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**Empirical Analysis of the Mechanisms of
Group Lending**

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Empirical Analysis of the Mechanisms of Group Lending

1. Introduction

Much of the literature on microfinance has focused on the concept of *joint liability* and its ability to overcome informational asymmetries by exploiting local information and social capital among borrowers.

This study was designed to examine how joint liability works in practice, by directly interviewing clients of microfinance institutions throughout two states of India. Specifically, the main objective of the study was to examine how groups screen their members, monitor behaviors and investments, and enforce repayment. The findings are analyzed in reference to the predictions from the extensive literature written on the subject of joint liability.

The research questions addressed by the investigation include:

1. How are potential group members identified?
2. What information is known before selecting a group member?
3. What type of investment screening and monitoring takes place?
4. What type of interaction and communication exists between group members?
5. What mechanisms are in place to enforce repayment?
6. What determines future lending behavior?

The study will serve as an exploratory research project to identify research topics that deserve further analysis. Ultimately, the goal is to identify areas where MFIs can improve client impact and efficiency through institutional, policy or product design innovations.

2. Literature Review

Due to a lack of physical collateral for securing loans, poor people around the world cannot access formal credit markets. Additionally, information asymmetries such as adverse selection- where banks cannot screen riskier customers from safer ones- and moral hazard -where banks cannot monitor the behavior of the borrower- are accentuated in the case of poor borrowers. It becomes too expensive for banks to screen and monitor numerous small borrowers, as opposed to a few large ones. Given these problems, commercial banks have traditionally considered poor lenders to be unprofitable.

Microfinance institutions provide small loans to customers without access to commercial banks, while not requiring physical collateral. One innovation that makes this possible is group

lending, where poor borrowers act as guarantors for each other by assuming joint liability for the loans. By exploiting the local knowledge that members have about each other, group lending schemes have solved many of the problems of information asymmetries between borrowers and creditors.

The initial literature providing the theory behind microfinance and group lending can be traced to early work by Stiglitz (1990) and Varian (1990), who analyze how joint liability may induce borrowers in a group to screen each other's abilities and monitor each other's efforts, thereby alleviating moral hazard problems.

Additional literature has highlighted the ability of group contracts to attract safe borrowers into the credit market, by lowering monitoring and enforcement costs and thereby reducing interest rates. Furthermore, several papers have shown that joint liability lending can also increase repayment rates, given the threat of social punishment.

Work by Ghatak and Guinnane (1999) shows how joint liability can help reduce all four problems preventing poor people from accessing credit markets: adverse selection, by affecting group formation; moral hazard, by inducing group members to influence the way other members select their projects; costly monitoring, by helping the lender avoid external audits; and enforcement problems by encouraging borrowers to repay their loans without the lender having to impose sanctions. In this case, peer pressure and threat of social punishment within the groups effectively replace the need for physical collateral to be seized in case of default. The paper also presents a brief empirical section on Grameen Bank to show how these models work in practice.

On the issue of screening, Ghatak (2000) shows that borrowers' use of information about each other's projects can lead to self selection of group members and positive assortative matching in group formation (i.e. members select others of the same risk type, forming homogeneous groups). In this way, local knowledge serves as an effective screening mechanism, where "good" borrowers can be matched up with other "good" borrowers, and interest rates obtained can be low enough to induce good types into the credit market. "The resulting improvement in the pool of borrowers is shown to increase repayment rates and welfare" (Ghatak, 2000).

Armendariz *et al.* (2000) builds on this theory by proposing that even in cases where group members are relatively uninformed about each other's effort/abilities (as can be the case in urban settings) group systems can nevertheless be seen as an effective risk-pooling mechanism, where the negative externalities from risky borrowers are reduced, thus allowing for lower interest rates and attracting safe borrowers into the market. This paper demonstrates that assortative matching is not a necessary condition for joint lending to be welfare improving.

Using evidence from FINCA in Peru, Karlan (2005) provides support for the idea that social capital reduces screening and monitoring costs and improves enforcement, thereby improving access to credit for the poor. Karlan finds that more social capital results in higher loan repayments

and more savings. Additionally, social capital seems to improve the groups' ability to distinguish between defaults caused by moral hazard and by negative external shocks.

Stiglitz (1990) also addressed the repayment issue, from the perspective of the projects chosen, showing that joint liability leads borrowers to embark on safer projects. It must be noted, however, that work by Banerjee et al, (1994) shows that this bias towards safer projects can also lead to low returns of the micro-enterprises chosen.

Besley and Coate (1995) show that it is possible for joint lending to lead to an ambiguous result in terms of repayment rates. If successful group members have an incentive to repay the loans of those members who had bad results in their projects, then repayment will be higher given group lending. But if the joint liability leads to the default of a whole group where some individuals wouldn't have defaulted in the case of individual lending, then joint liability leads to lower repayment rates.

In terms of identifying a future research agenda, Morduch (1999) sets a clear layout of the principles of microfinance, demonstrating that most of the evidence thus far is anecdotal in nature and systematic evaluations should be undertaken.

3. Methodology

This study presents the results obtained from interviews conducted with microfinance clients in two states of India. The questionnaire used can be found in Annex I.

A total of 105 interviews were carried out: 60 with clients of ASA - Grama Vidiyal in Tamil Nadu and 45 with clients of CASHPOR Micro Credit in Uttar Pradesh.

In order to ensure variety within the sample, clients interviewed belonged to different communities, settings (urban and semi-urban) and had varying levels of experience with microfinance. Guidance in selecting the clients was provided by MFI staff in the local branches. This implies that sampling was not systematic or random; therefore, it is difficult to draw statistical conclusions based on the results of this sample. As mentioned earlier, this research was designed as an exploratory study to be followed by further systematic research. (*Ref: Table 1*)

4. Background on the MFIs

4.1 ASA-Grama Vidiyal

Activists for Social Alternatives (ASA) is a non-governmental organization (NGO), committed to contributing to poverty alleviation and empowerment of women. ASA has been operating in the state of Tamil Nadu since 1986. Grama Vidiyal (GV), meaning "Dawn of the Rural Poor," is ASA's Microfinance Program, registered as a Public Charitable Trust in the Year 1995 with the objective of improving members' standards of living.

