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Impact of Competition on Microfinance Beneficiaries: Evidence from India

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India has been implementing Microfinance programmes for the last three decades. The journey from Micro-Credit to Microfinance has been long. Presently formal financial institutions and government and non-government agencies are implementing microfinance programmes all over the country. However, it is found that there is no synergy among these organisations. They are not sharing information about their clientele among themselves. This paper makes an attempt to analyse the impact of an increase in competition among microfinance institutions on the decision of delaying the repayment by their clients.

Key Word: Microfinance, Competition, Double Dipping, Self Help Groups.

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I. Introduction

Government of India has taken various steps for alleviating poverty since Independence. However, in spite of the various efforts, almost 27 percent[1] of total population in India still continues to be below the poverty line. It is identified that most of the poor are in the rural areas. Further, along with this poverty scenario, no adequate employment has been generated in the labour market in India. This may be one of the reasons for the persistence of poverty. Poor adopt various coping strategies to surmount their poverty situation. Credit, Asset Selling and Migration are some of the popular coping strategies adopted by the poor in India. Development Economists have over the years proposed that credit is one of the best strategies to overcome the problem of poverty. Credit can help the poor in taking up income generation activities which will in turn improve their standard of living.

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Theory of Rural Credit Market says that the formal financial institutions do not have the perfect information about the poor borrowers. So lending to a poor is risky as the person is not able to offer enough asset as collateral to the lender (Ray, 1998). Apart from this, the borrower has limited liability. If the project fails, the borrower is not able to repay the loan. These factors limit the access of the poor to credit in the formal rural credit market. In this context, Stiglitz (1990) explains three problems of formal financial sector: Screening problem[2], Incentive Problem[3] and Enforcement Problem[4]. Another important feature of credit market is that formal lenders are not concerned about end- use of loans. The incidences of post borrowing moral hazard[5] are often found in rural Indian credit market. For example, a person who has applied for a loan for use in agricultural production may use it for consumption purpose like meeting expenses of a wedding ceremony or religious festival. In such cases the lenders do not have enough mechanisms to recover the loan[6].

It is identified in the credit market that there is a large covariance between access to loan and income level of a household (Dasgupta 1993). The asset less and risk averse poor borrowers do not get credit in time of distress as supply of credit is generally reducing with the rise in demand

[1] See Census 2001.
[2] In the absence of information about the returns from projects of different borrowers, the cost of determining the extent of risk of default for each borrower is high.
[3] It is costly to ensure that borrowers take actions which make repayment most likely.
[4] In the event of failure of a project, it is difficult to compel repayment.
[5] Moral Hazard is called a hidden action problem. It is not easily discerned how borrowers are using their loans due to information asymmetry.
[6] The amount of loan is small. If the lenders try to recover the loans through legal procedure, it will be costly for them.

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for credit. To maintain the equilibrium in this market either rate of interest has to be increased or high collateral is required (Dasgupta 1993). It is indeed ironical that though the rich have lesser need of credit than the poor, they have more access to the credit than the poor. Because of these factors, the informal moneylenders have come to dominate the rural credit market for a long time. The moneylenders also charge usurious rate of interest on loans. Another reason for dominance of informal money lenders is the prevalence of inter-linked credit transaction. For example, a trader prefers to lend to those borrowers who can supply him inputs, say grains. The informal lender does not ask for high collateral and as a result, the poor find these informal loan facilities easily accessible.

The government of India has made several attempts to provide credit facilities to the poor since the nationalisation of 14 major Commercial Banks in 1969. In the year 1975 Regional Rural Banks were set up with the objective of priority sector lending which targeted rural poor and weaker section of the society. Through these initiatives, the government was able to make credit accessible to 61 percent of rural poor in 1981 whereas only five percent of them were served in 1951 (Karmakar 1999). Different programmes were also designed to reach the poor clientele. However, experience over the years shows that most of the government implemented credit programmes have not been successful and as a result, poor are not able to avail formal credit especially during the time of their distress when they are in dire need of credit support.

