monthly savings is deposited in the local branch of the public bank . Every month the repayment amount due is deducted from the this account automatically. It is the responsibility of the group to ensure that the borrowers meet their repayment obligations and that these repayments are deposited into the group's bank account. We were told by the NGO in Hathin, that 97% of the repayment were made on time according to the accounts maintained by the group. In the 7 groups we looked at, there has never been any reported instance of a late payment.

In conventional group composed solely of borrowers, imposing joint liability on the group members is not trivial. It has been argued that the NGO is able to impose joint liability in effect by threatening to penalise the whole groups for one or more members' late payment or default. This penalty is barring the groups access to future credit.

Ghatak and Guinnane (1999, pg. 214) illustrate with an example from the Grameen Bank's lending practice. "All borrowers accept the threat that if their group does not fully repay its loans, then all members are cut off from future credit from this lender."

Given that, with the SHG, joint liability bites with certainty and in the present period, it ensures that members try their best to group with individuals that are reliable. It further serves to sharpen the member's incentives to monitor and audit²¹ the borrower.

7.2 Active Screening

The nurturing phase gives the Community Development Officer (CDO) the opportunity to observe the functioning of the group before deciding whether it wants to link the group to external sources of credit. The conduct of the weekly group meeting conveys important information about group's social cohesion. This and other relevant information collated by the CDO helps the NGO assess the future prospects of the group.

Hoff and Stiglitz (1990) classify this kind of screening as a *active screening* as it "entails lenders (a) expending resources in actively screening applicants (groups) ... and (b) limiting the range of their lending activity to members of a particular kinship group, residents of a given region or individuals with whom they trade." This kind of screening is distinct from *passive screening* mechanism which works through the design of contracts (interest rate and loan size) and encourages the borrower or groups to self select.

Given that the NGO does not act purely like a financial intermediary, it does not have full control on the terms of contract it offers the groups. Consequently, it is constrained in its ability to screen the groups *passively* through self selection. The lending rates are set either by the government lending agencies like the RMK and NMFDC at the National level or by the respective public banks. The NGO does have a slightly greater, though not full control, over the size of the loans to be offered to the groups, once they has mature.

²¹Monitoring here entails monitoring the usage of borrowed fund before the output is realised. Auditing is undertaken to verify the veracity of borrower's claim about the value of the output, after the output has been produced

In our study, we observed the NGO undertaking the cost associated with active screening. I frequently accompanied the community development officers in their visit to groups that were being nurtured. Each such visit would almost take 3 hours or more. The CDO would mainly observe the weekly meeting, interrupting only to clarify rules regarding accounting and saving. The CDOs tended to address the meeting at the end, to convey to the group that their future access to credit hinged crucially on their ability to efficiently self govern through the next few months.

Further as Hoff and Stiglitz (1990) suggest in (b), the NGO, by tying-in the groups with a mandatory saving scheme, encourages the formation of group (or cements a pre-existing group) on which it intends to concentrate its future lending activity.

With a mROSCA, the resources expended in screening actively are significantly less than it would be in its absence. Specifically, the CDO is able to gather information merely by attending successive weekly meetings and examining the accounts maintained by the group. The mROSCAs enable NGO to observe the prospective group, for a period of time, at a nominal cost before committing to link the group.

It is well documented that the NGO, as an outsider, has a disadvantage in cost of acquiring local information as compared to the various participants in the local informal markets. Adding the ROSCAs element to the conventional micro finance model is an invaluable innovation, as it allows the NGO to partially mimic the way the local monylender acquires information in the local informal market. It also allows the groups to exhibit their ability to administer themselves as a financial entity. The only the groups that are able to develop rules and draw upon the requisite social connections are able to survive through the nurturing stage. The group that are weak or show lack of cohesiveness do not make past the nurturing stage.

7.3 Monitoring

The are are number of ways in which the SHG Linkage Programme group arrangement is able to induce monitoring. The instrument that encourages monitoring vary accord-

ing to the stages of life.

7.3.1 Sequential Borrowing in mROSCA

There is a moratorium on lending for approximately the first six months. The lending start after that very gradually. The limited amount of saving, given the small mandatory monthly saving each member makes, ensures that the groups lends sequentially with the group deciding the sequence in which the borrowers get credit.