Today, ASA-GV is one of the largest microfinance institutions in India reaching out to about 76,000 clients spread over 6 districts in Tamil Nadu and through 29 branch offices. As of April 2005, total number of loans disbursed was 231,059 (US\$ 24.8 million) with a loan outstanding of US\$ 3.8 million. Total savings of members amount to US\$ 1.72 million.¹

ASA-GV offers various products to its clients:

- **Credit:** The credit products are the part of ASA's Economic Empowerment and Microfinance Program, which is being implemented by Grama Vidiyal. The Income Generation Program (IGP) offers loans ranging from 3,000 to 10,000 rupees to women members, which are repayable in 50 weeks at an annual interest rate of 12%. The purpose of IGP is to support and strengthen livelihood activities and rural enterprises owned by poor women in the villages. Loan amounts are set at 3,000 or 4,000 rupees for first timers and increase gradually as loan cycles are completed. A housing loan worth Rs. 35,000, repayable in 160 weeks was available until March 2003, but has presently been discontinued, although some members are still repaying their housing loans. Apart from the loans for IGP, Grama Vidiyal provides Festival Loans and Education Loans to its clientele.
- **Compulsory Savings:** Members contribute an amount of Rs. 10 per week during repayment of the first loan and this amount increases over time based on the size of loan. The main purpose of compulsory savings is to allow members to develop a regular savings habit and create assets of their own. In addition, savings, balances help to repay loans in cases of default.
- **Insurance:** Life insurance is offered in collaboration with mainstream companies such as Bajaj Allianz, AMP Sanmar, Max New York Life. The insurance policy provides a cover of Rs. 20,000 (\$440) in case of death. Currently, 80% of the members are insured.

4.2 *Pension/Social Security Scheme for members*

Before setting up a new center with 20 eligible clients, ASA carries out an initial survey to identify eligible clientele, ensuring there are enough poor households in the area to form a full center. The criteria used in this survey are both qualitative and quantitative:

- Secondary Data Collection from Government offices
- Sixteen-point housing index (size of building, condition of structure, roof material, wall material, etc.)
- Land holdings of less than 0.5 acre of wetland or 1.5 acres of dry land.

- Wealth ranking: annual income of the household should not exceed Rs.18,000 (US\$ 391)
- Member should be living in the same area where the centre is to be committed (member should have been living there for a minimum of three years)

Once target clients are identified, a Compulsory Group Training (CGT) for five days is conducted to create a culture of credit discipline and to ensure that all members understand the programs and background. Groups (of five women) and centers (of four groups each) are formed during these sessions among the women that show commitment and continued interest. ASA's rules for group formation include:

- A group must consist of 5 self-chosen members
- All group members must be from the same village
- A group shall be formed with likeminded women, and are in similar economic condition and enjoy mutual trust
- There shall be no more than one member from the same household in a group. It is also not desirable for close relatives to be in the same group
- As each group is formed, it elects its own leader among the members. Four groups federate to form a center, headed by center leader²

Before being able to apply for loans, new groups have to pass a Group Recognition Test (GRT), where the Branch Manager or Field Manager tests the eligibility and readiness of group members to join the program. It is necessary that all group members pass the GRT to become recognized members of ASA.

4.3 CASHPOR Micro Credit (CMC)

CASHPOR is a network of Grameen Bank-type Micro Finance Institutions (MFIs) throughout Asia.³ CASHPOR Financial and Technical Services (CFTS) is a MFI that began its micro-lending program in Uttar Pradesh, India in 1996. After being advised by the Reserve Bank of India to discontinue its micro credit business in November 2003, CFTS transferred its entire micro credit portfolio to CASHPOR Micro Credit (CMC) a section 25 company under the Company Act of 1956.⁴

CMC seeks to achieve a significant reduction of poverty throughout Asia by providing financial services to poor households. Its mission is to provide financial services to large numbers of poor women throughout Asia in a timely, honest, efficient and financially sustainable manner.

CMC has gone from serving 27,760 clients as of December 2003 to roughly 73,000 clients as of July 2005. It currently has 7 districts in operation, with expansion plans for 3 more in the

near future. Cumulatively the organization has loaned its clients almost Rs. 112 crore (\$25.5 million) at a recovery rate of 98.3%.⁵

4.3.1 *Targeting and Qualification Requirements*

CMC only targets the “hard-core poor.” Much care is taken in identifying at the village-level, the poorest villages and households. Instead of traditional indicators, CMC uses sources of household income, number of wage earners, and value of productive assets owned to measure poverty levels.

The number of poor households in a village is determined by use of the CASHPOR House Index (CHI). Each house in a village is assessed systematically based on its structure and materials. Large houses made of brick or concrete and having re-enforced concrete or tile roofs that are unlikely to contain poor households are excluded. Small houses made from inexpensive materials and not having a permanent roof, that is, houses that score three or less on the CHI are listed. The whole village is covered in this way, and the number of potentially poor households is determined. If this number is forty or more, the cost-effective process of targeting the poor households can commence.

To ensure that CMC is reaching the poorest households (VP), they must be distinguished from the Moderately Poor (MP) and the Non-Poor (NP). The following are the criteria for each category:

- Very Poor (VP): most household income from traditional sources, such as agricultural labor, no more than 2 earners and productive assets <Rs.5,000
- Moderately Poor (MP): have added self-employment as an income source, and at least 2 earners & productive assets valued between Rs.5000 & 35,000
- Non-Poor (NP): salaried work or large remittances or >3 income earners & productive assets >Rs.35,000⁶

4.3.2 *Service Delivery Approach and Financial Products*

CMC exclusively targets the poor women using a modified Grameen approach. All clients are required to attend weekly meetings and adhere to the requirements of CMC credit discipline. Clients may receive the following types of loans:

- Income Generation Loans (Rs. 1,000 to Rs. 14,000)
- Emergency Loan (Maximum Rs. 1000 for 25 weeks)
- Marriage loan (up to Rs. 8000 but not widely utilized)

4.3.3 *Creating Credit Discipline*⁷

CMC has identified the following as important determinants of credit discipline:

1. Cost-effective identification of poor women in their villages
2. Client training that emphasizes the importance of the verbal contract
3. Group Recognition testing that ensures that clients know and trust each other
4. Insistence on timely attendance at Center meetings, and proper seating among clients
5. Opening and closing meetings with the client and staff pledges
6. Unanimous approval of loan applications by the Center: this authority for the Center goes along with collective responsibility for full and timely repayment of the loans it approves
7. Loan utilization checking by the Group Chairperson, Center Chief and Field Staff; experience is that if loans are not properly utilized repayment is likely to be affected adversely
8. Under the No Cash Policy, if there are any arrears, there will be no further disbursement, until they are cleared

5. **Main Findings**

5.1. *How are potential group members identified?*

As described in the previous section, both ASA and CASHPOR use housing and poverty indices to target the poorest women in the villages. Groups are formed during the training sessions and in most cases clients select each other according to geographical location (ie. neighbors and fellow villagers join groups together). In the case of CASHPOR, it is not uncommon for MFI staff to assume the responsibility of group formation.