Micro-credit emerged as a poverty alleviation tool which has brought hope and light in the lives of poor. The initiation of the Micro-Credit movement can be traced to Bangladesh in 70s. Md. Yunus, Noble laureate, Chairperson of Bangladesh Grameen Bank is credited as the pioneer of this movement. The movement over the years has proved that poor are bankable. The success of this movement solely depended on Joint Liability Lending[7] and Peer Monitoring[8]. The model of Bangladesh Grammen Bank was also replicated in different parts of the globe. Other important microfinance institutions across the world are BancoSol of Bolivia, the Bank of Rakyat of Indonesia, the Bank Kredit Deas of Indonesia and the village banks started by the Foundation for International Community Assistance (FINCA) in Indonesia etc. Like other developing nations, in India this movement started in late seventies. In the initial stage Non Government Organisations (NGOs) took the initiative of providing micro-credit service to the rural poor. Eventually, National Bank for Agriculture and Rural Development (NABARD) came to play a prominent role in providing microfinance to the poor in India.

[7] *Joint Liability Lending* promotes screening, monitoring, verification and enforcement of repayment.
[8] *Peer monitoring* transfers risk of fund from the lender to the co-signer or peer.

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II. Microfinance in India

Microfinance[9] has been perceived as an alternative tool of providing financial services to poor clientele in India. SEWA (Self Employed Women Association) Bank[10] is the oldest microfinance organisation in the country. The Community Based Organisations (CBOs) and Non Governmental Organisations (NGOs) initiated the microfinance movement and the formal financial Sector joined in at a later stage. The popular mode of delivering microfinance in India is Self Help Groups (SHGs)[11]. Initially, NGO-MFIs motivated poor to form SHGs and supported them to manage their savings and internal lending activities within the SHG. In the year 1992, NABARD initiated a pilot project on SHG-Bank Linkage programme in India. For this pilot project, Southern States in India were chosen. NABARD took up this programme on a full-fledged manner in 1998 after experiencing an immense success of the pilot project. Now SHG-Bank Linkage Programme is the largest microfinance programme in the world. Within a span of 15 years, the outreach of this programme had increased to 2.24 million credit linked SHGs in the year 2006 from 255 credit linked SHGs in the year 1992. In the present Indian microfinance sector, Commercial Banks, Regional Rural Banks, Cooperative Banks, Non Banking Financial Companies (NBFCs) and NGOs are involved in offering microfinance services to the poor.

Microfinance movement in India can be divided into two phases. In the first phase of this movement, it was found that NGOs and CBOs took the initiative of group formation. They nurtured these SHGs and provided micro-credit. In this phase most of the programmes were sponsored by national and international donor agencies. In the second phase, Micro-Credit movement transformed to a broader level of intervention and came to be recognised as Microfinance movement. Formal financial Institutions have joined this movement along with NGOs and CBOs. Apart from credit, the provision of other financial products like insurance and micro savings is also carried out. It is important to note that that in the nascent stage it the movement was considered as a poverty lending exercise and now in the present stage it has transformed into a profit earning financial business. Initially the major concern was the

[9] Microfinance has come to be referred to as small-scale financial services (including savings, credit, insurance, business services and technical assistance) provided to people who work in agriculture, fishing, herding; who operate small or micro-enterprises, who provide services; who work for wages or commission; and other individuals and groups working at local levels.

[10] It was set up in 1973 in Ahmedabad, Gujarat. This is a trade union which started organising self employed women in this State.

[11] An SHG is defined as a small informal association of members who have come together voluntarily with the objective of obtaining socio-economic benefits on the basis of self help and collective responsibility.

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horizontal[12] increase of outreach. However, the horizontal as well as vertical[13] increase of outreach is the major concern in the second stage.

Salient Features of Microfinance Sector in India

Some noticeable features of the microfinance sector in India are discussed here. The most debated topic with respect to the development of this sector is its legal framework. No unique legal structure of microfinance institutions exists in India. Generally, microfinance services are provided by three types of institutions:- Formal Financial Institutions (such as Commercial Banks, Regional Rural Banks, Cooperative Banks and Non Banking Financial Intermediaries coming under the ambit of the Reserve Bank of India's (RBI's) regulatory framework flowing from the statutory provisions of either the Banking Regulation Act, 1949 or the Reserve Bank of India Act, 1934, or both.); Semi Formal Institutions (such as NGOs, NBFCs registered under the Registration of Societies Act or Section 25 of the Companies Act or the Cooperative Societies Act etc as the case may be) and Informal Institutions (Self Help Groups and village moneylenders etc). According to legal status, semi formal MFIs are not allowed to raise equity and mobilise public deposits. As a result most of the semi formal institutions are changing their legal status from either a society or a trust to a NBFC or a Bank. In this process they are being forced to change their mission of social service to the objective of profit earning. It is also seen that the growth of this sector is enormous and resulting in competition among service providers.