Thus both the borrowers that are waiting for credit and those in not in the queue have incentives to monitoring and audit the present the borrower(s). Not only are they impatient to ensure that they get a chance to borrow, their accumulated saving is jeopardised if the present borrow does not repay on time or defaults. With the full and *immediate* joint liability that SHG mechanism encompasses, the non-borrowers in the group have a strong incentive to ensure that the borrowers repay back on time.

7.3.2 Tightly Structured Repayment

The repayments in SHG linkage programme, like most micro finance schemes, are very tightly structured with members required to repay the loan fully in 10 months.

Jain and Mansuri (2003, pg. 255) note that this "limits the types of projects that can be financed with micro-credit loans" and "long-gestation projects ... are difficult to finance solely by loans for which repayments begin long before the returns from the project are realised." (*ibid*) They suggest that the widespread use of these tightly structured repayment schedules is to encourage the borrowers to repay by borrowing from the informal sector. According to them, this allows microfinance institutions to incorporate the superior monitoring technology of the informal sector in monitoring the borrowers.

In our study, we found, as reported above, interest rates in the informal sector, though higher, were comparable to the rates at which members borrow through the group. Further, we did not find evidence that the group members were active participant in the

informal sector once they had joined the group. Table 9 shows that in our sample of the 58, only 7 interviewees reported that they had borrowed from the moneylender in the recent past. Relatives seem to be the largest source of credit with 14 interviewees reported to have borrowed from a relative at a average interest rate of 9.8 per cent per annum. There were 6 instances of borrowing from the acquaintances and public banks each at 20.4 and 31 per cent per annum respectively. Further, the average size of loan from relatives was much higher as compared to the other sources of loans.

A tightly structured repayment may be used to restrict the number of simultaneous borrowers in the group borrowing simultaneously, at any given point in time. This curtails the demand for credit and would obviously imply a lower number of simultaneous borrowers in a group. Specifically, by restricting the choice of potentially profitable projects that may be undertaken by the borrower, it lowers the demand for credit and thus reduces the frequency requests for credit at any given point in time.

7.3.3 Restricting the Number of Borrowers

In our sample we found that no more than a third of the group has loans outstanding, at any given time. The group, as a whole, bears the responsibility of ensuring timely repayment by individual borrowers. As we elaborated in Section 7.1, the group is *jointly liable*, for any loans undertaken by an individual member of the group.

With joint liability, the threat of losing their accumulated savings, gives the peers incentives to monitor the borrower and thus ensure that the loaned funds are used judiciously and repayments are made on time. Peers also have the incentives to audit the borrower, if the borrower declares inability to meet her repayment obligations.

Restricting the number of borrowers who borrow simultaneously, sharpens these incentives even further for the group since at any given point in time, these incentives are sharper for a non-borrowers i as compared to a member j who has borrowed.

Member j has comparatively less to lose if another borrower defaults and the group collapses. By declaring default, he may have a good chance of escaping repayment obli-

gations. Conversely, if the group a borrower repays late or defaults, member i would lose part of her saving as well as access to future credit. Thus, the non-borrower member i monitors and audit her peers more diligently than the borrower j .

Thus, measures that dampens the demand for credit and reduces the number of simultaneous borrowers in the group induces greater amount of aggregate monitoring in the group.

8 Conclusion

The objective of this exercise was to minutely look at the working of a particular micro-finance operator. We set out the programme, as it has been designed at the national level in India. We look at the incentive structures laid out in the programme for the NGOs and microfinance operators to fulfill the gap in rural financial markets across the country. We found that by incorporating the national banking network, the programme unbundles financial intermediation from the process of institution building. This allow the NGO to specialise in process of institution building.

We looked at the innovative way in which the programme uses a modified form ROSCA to effectively screen the groups, implement full and immediate joint liability and involve the savers in the process of the group lending. We also analysed how this allows the group to solve the information problems associated with lending to the impoverished more effectively.

The programme allows the poor to not just borrow but also to be able to get some returns from the process of financial intermediation. Thus, it gives the poor a valuable instrument to save.

We found that in the programme, members borrow at marginally lower rate as compared to the informal money market in the area. It also allows them an opportunity to save. We found that there was considerable variation in the cost of acquiring information between rural and urban communities.