In this sense, it is clear that there is no direct screening process conducted by the clients as described in the literature. Positive assortative matching, where “good” types are grouped with other “good” types, may not take place.

Through aggressive targeting and their socially oriented missions, many MFI’s limit the pool of eligible clients. They impose specific requirements, such as compulsory training sessions and timely attendance at weekly meetings that effectively serve as a screening mechanism. Thus, the screening mechanism used by the MFIs is primarily based on commitment, where it is assumed that women who attend every meeting on time are “good” types and therefore eligible borrowers. In this sense, MFI’s are assuming the costs and responsibilities of screening and choosing members.

An interesting illustration of this commitment requirement is ASA's color coding system for attendance to meetings. ASA considers attendance an important indicator for performance. In order to facilitate easy monitoring, members who are on time to meetings are asked to sign in green ink while those who are late sign in blue ink. Members who are absent are marked in red. When a member incurs four to five consecutive absences, the center takes a disciplinary action which may even include loan suspension.⁸

If the clients don't identify as a group, the MFIs intervention in the group selection process can potentially lead to a breakdown of the joint liability mechanism. In some cases CASHPOR clients responded that they weren't willing to cover another group member's payment because they belonged to a lower caste, or because they hadn't chosen that member to join in the first place. These situations are less likely to occur in the case in which clients are able to choose their own groups of five or twenty members. Existing literature on group selection indicates that repayment rates are higher in situations where social capital is tighter (Karlan 2005).

5.2. What information is known before selecting a group member?

5.2.1. *Screening for initial group formation*

Regardless of the process by which group members were chosen, roughly 95% (94/99) of the women interviewed said they knew the members of their group before it was formed, mainly because they all live in the same village. Additionally, nearly 60% (57/96) said they have some knowledge about their group members' levels and sources of income, while only 27% claim that they know about previous debt levels. Table 2 shows the results by MFI:

Thus, there is not an active or formal process by which members initially screen each other to find out their financial situations and investment plans. However, the role of local knowledge must not be underestimated. Members typically know everyone in the village, what business they conduct, what their husband does, who has economic problems and who doesn't. In this sense, as long as the MFI is not doing the group selection women can "implicitly screen" by excluding neighbors whom they distrust.

Interventions designed to reduce the role of MFIs in the group selection process and to encourage more explicit screening mechanisms on behalf of the women can potentially lead to strengthening of the joint liability mechanism. In the cases of default without group cover-up, the primary cause was identified as a breakdown of the joint liability mechanism rather than impossibility of group members to provide the extra money.

5.2.2 *Screening new members into an existing group*

As can be expected, group members change over time, mainly due to women leaving the program. One quarter of the five-member groups interviewed in ASA have changed since the first cycle and out of these, most of them have only had one member change (13/15). In the case of CASHPOR the percentage is considerably higher (59%), however, this question was answered regarding their 20-member center rather than the 5-member groups. Roughly 32% of the changes were due to an increase in the size of the center due to the addition of another group. Such a high response is indicative of the aggressive growth strategy in the particular districts and emphasis on scaling up the operations.

The primary reasons given by members for leaving a group were:

- Members who dropped because their business had failed or couldn't continue repaying (these members usually repay their full loan before leaving) (30%)
- Members who were expelled from the group for lack of repayment (means for lack of repayment??) (6%)
- Members who left because they didn't need any more money (18%)
- Members who left because they moved away (18%)
- Members who left due to illness (6%)

In both MFIs, explicit screening behavior does take place when original group members have to be replaced. In most cases, such screening includes home visits and assurance of earners in household. Owning a home was given as an important pre-requisite "so that the family can't move away." In identifying replacement members, women that already run their own business are favored, given that they have a source of income. Also, recommendations by the departing member or a current member of the group are a common way of identifying new members.

In some cases, it was found that MFI staff intervened in this screening process as well and that center managers assigned a new member.

5.3. **What type of investment screening and monitoring takes place?**

5.3.1 *Choice of Activity and Size of Loans*

The purpose for which loans are taken varies considerably among women and villages. It is interesting to note that there was no evidence of peer pressure for clients to undertake or not to undertake a given activity. Also, no particular activity was identified as being too risky to be guaranteed. Perhaps this is due to the fact that no client endeavors to do anything too risky or innovative.

There is therefore little evidence of screening the types of activities that will be supported and furthermore, there is no effort within the groups to ensure some diversification of activities in order to mitigate risk to systemic shocks. According to the locality, it is not unusual to come across groups where all the members engage in the same activity.

Unlike choosing the investment activity, determining the size of the loan receives significant group scrutiny. Clients seem to be knowledgeable about the income generation possibilities of each business activity and therefore conscientious to loan only what they believe is reasonable for the activity. While the ultimate judge of a group member's ability to repay is the responsibility of the group leader (and the MFI), all members participate in the process. In this sense it can be said that there is screening regarding the sizes of the loans but not necessarily the activity.

5.3.4 What type of interaction and communication exists between group members?

As part of the MFI's credit discipline program, center meetings are held every week. Attendance at these meetings is compulsory for all members, except in the case of illness or other extenuating circumstances. The main purpose of the meetings is for the members to hand in their weekly repayments or deposit receipts to the group leader, who in turn hands them in to the center leader and field officer (or center manager).

In addition to this operational purpose, group meetings enable the monitoring of clients by other group members. Monitoring takes place as long as group members are informed about each other's business activities and performance. According to the survey, 92% of the women claim to have a very clear idea of how group members are using their loans. When asked to list the amount and purpose of each of their group member's current loans, they were almost always able to do it. Most women responded that they talk about their businesses, their problems and plans for future loans before, during or after group meetings.