Spread and Outreach of Microfinance Sector

The other issue is of spread. There is a regional imbalance of outreach in the microfinance sector. Majority of the outreach has happened in Southern States like Andhra Pradesh, Karnataka, and Tamil Nadu and other States joined much later. The Table 1 shows the region wise distribution of outreach and loan disbursement of the SHG- Bank linkage programme (see Annexure). It can be seen that in Southern States about 55 percent of SHGs are linked to the banks and 75 percent of total loans are distributed to these SHGs in the States in the year 2006. A very small growth of SHG outreach and loan disbursement is found in North-Eastern Region. This region accounts for 2.7 percent of total SHGs and 1.5 percent of total loan disbursed. The reason for this imbalance could be due to initial selection of Southern States for the pilot project and the enormous success of this project in these States. Further, historically these States had a large

[12] Horizontal increase of outreach means the increase in number of beneficiaries linked to the formal financial sector.
[13] Vertical increase means improve of the financial services provided to the same beneficiaries.

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number of *nidhis*[14] and chit funds that have fairly long and successful tenure in many parts of these States. These developments are likely to have induced many NGOs and other MFIs to launch and implement their micro finance programmes in this region.

Presently, a large number of NGOs and most of the Banks in India are implementing microfinance programmes. It is notable that some branches of Regional Rural Bank and Cooperative Bank have regained their profitability through implementing the microfinance programme[15]. Reserve Bank of India has also given importance to this SHG-Bank Linkage programme under the aegis of NABARD. Lending under SHG Bank Linkage by Commercial Banks and Regional Rural Banks is considered under priority sector lending. Some private commercial banks like ICICI Pvt. Ltd. and few foreign banks are also implementing this Linkage programme.

Initially there was no geographical overlapping of outreach as microfinance institutions were operating in different areas. However, now with the increase in demand for microfinance and increase in outreach per institution, in some parts of India, about five to six MFIs are presently operating in same geographical areas. Thus, it is observed that rural credit market in some pockets is completely saturated. Some MFIs in these pockets are also expanding their services in other geographical region with a view to increase their outreach. However, it has resulted geographical overlapping of outreach as some other MFIs have already started their operation in this new region.

The Problem

Despite the geographical overlapping, no MFI is sharing information about the quality of its clients with other MFIs in this area. They are facing the imperfect competition in this sector. Initially MFIs achieved the high rate of repayment due to joint liability lending. It is identified that the joint liability lending is successful when source of credit is limited. However, in the present situation with persistence of information asymmetry in microfinance sector has resulted in micro-credit clients accessing credit from more than one source. This phenomenon is known as 'double dipping'. If they invest multiple loans and earn significant income, they would be able to repay all the debts and improve their living standard. It is found that a large number of

[14] Nidhis are companies formed with the exclusive object of cultivating the habit of thrift, savings and functioning for the mutual benefit of members by receiving deposits only from individuals enrolled as members and by lending only to individuals, also enrolled as members.

[15] Informal discussion with some bankers of Regional Rural Banks and Cooperative Banks in Gujarat and Tamil Nadu revealed this fact.

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microfinance clients have borrowed credit for productive activities[16]. However, they have experienced with lack of marketing facilities for selling their products. Along with this the general lack of business opportunities in the market, double dipping increases the indebtedness of borrowers. It is also found that SHG members have delayed their repayment in presence of competition in India as they have not been able to use up credit productively.

In this present scenario, the paper makes an attempt to study the impact of rising competition of MFIs on their clients in India. Section III reviews the existing literature on the impact of rising competition in the microfinance sector. Section IV discusses the data and methodology. Section V describes the socio-economic profile of the surveyed sample. Section VI analyses the determinants of 'delay in repayment' in presence of competition and section VII has the conclusions.