We looked at the demographics of the borrower. The groups were led by group leaders that were economically better off and more educated than the rest of the group. The ordinary members had minimal educational skills. Thus, we found that education is the scarce resource among the impoverished in Hathin. One of the benefits of group lending is that it increases the “effective literacy” of the group. Essentially, it gives a number of less educated individuals the benefits of sharing the educational skill of the few in the group.

We also found that the group leaders were more active in terms of borrowing. Given the strict structured repayment structure, being economically better-off also means that being able to borrow more. We looked at the problem of elite capture and found that this particular group lending programme did not seem to have any significant risk of elite capture. Restriction on the saving and time the group takes to graduate to large loans act as deterrents for elite capture.

Table 1: Rural Bank in India

Year	Rural Bank Offices			Rural Credit	Rural Deposits
	Number	Growth	% of total	% of total	% of total
1975	7,112.00	10.3	35.5	6.0	8.5
1976	8,588.00	20.8	36.6	6.4	8.7
1977	10,856.00	26.4	40.3	7.2	9.4
1978	12,534.00	15.5	42.5	8.4	10.1
1979	14,171.00	13.1	44.0	9.3	11.4
1980	16,111.00	13.7	46.9	10.7	12.6
1981	19,453.00	20.7	51.2	11.9	13.4
1982	21,626.00	11.2	53.0	12.5	14.2
1983	23,782.00	10.0	52.4	13.6	14.4
1984	25,541.00	7.4	52.9	13.5	13.4
1985	29,408.00	15.1	54.6	14.1	13.6
1986	29,700.00	1.0	55.7	14.5	14.0
1987	30,585.00	3.0	56.2	15.3	14.7
1988	31,641.00	3.5	56.2	15.3	14.7
1989	33,572.00	6.1	57.3	14.8	15.0
1990	34,867.00	3.9	58.2	14.2	15.5
1991	35,134.00	0.8	56.9	15.0	15.5
1992	35,254.00	0.3	56.8	15.1	15.1
1993	35,360.00	0.3	56.3	14.1	15.0
1994	35,396.00	0.1	55.9	14.0	15.2
1995	33,017.00	-6.7	51.7	11.9	13.7
1996	32,981.00	-0.1	51.2	11.4	14.4
1997	32,909.00	-0.2	50.5	11.4	14.7
1998	32,854.00	-0.2	49.9	11.4	14.5
1999	32,840.00	0.0	49.3	11.0	14.7
2000	32,673.00	-0.5	48.7	10.6	14.7
2001	32,640.00	-0.1	48.3	10.1	14.7
2002	32,443.00	-0.6	47.8	10.2	14.2

Source: Ramachandran and Swaminathan (2005)

Table 2: SHG Bank linkage Programme

Year	SHGs Financed			Bank Loan (Rs. crore)		
	Number	Growth	Cumm.	Amount	Growth	Cumm.
1992-1999	32,995		32,995	57		57
1999-2000	81,780	148%	114,775	136	138%	193
2000-2001	149,050	82%	263,825	288	112%	481
2001-2002	197,653	33%	461,478	545	89%	1026
2002-2003	255,882	29%	717,360	1,022	87%	2049
2003-2004	361,731	41%	1079,091	1,855	81%	3904

Source: Government of India, Economic Survey, 2003-04

£1.00 = Rs. 79; Rs 1 Crore = Rs 10 million

Table 3: Distribution of Loans

Loan Amount	Number of Loans
0 - 999	0
1,000 - 1,999	3
2,000 - 2,999	12
3,000 - 4,999	8
5,000 - 9,999	13
10,000 - 14,999	23
15,000 - 19,000	14
20,000 - 25,000	2
Mean	8,555.84 (643.62)
Median	10,000
Mode	10,000

std. error in brackets

Table 4: Group Members that have Borrowed at least once

Months	Poornima	Shikant	Sahil	Rahim	Chahat
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	1
4	0	0	1	0	3
5	0	1	1	0	5
6	1	1	1	0	5
7	1	1	1	3	5
8	2	2	1	3	5
9	2	5	1	4	5
10	2	5	1	5	5
11	3	6	3	5	5
12	4	7	5	5	5
13	7	8	5	6	5
14	9	8	5	6	5
15	9	8	5	8	6
16	10	8	5	8	9
17	10	9	7	8	9
18	11	10	7	8	10
Total Membership	16	17	17	17	16

Average wait for first loan: 4 months after group formation
Average wait for second loan: 5.6 months after group formation