When asked whether group members visit each other's businesses to ensure they are working and using the loan for the intended purpose, 89% of the women responded that they do. The degree to which the monitoring is explicit and to whom the responsibility belong, varied from group to group. The most common answers were:

- 57% say that both the center leader and the rest of the members of the group, purposely or not, monitor each other since they live in the same area and they see each other all the time
- 29% say that the group or center leader takes on the responsibility of explicitly monitoring other people's activities
- 13% say that both the group leader as well as the center manager (field officer) is responsible for the monitoring activities

As was the case with the screening mechanisms, the proximity of these women means that monitoring mechanisms are invariably present given the amount of “local information.” In the case of monitoring procedures, there is no doubt that each woman knows whether the others are working or not, and how hard they are working. As long as women are informed about the circumstances of others, members in trouble can receive preemptive assistance. Many times this knowledge comes from purposeful monitoring visits, sometimes from information shared during groups meetings and sometimes due to the fact that many of them work together and live in the same area.

5.5. What mechanisms are in place to enforce repayment?

Under the joint liability scheme, if any member fails to meet a weekly payment and the group does not cover it, then the whole group is considered to be in default and can be denied further loans. In this sense it is in the groups’ best interest to help out members or exert pressure when they have a problem repaying as well as making sure that the problem does not persist.

Almost 46% of the women interviewed declared that there had been at least one episode of default –where one member couldn’t make weekly payment and others had to cover - in their group or center. For the entire sample, this percentage is 32% for the case of ASA and 67% for the case of CASHPOR. In both institutions, prevalence of cover-ups varied considerably by branches, as can be seen in Table 3.

It is interesting to note that in both cases the oldest branches within each institution had highest default episodes (Kovil Patti for ASA and Maharajgang for CASHPOR). One hypothesis for this trend is that being the oldest branches, they underwent the most policy and product changes:

- *Kovil Patti:* ASA opened this branch over 20 years ago, long before they started working on microfinance. During that time, ASA’s work in the area was mostly based on grants and micro-credits were not introduced until 1993. When questioned about the high prevalence of defaults in this branch, ASA personnel explained that one of the reasons was that it has been hard for women to accommodate to the change from grants to credits.
- *Maharajgang:* CASHPOR began its operations in the Mirzapur district in the year 1996. Since Maharajgang was the first branch in the district, it has experienced all major policy and product changes of the institution. Initially CASHPOR was able to provide savings and insurance, as ASA still does today. Due to the legal status of the institution, savings can no longer be provided. Additionally, CASHPOR went from a “cash policy” to a “no cash policy” for its center managers, which has shifted the burden of the transportation costs to the client by requiring them to deliver the money to the branch offices themselves.

5.5.1 *Causes for Default*

Most episodes of default resulted from external shocks rather than business problems. The most cited external shocks were:

- Illness
- Death in the family
- Unseasonal weather
- Travel by primary wage earner

In nearly all cases of default, the remaining group members covered the weekly payment and the defaulting member paid back within a couple of days. The responses from the survey indicated no cases of willful default. When the impossibility of repaying due to business problems became chronic, members were either expelled or left voluntarily, usually after finishing off their loans with money from family members or their savings. (*Ref: Table 4*)

In five separate cases, clients admitted resorting to outside sources, such as neighbors or family members, rather than group members, in order to fulfill their payments. Only two of these clients admitted resorting to moneylenders.

Enforcement measures exist at both the center and group level. In the case of CASHPOR, center managers also play an active role in enforcing repayment. CASHPOR staff aggressively pursue defaulters and pressurize the entire group to address the situation. It is not uncommon for a CASHPOR staff member to visit the defaulting member's home.

Other enforcement measures were taken up as the groups' responsibility. Anecdotal evidence ranged from group leaders helping the defaulting member in finding additional sources of income to group members removing defaulter's nose ring and anklets or damaging her house until the member repaid.

As mentioned earlier, ASA mandates its members to save a weekly amount ranging from Rs. 10 to 50. These savings are kept by the MFI and clients withdraw from these savings only when leaving the program or under special circumstances. Having a savings product may explain the differences in default rates amongst ASA and CASHPOR. Clients with savings may be less inclined to default knowing that they would lose their deposits.

In a few cases where members defaulted, their savings was used to cancel the debt. Such savings essentially served as collateral and therefore substituted for other enforcement mechanisms.

5.5.2 Cases of non-default

Since 54% of the groups have never experienced a situation where a member could not make a weekly payment, women in these groups were asked what would happen if the situation arose. From their responses it was evident that all clients have a clear idea of how the joint liability lending mechanism works, understanding that the rest of the members would have to cover up for a member in default.

Variations were found, however, identifying the liable members in case of default. Both in the case of ASA and CASHPOR much confusion surrounded the distinction between the roles and responsibilities of groups and centers, at times not being able to identify one from the other. Equally many clients responded that the remaining 4 members of the group had to pay, as those responding that the remaining 19 center members had to pay. One potential reason for this confusion might have to do with the fact that the weekly meetings are done at the center level and therefore many women consider the center as their group. This lack of clarity regarding where the joint liability lies may cause problems in situations of default.

Lastly, some women answered it was the group leader's responsibility to cover missed payments. In all cases the women who answered this were group leaders, and they claimed that this was so because they were responsible for the group. Apparently the decision of repayment responsibility in case of default is rather inconsistent, without the MFI field staff transmitting clear rules to the members.

While inquiring about reasons for lack of default, one of the main reasons listed by clients was "*because we all have incomes.*" Activities undertaken by clients tended to be low-risk, low-investment activities that generate modest but constant flows of income. Other important reasons included the ease of weekly (hence smaller) payments, and the possibility of getting future loans. (*Ref: Table 5*)

5.6. What determines future lending behavior?

Clients covered in this investigation had completed 0 to 10 loan cycles, and their current loan sizes ranged from 3,000 to 15,000⁹. The average loan amount for the 105 women interviewed was Rs. 7,117 (Rs. 7,698 including the two housing loans). This amount was Rs. 7,661 for ASA and Rs. 7,756 for CASHPOR.

Both ASA and CASHPOR have limits on the maximum amount a client can borrow. This limit is set at Rs. 10,000 for ASA clients and Rs. 14,000 for CASHPOR clients. Also, before these amounts are reached, there are limits as to how much clients can borrow according to the number of loan cycles they have completed.

Partly due to rules set by the MFIs and partly due to initial apprehension of the clients, loans tended to start small and increase consistently over new loan cycles. It is interesting to note that although most clients increased the size of their loans from one cycle to the next, they did not always borrow at the maximum level set by the MFI.

At least 43% of the clients borrowed the same amount or less when going from the second cycle to the third. The same is true for the transitions towards higher loan cycles (44% of those going from the third to the fourth and 55% of those going from the fourth to the fifth). This may explain why average loan amounts tend to level off in the higher cycles, as demonstrated in Table 6 and Graph 1.

Apart from analyzing past loan amounts, the questionnaire included a hypothetical question about future investment plans. Clients were asked: *What amount do you plan to borrow next?*

Responses to this question varied according to the size of their current loan and number of loan cycles completed (these two variables are highly correlated, 0.73, since loans get bigger as cycles progress). When controlling for current loan size (or the cycle number), neither the particular MFI, nor the type of investment activity had a statistically significant effect on the loan size the clients wished to borrow next. Table 7 shows the results of the regressions.

Most members (48%) answered that they wanted the next loan to be 1,000-3,000 Rs. higher than their present one. 20% wanted a next loan that is 4,000-6,000 Rs. higher than their current one, while 14% were planning on taking a next loan that is more than 7,000 Rs. higher than their current one. As was observed previously from their actual borrowing history, there are also members (18%) who responded that they wished to take a next loan that was equal to or smaller than their current loan. Table 7 and Graph 2 illustrate the relationship between current loan amount and the planned next loan.

5.6.1 *Maturing into Larger Loans*

Additionally, the survey attempted to capture the maximum amount that women would be comfortable borrowing in the absence of the borrowing restrictions. This question was designed to understand the capital constraints that MFIs are placing on their clients.

Results obtained for this question varied considerably across MFIs. For ASA, 70% of the women were willing to borrow more than the established limit of 10,000, with a considerable number of women (28%) saying they would be willing to borrow 50,000. Some ambitious clients even said they were willing to borrow Rs. 100,000. On the other hand, clients of CASHPOR proved to be more conservative, with only 28% wanting to borrow more than the established limit of 14,000 (and 51%

wanting to borrow more than 10,000). In the case of CASHPOR, nobody answered 50,000 or more, and only one client suggested 25,000.

There are a few possible explanations for this difference in client behavior between institutions. One has to do with the existence of ASA's Rs. 35,000 housing loan. Although the housing loan is no longer available, most members know about its existence or know members who are repaying it. It gives them a concrete example or benchmark of a sizeable loan and utilization that can be effective amongst their peers. Evidence to back this theory can be found in the fact that 7 out of 10 women that would be willing to take a loan for 50,000 and all of the ones answering 35,000 say it is for "house construction", while *none* of the CASHPOR clients cite house construction as a reason for maximum level of indebtedness.

A complementary explanation might have to do with the role of savings. The fact that ASA clients have an explicit savings mechanism may give them more security in terms of acquiring higher loans.

It is interesting to note that the response to this question has basically no relation to the current borrowing levels. It is reasonable to expect that members with more experience and higher current loans would be more comfortable borrowing larger amounts of money in the future. However, this is not necessarily the case as some "young" clients have expressed the desire of receiving high loans (women with only 4,000 or 5,000 have said that they would take ten times this amount in loans), while some "mature" clients have been modest in their responses (women with only 10,000 have said that they would only take a maximum loan of 12,000). The answers also seem to have no relation to the type of businesses women are in or even their weekly profits.

We can only assume that this response is being guided by personality factors and existence, or lack of, concrete future plans. In fact, all clients proposing higher amounts had a clear plan for what to do with that money. Examples include:

- House construction
- Transform petty shop into grocery shop
- Expand biscuit business (rent a place to work, instead of own kitchen, and hire more workers)
- Set up electrical shop
- Buy van for husband's business

(Ref: Graph 3 & 4)

On the other hand, women proposing smaller amounts tended to answer based on their current capacity “*that is all I can repay*” rather than looking forward to a new investment that would allow for a greater repayment capacity. In this sense, 30% of the women proposed the same amount for “*how much is the maximum you would be willing to borrow?*” and “*how much are you going to borrow next?*”. This indicates a lack of long-term investment plans beyond the next cycle. (Ref: Graph 5)

5.6.2 *Guarantees amongst group members*

In reference to how much clients are willing to guarantee for other group members, 58% of clients were willing to guarantee the same amount they are willing to borrow and 31% would guarantee an amount lower than the maximum they wish to borrow.

These responses are interesting in light of the fact that loan sizes tend to be relatively uniform within individual five member groups. In 37% of the cases all members of the group were borrowing the same amount of money, and 80% of the groups had a difference of 3,000 or less between the member with the highest loan and the member with the lowest level.

Regardless of the size of the loan, 60% of clients said that their guarantee depends on the business activities chosen by other group members. In particular, it was conditional on their repayment capacity.

5.7 **Moving out of Group Lending**

Given the readiness that some members demonstrated to borrowing large amounts of money, they were asked whether individual loans would be preferred to continued group lending, given the same interest rates and repayment schedules.

The majority of clients responded that they would rather continue with a group lending scheme (36 out of 45 women who answered the question). Overwhelmingly, the reason given for this choice was the ability to share risk and receive support in periods of financial difficulty. Other reasons cited included:

- The group nature of joint lending
- Because they can all be benefited
- Because the group generates more pressure to repay
- Because they can share the cost of transporting the money to the field office¹

When looking closer at the clients who responded they would rather change to a scheme of individual lending (9/45), we see that they are not necessarily the clients with the highest current loans or most completed cycles. Women who would rather have individual loans had loan amounts

from 4,000 to 15,000 Rs. and had completed from 1 to 8 lending cycles. The main reasons provided for preferring individual lending were:

- Not to have responsibility for other members' repayment
- To be able to pay off loans quickly if desired
- To get higher loans

It is interesting to note that one client who responded that “she does not want to bear the burden of others” is a client who admitted to having business problems the previous week and having had to resort to an external source of financing to cover her ASA repayment². This behavior reveals that the client is not counting on the group members for help when needed, and instead would rather face things individually, even if it means accumulating additional debt.

The majority of the other members showed that this is precisely the kind of situation that they wish to avoid by being in a group. The group allows them to mitigate risk by sharing among themselves.

6. Further Research

Although exploratory in nature, this report has presented several themes that emerged from surveys regarding the mechanisms of joint liability. This section will present areas where further research can help identify institutional, policy or product design innovations that could lead to improvements in the overall performance of microfinance institutions.