Table 5: Group Leaders Proportion of Total Borrowing
(after 18 months of group formation)

	Total Borrowing	Average per Borrower	Group Leaders' Borrowing	Group Leaders' Proportion
Sahil	135,500	16,938	70,500	52.03%
Poornima	107,800	9,800	30,000	27.83%
Rahim	28,000	3,500	7,500	26.79%
Shrikant	99,000	9,000	10,500	10.16%
Chahat	65,000	5,458	2,000	1.16%

Table 6: Demographics

	All Members	Members excl. Group Leaders	Group Leaders only
Sample Size	58	44	14
Members' Age	34.14 (9.20)	35.05 (10.12)	31.29 (4.56)
Husband's Age	38.93 (10.26)	39.67 (10.77)	36.71 (8.55)
Household income (per capita)	34,038 (21,855) 5,928 (4,200)	31,525 (21,181) 5,430 (3,998)	41,769 (22,935) 7,460 (4,597)
Years of Formal Education			
members	2.92 (3.99)	1.74 (3.20)	7.50 (3.54)
husband	5.23 (4.71)	4.06 (4.51)	9.78 (1.92)
Household Size	6.44 (2.41)	6.51 (2.48)	6.21 (2.22)
No. of dependents	3.91 (2.51)	3.81 (2.60)	4.21 (2.29)
Children			
Total	3.96 (2.05)	3.95 (2.10)	4.00 (1.96)
Female	1.79 (1.46)	1.91 (1.59)	1.43 (0.94)
Male	2.14 (1.29)	2.10 (1.27)	2.29 (1.38)

Table 7: Group-wise Demographics

	Poornima	Shrikant	Sahil	Chahat	Rahim
Total membership	16	17	17	16	17
Sample size	7	9	14	8	14
Agricultural labourers	2 (28.6%)	0	6 (42.9%)	0	12 (85.7%)
Members' Age	34.43	32.56	34.21	40.63	33.50
Husband's Age	39.00	39.44	39.67	44.13	38.14
Household income (per capita)	23,714 6,021	38,333 7,511	39,364 6,548	38,750 7,097	21,500 2,992
Years of Formal Education					
members'	2.29	4.38	2.25	2.13	0.38
husbands'	4.67	8.56	1.44	5.50	2.50
Size of house hold no. of dependents	4.43 2.29	6.33 4.33	6.62 4.69	6.88 2.75	6.79 3.92
Children					
Total	2.57	4.22	4.15	3.88	4.43
Female	1.14	2.00	2.08	1.63	1.93
Male	1.67	2.22	2.08	2.25	2.50

Table 8: Locality-wise Demographics

	Hathin	Guraksar	Kondal	Khuluka
Sample Size	16	14	14	14
Members' Age	33.40 (7.94)	34.21 (10.12)	35.57 (10.12)	33.50 (9.76)
Husband's Age	39.20 (10.05)	39.67 (9.53)	38.71 (11.74)	38.14 (10.99)
Household income	33,067 (14,552)	39,364 (29,107)	43,000 (22,891)	21,500 (16,206)
(per capita)	7,066 (4,3213)	6,548 (5,320)	6,891 (3,789)	2,992 (1,938)
Years of Formal Education				
members'	2.93 (4.30)	2.25 (2.99)	4.43 (4.64)	0.38 (1.06)
husbands'	7.00 (4.31)	1.44 (2.96)	7.67 (3.92)	2.50 (4.63)
Household size	5.60 (2.38)	6.62 (2.81)	7.00 (2.57)	6.79 (1.76)
No. of dependents	3.47 (2.56)	4.69 (2.75)	3.71 (2.70)	3.92 (2.18)
Children				
Total	3.53 (2.10)	4.15 (2.15)	3.86 (2.32)	4.43 (1.79)
Female	1.60 (1.84)	2.08 (1.38)	1.57 (1.45)	1.93 (1.21)
Male	2.07 (1.14)	2.08 (1.32)	2.00 (1.30)	2.50 (1.45)