Regarding screening mechanisms, survey results imply that most of the screening activities are carried out by the MFIs. Client selection of group members is primarily done on a neighborhood basis. This allows for implicit screening to take place, but does not induce active screening based on work ethic, entrepreneurial spirit or debt levels. Strengthening of screening mechanisms may produce positive results by preventing situations in which women do not want to cover up for their group members. In other words, it may reduce those situations in which there is a breakdown in joint liability.

Further research is necessary to look into policies designed to: (a) encourage more explicit screening mechanisms on behalf of clients and (b) reduce the role of MFIs in the group selection process. While most cases of default were covered by group members, in cases where this did not occur, the primary reason for default was a breakdown in the joint liability function. A comprehensive assessment of the impact of varying levels of MFI intervention in the screening process could provide useful insights into the proper designation of such responsibilities.

The role of savings emerged as an important factor throughout the investigation, primarily because ASA had a compulsory savings policy while CASHPOR's legal status prevented them from

providing such a product. Results from the survey indicate that mandatory savings may make clients feel more comfortable borrowing and guaranteeing larger loan amounts. Further research should be dedicated to determining whether or not savings reduces the need for enforcement mechanisms within the group.

Example research questions include:

- Are clients with savings willing to borrow and guarantee larger loans?
- Does offering savings reduce the need for group enforcement mechanisms?
- Are clients without savings more likely to default on their loans?
- Do clients with savings borrow more or less?

Another policy design intervention is the development of a graduation process into alternative lending schemes for mature clients. Although this has not yet been formally addressed by many MFIs, such processes need to be developed as MFI's and the client bases grow and mature. The results of the study showed that some clients desired individual loans given the same weekly repayment scheme, while others wished to continue borrowing as a group. It is necessary to delve deeper into these matters to develop processes that best fit the needs of the clients. Examples include an exit strategy, graduation into individual lending, continued group lending with different repayment schemes, meeting cycles, or higher loans.

Example research questions include:

- How can mature clients be linked to commercial banks with individual accounts?
- Is it financially feasible for MFIs to offer individual lending to mature clients?
- How can mature clients be better incentivized to continue repaying loans?
 - o Should alternative repayment schemes be offered?
 - o Should they be allowed to take larger loans?
 - o Should the length of the loans be shortened?
 - o Should interest rates be weighted?
 - o Should meetings be held less often?
 - o Need collateral or guarantor?

Finally, an analysis of MFI staff incentive structures and their impact on client behavior would be of great value for improved MFI performance. Many MFIs evaluate field officers with respect to repayment rates and new group creation, among other things. This can potentially lead to

problems if field officers demand repayment in situations where it is not possible, forcing members to turn to moneylenders or other undesirable ways of financing to repay the MFI.

Example research questions include:

- Are there better ways to incentivize field officers to improve their performance?
- What types of individuals make the best field officers? What gender, level of experience, education, personality characteristics?
- What adjustments can be made in the training procedure of field officers to improve their performance?
- How can monitoring and evaluation procedures be adjusted to improve performance of field officers?
- What type of communication strategies work best?

As described in this paper many institutional, policy and product design factors have great influence on client borrowing behavior. Therefore, there is potential to improve monitoring, screening and enforcing mechanisms by experimenting with alternative methods. Hopefully, this paper has identified some of the potential avenues for such experimentation.

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11. <http://www.cashpor.org/>

Annex I : Questionnaire

Date of Interview:

Name:

Client ID:

Center Name:

Branch:

MFI:

Joint Liability

- 1.1 When did you receive the first loan from the Bank/MFI?
- 1.2 How many loan cycles have you completed?
- 1.3 How have you spent the past loans? How much? Your business or your husbands?
 - 1.3.a Cycle 1:
 - 1.3.b Cycle 2:
 - 1.3.c Cycle 3:
 - 1.3.d Cycle 4:
 - 1.3.e Cycle 5:
- 1.4 What amount are you currently borrowing?
- 1.5 What amount are you currently saving per week?

2. Screening

- 2.1 Did you know ALL the other members of the group before forming the group?
- 2.2 How did you chose the members in your group?
- 2.3 Did you know about group members income levels and sources before joining the group?
- 2.4 Did you know about group members debt levels before joining the group?
- 2.5 Do you know what activities group members plan to do before joining the group?
- 2.6.a Has your group always been the same?
- 2.6.b How many members have changed? Why?
- 2.6.c If a new member had to join the group, how was that member chosen?

3. Monitoring

3.1 Do you know ALL group members activities and how much in loans they have?

	Name	Loan Amount	Purpose
3.2.a			
3.2.b			
3.2.c			
3.2.d			

3.3 How often do you talk to group members outside meetings about your business? When?

3.4 Do group members visit each other's businesses to ensure they are working?

3.5 Who is responsible to visit other group members businesses? (member or group leader)

3.6 Why was your group leader chosen?

3.7 What responsibilities does the group leader have?

4. Enforcing

4.1 How many times has a group member defaulted on a weekly payment?

4.2.a If Never, what would happen if someone defaulted?

4.2.b Why do you think nobody defaults?

4.3.a If Yes, what happens when someone defaults?

4.3.b Are the defaulting members usually the same?

4.3.c Have you removed a defaulting member from the group after completing the loan?

4.3.d Why or why not?

5. Maturing into larger loans

5.1.a How much is the max you would be willing to borrow?

5.1.b Why?

5.2 How much is the max you would be willing to guarantee for other group members?

5.3 Does this vary for different group members? Why?

5.4 Which activity would you absolutely not support for other members?

5.5 Given the same repayment schedule and interest rate, would you rather have group or individual lending? Why?

Microenterprise

6. Current Investment Activities

- 6.1 What were you doing before you obtained microfinance lending?
- 6.2 What type of enterprise do you operate now?
- 6.3 How long have you been doing this enterprise?
- 6.4 Why did you choose this enterprise? Or why did you change activities if you did?

7. Financial Status of Enterprise

- 7.1.a Do you have any debt other than the MFI?
- 7.1.b Who did you borrow from? Why?
- 7.2 How many family members help you with your business? Which ones?
- 7.3 Do you have paid employees?
- 7.4 How many hours do they work per week?
- 7.5 How much do you pay them (a week/a day/per hour)
- 7.6 What material inputs are necessary for your enterprise? How much do you spend on them per week?
- 7.7 How much are your total costs per week?
- 7.8 What are your average revenues per week? (or day)
- 7.9 What is your estimated weekly profit?
- 7.10 Does this vary through the year?
- 7.10.a If yes, what have caused these fluctuations in the past?