Table 9: Informal Money Market in Hathin

Borrowed from:	All	Locality / Villages			
		Hathin	Guraksar	Kondal	Khuluka
Moneylender	7	3	2	0	2
Avg. amount (Rs.)	4,625	6,250	1,000		5,000
<i>max</i>		10,000	1,000		5,000
<i>min</i>		2,500	1,000		5,000
Avg. interest rate	36.0	36.0	36.0		36.0
Relative	14	5	1	4	2
Avg. amount (Rs.)	37,889	12,000	10,000	73,250	2,000
<i>max</i>		20,000	10,000	150,000	2,000
<i>min</i>		6,000	10,000	35,000	2,000
Avg. interest rate	9.8	9.0	0.0	12.0	12.0
Acquaintance	6	0	2	3	0
Avg. amount (Rs.)	5,000		5,000	5,000	
<i>max</i>			5,000	5,000	
<i>min</i>			5,000	5,000	
Avg. interest rate	20.4		0.0	34.0	
Bank	6	4	0	1	0
Avg. amount (Rs.)	10,750	5,000		28,000	
<i>max</i>		5,000		28,000	
<i>min</i>		5,000		28,000	
Avg. interest rate	31.0	33.6		18.0	

note: 24 out of 58 interviewees said that they had participated in the informal money market

Questionnaire

Table 10: Questionnaire used in the Hathin Casestudy

1.	Individual No.	
2.	Name:	
3.	Village:	
4.	Caste:	
5.	Name of SHG:	
6.	Members's age:	
7.	Husband's age:	
8.	Household income:	
9.	Member's profession:	
10.	Members years of schooling:	
11.	Husband's Profession	
12.	Husband years of schooling:	
13.	land owned:	
14.	buffaloes owned:	
15.	Ever been President of the group?	
16.	Ever been Secretary of the group?	
17.	Size of household:	
18.	No. of dependents:	
19.	No of children	
20.	no of female children:	
21.	no of male children:	

Questionnaire used in the Hathin Casestudy

Female Child

	Age:	
	Year of schooling:	
	Age:	
	Year of schooling:	
	Age:	

Male Child

	Age:	
	Year of schooling:	
	Age:	
	Year of schooling:	
	Age:	
	Year of schooling:	

22.	Date the group started:	
23.	Date joining the group:	
24.	Duration of membership:	
25.	No. left group after it started:	
26.	Who invited you to the group?	
27.	How did the group start	
28.	How close are the group members?	
29.	Who took the first loan:	

30.	Ever borrowed from the group? (Y/N)	
31.	Amount of first loan:	
32.	Saving at the time of first loan:	
33.	Date of the first loan:	
34.	Purpose of the Loan?	
35.	Loan Bank linkage or Group Loan?	

Questionnaire used in the Hathin Casestudy

36.	No. who borrowed before you?	
37.	How long waited after the need arose for the loan?	
38.	total saving at the time of loan	
39.	Who got the highest amount in loan?	
40.	Amount:	
41.	Who got the second highest amount in loan?	
42.	Amount?	

43.	Ever borrowed from moneylender (Y/N):	
44.	Amount:	
45.	Rate of interest (per month):	
46.	Ever borrowed from a relative (Y/N):	
47.	Amount:	
48.	Rate of interest (per month):	
49.	Ever borrowed from a acquaintance (Y/N):	
50.	Amount:	
51.	Rate of interest (per month):	
52.	Ever borrowed from a public bank (Y/N):	
53.	Amount:	
54.	Rate of interest (per month):	
55.	How many group members live close by?	
56.	How many group member live far?	
57.	No. of members who you can encourage to repay?	
58.	What action would you take if they do not repay?	
59.	Would you visit their house	
60.	Would you ostracize them in any way	
61.	No. of member's asset holding aware of?	
62.	No. of member's household expenditure aware of?	

Glossary

ASCRA Accumulating Saving and Credit Association

Adhyaksha Secretary of the Group

CDO Community Development Officer

Crore 10 million

MFI Micro Finance Institution

MfO Microfinance Operator

mROSCA modified ROSCA

NABARD National Bank of Agriculture and Rural Development, *www.nabard.org*

NGO Non-Governmental Organisations

NMDFC National Minorities Development Finance Corporation, *www.nmdfc.org*

RBI Reserve Bank of India

RMK Rashtriya Mahila Kosh (National Womens Fund), *www.rmknic.in*

Rs. Indian Currency Ruppees (£ 1 = Rs. 79)

ROSCA Rotating and Saving Credit Associations

SHG Self Help Group

SPYM Society for Promotion of Youth and Masses, *www.spym.org*

Sachiv President of the Group

Tehsil A administrative sub unit of a district in the India

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