8. Characteristics of the Value Chain

- 8.1 Where/who do you buy your inputs from?
- 8.2 Do you buy from one supplier or several?
- 8.3 Who do you sell your output to?
- 8.4 Who determines the price of your good or service?
- 8.5 What does your buyer do with the products?
- 8.6 Is your buyer willing to buy more of your product?

9. Investment Strategy and Scaling Up

- 9.1 Do you expect to take another loan? How much?
- 9.2 What will you do with your next loan? Scale up current business?
- 9.3.a If you were given training, would you rather be doing a different enterprise?
- 9.3.b Which one?
- 9.4.a If you were given training, would you rather be doing a different enterprise?
- 9.4.b Which one?
- 9.4.c. How much more money would you need?

10. Sources of Alternative Business Ideas

- 10.1 How many different business ideas did you try?
 - 10.1.a Which ones?
 - 10.1.b Why did you pick them?
- 10.2. Have any of your ideas failed in the past?
 - 10.2.a. Which ones and why?

Footnotes

- 1 ASA-GV internal powerpoint presentation
- 2 <http://www.asadev.org/MFP>
- 3 <http://www.cashpor.org/about/>
- 4 http://www.gfusa.org/programs/partners/cfts_cashpor/
- 5 CMC Internal PowerPoint Presentation (7/9/2005)
- 6 CASHPOR India Group Operating Manual
- 7 CASHPOR India Group Operating Manual
- 8 Responses were not self declared. See Annex II for classification of beneficiary by loan activity.
- 9 Outliers declaring less than Rs. 50 or more than Rs. 2,500 per week were removed from the sample for these calculations.
- 10 In the regressions, the excluded MFI category is CASHPOR and the excluded activity category is production.
- 11 This response was given only by CASHPOR members given their current “no cash” policy
- 12 The client received a Rs.200 loan at an interest rate of Rs. 6 per week.

Table 1: Branches Covered in the Investigation

MFI	Branches Covered
ASA - Grama Vidiyal	Chozan Nagar, Kattur, Kovil Patti, Manikandam, Somarasampettai, Srigangam
CASHPOR Microfinance	Maharajgang, RajaTalab, and Chaubeypur

Table 2: Screening Process for Group Formation

		ASA		CASHPOR	
		Freq.	%	Freq.	%
Did you know all the members of the group before joining the group?	Y	57	96.61	37	92.5
	N	2	3.39	3	7.5
Did you know about group members' income levels before joining the group?	Y	36	61.02	21	56.76
	N	23	38.98	16	43.24
Did you know about their debt levels?	Y	20	33.9	5	14.29
	N	39	66.1	30	85.71

Table 3: Episodes of Default

Branches	Number of clients having episodes of non-payment (with or without group cover up)	Total number of clients interviewed	%
ASA			
Chozan Nagar	1	6	16.7
Kattur	1	9	11.1
Kovil Patti	5	6	83.3
Manikandam	5	12	41.7
Somarasampettai	2	10	20.0
Srirangam	5	16	31.3
Total ASA	19	59	32.2
CASHPOR			
Chaubeypur	2	5	40.0
Maharajgang	12	15	80.0
Rajatalab	11	17	64.7
Total CASHPOR	25	37	67.57
Total ASA and CASHPOR	44	96	45.8

Table 4: Outcome of Episodes of Non Payment

Total Episodes of Non Payment	44
Group covered up and defaulting member repaid	28
Member dropped out or was expelled by group (group repaid)	12
Member borrowed from moneylender for repayment	2
Still in default	2

Table 5: Causes of non-default

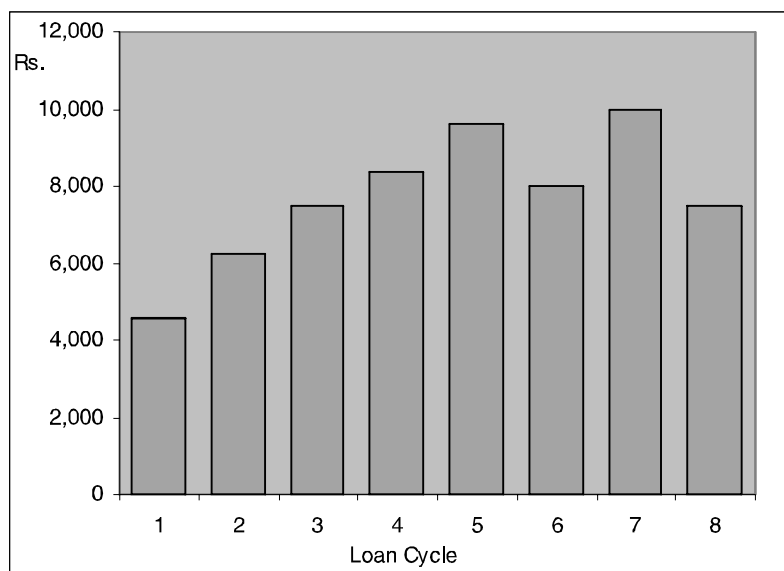
Why do you think nobody defaults?	#	%
Have sufficient income	11	32.35
Ease of weekly payments	8	23.53
To get future loans	5	14.71
Support from MFI	4	11.76
Trust in group	3	8.82
Borrow from others	2	5.88
Monitoring	1	2.94
Total	34	100

Table 6: Mean Loan Amount by lending cycle

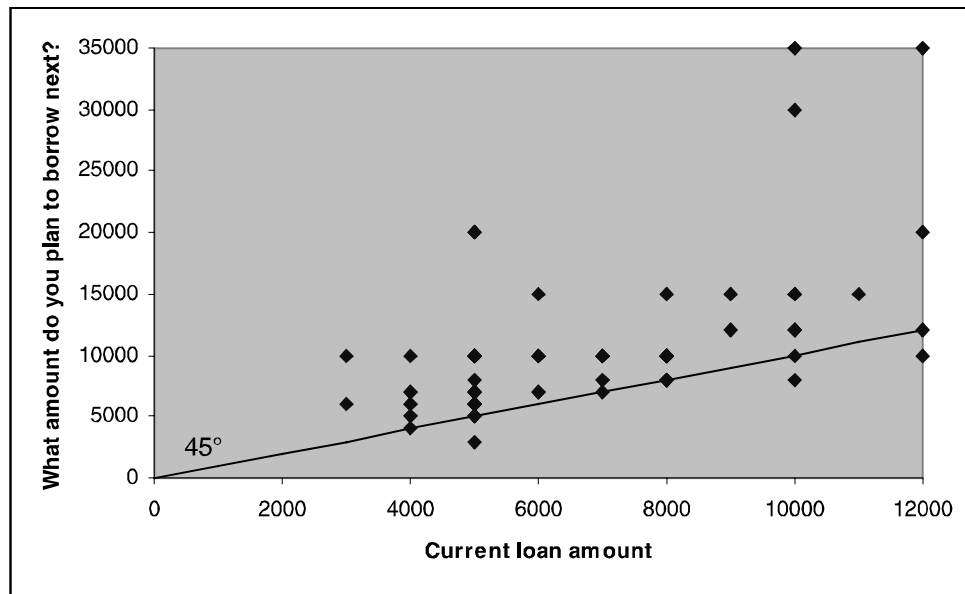
	Mean Loan Amount	Obs
Cycle 1	4,584.6	65
Cycle 2	6,238.1	63
Cycle 3	7,463.4	41
Cycle 4	8,350.0	20
Cycle 5	9,615.4	13
Cycle 6	8,000.0	6
Cycle 7	10,000.0	8
Cycle 8	7,500.0	2

Table 7: Dependent Variable: Size of Next Loan¹

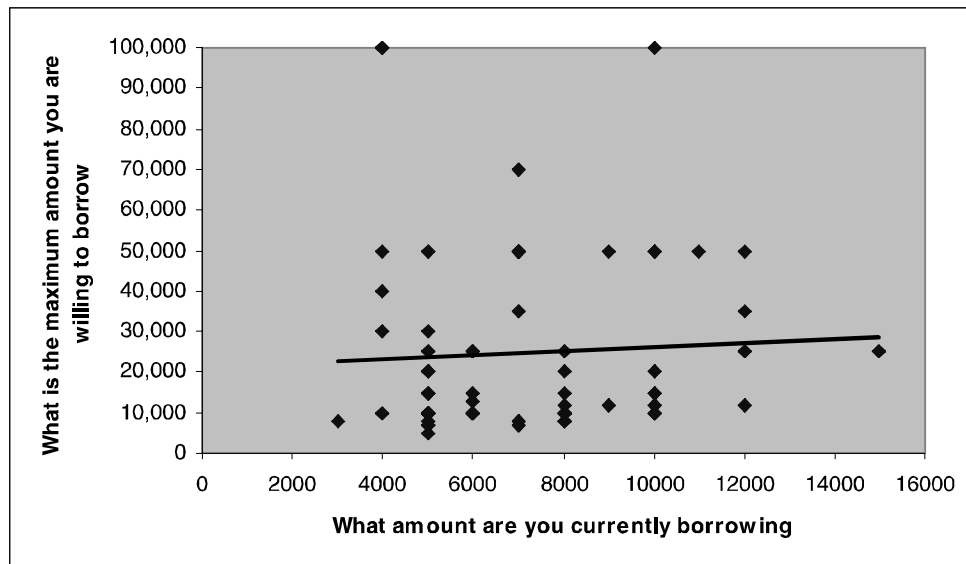
	Regression #1		Regression #2		Regression #3	
	Coef.	T - Stat	Coef.	T - Stat	Coef.	T - Stat
Size of Current Loan	1.5039	8.59 (*)			1.067911	5.26 (*)
Number of Cycles			3383.334	6.88 (*)	1845.139	3.48 (*)
MFI (1=ASA)	2619.5	1.61	985.4762	0.56	1421.386	0.93
Agriculture	-8336.5	-2.33 (*)	-8068.593	-1.95	-13270.2	-3.73 (*)
Animal husbandry	-2191.5	-0.95	-2196.847	-0.87	-2996	-1.41
Construction	-1259.9	-0.3	-4802.353	-1.03	-3177.22	-0.82
Trading	-1192.4	-0.68	-578.4452	-0.3	-659.809	-0.41
Transportation	495.84	0.09	1464.314	0.23	1614.926	0.3
Constant	-634.57	-0.35	783.5423	0.42	-2066.15	-1.2
Number of Obs.	64		64		64	
R-squared	0.6411		0.541		0.7058	
Adj R-squared	0.5962		0.4866		0.663	

Graph 1: Average Size of Loans by Lending Cycle

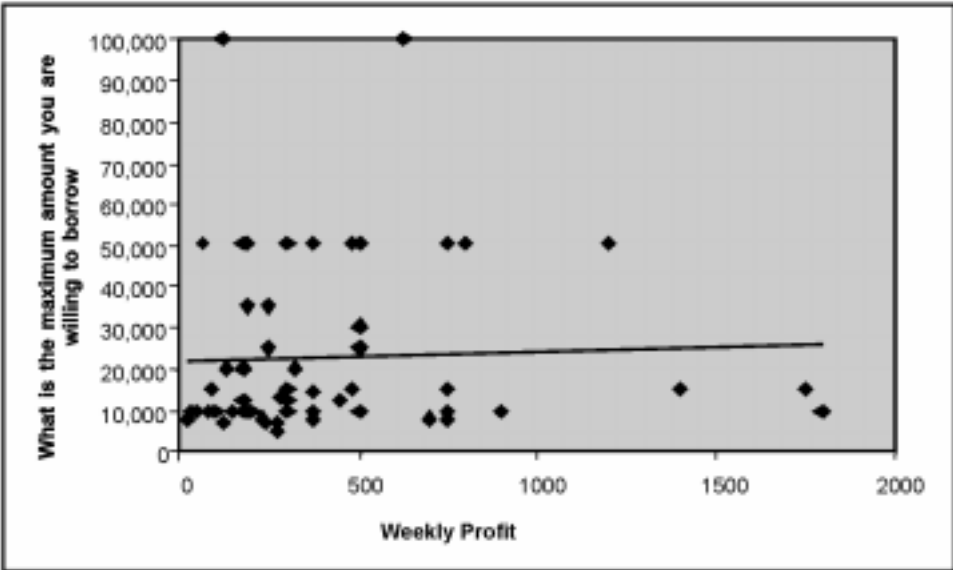
Graph 2: Amount planned to borrow next and current loan amount



Graph 3: Maximum amount willing to borrow and current borrowing amount



Graph 4: Maximum amount willing to borrow and weekly profit



Graph 5: Maximum amount willing to borrow and amount to borrow next