III. Microfinance and Competition

The rapid growth of microfinance movement by socially committed non profit institutions has proved that poor are bankable. Realising this fact, profit maximising formal lending institutions have started to penetrate into this market. Now it is the global scenario that non profit organisations are facing competition from profit driven lenders. This has made the socially motivated non profit lenders re-think about their strategies of reaching the poor. Competition in microfinance sector started in the last decade in some countries such as Bolivia, Nicaragua, Bangladesh and Uganda (Rhyne and Otero 2006). In other developing countries such as India, it has just started. Economic Theory says that competition brings more choices to the consumers and it forces the service providers to re-think about their quality of product and strategy.

The competition in any market has positive as well as negative impacts. The major findings on this issue with reference to microfinance sector in the existing literatures are discussed in this section. McIntosh and Wydick (2005) have identified three adverse effects of the entrance of new MFIs into the same area: - i) Bertrand competition among MFIs reduces the ability of rent generation for providing credit to the poorest and potentially least profitable borrowers; ii) emergence of a competitive market restricts grant funding to the poorest potential borrower as client maximising non profit lenders are undercut by profit maximising lenders to capture the

[16]It is seen in Andhra Pradesh, Gujarat, West Bengal and Tamil Nadu during the field trip organised by IRMA, JDS and IFMR.

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most profitable borrowers in a given pool and iii) competition generates the likelihood of increasing asymmetric information between lenders. The more are the number of lenders in the market; the information sharing among lenders becomes more difficult. This creates an incentive to some borrowers to borrow from multiple lenders (double dipping). The more is the number of lenders entering into the competition; the more is the deterioration in repayment performance and in savings deposits of borrowers[17]. With absence of the formal mechanism of information sharing, MFIs are not able to overcome the problem of double dipping as they do not know the indebtedness of their clients.

Two opposing effects of increase in competition among microfinance lenders in Bolivia have been studied in Vogelgesang (2003). On one hand, high competition and increase in supply of credit increase the indebtedness of the borrowers resulting in repayment problem. While on the other hand, clients with a given level of indebtedness repay punctually as they could be more aware of the importance of need of timely repayment as micro-loans are required for conduct of their daily business. The author has suggested that lenders could have developed higher repayment incentives and efficient screening to compensate for high competition and supply. In three conditions, rising competition could have positive impact on the society. These are:-i) a well functioning credit information system (helps lenders to know when multiple loans reduce a client's repayment capacity and to manage early). The larger the supply of loans is, the more important is the credit information system; ii) a mature market with clear regulations (contributes to stability and reduces uncertainty) and iii) the lender's growth strategies (need to be adjusted to increasingly saturated markets). They should concentrate on different directions for growth like to rural areas, to larger enterprises or to offer other financial services etc.

Navajas et al (2003) have analysed the impact of competition between Bancosol, the pioneer microfinance bank in Bolivia and Caja Los Andes, Non-banking financial intermediaries (which entered into the market at a later stage). Their study reveals that the impact of competition on poorest is ambiguous. Profitable micro-lending would be possible if appropriate lending strategy is adopted. They have examined that competition has changed the loan contracts through which different segments of market could be served and different classes of poor could access the credit facility. They have also found that competition can reduce the outreach of the pioneer-lenders by limiting the extent to which the socially motivated lenders cross-subsidise poor borrowers.

[17] Poor people have the limited financial resources hence they are not able to save much. In presence of multiple MFIs they distribute their savings among these MFIs to access the credit from them. As a result the average size of savings per beneficiary per MFI is quite low.

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How competition has made microfinance institutions efficient is discussed in Rhyne and Otero (2006). They have mentioned that Bancosol in Bolivia has increased its productivity, reduced costs and increased loan terms to bring its operating expense ratio from the high teens in the late 1990s to the single digit at present. According to the authors, a final effect of competition is greater bargaining power of the clients. They can ask for products and services according to their needs. For example, Bancosol has diversified its product under competition.

Some of the economists have felt the necessity of credit bureaus in microfinance sector. Tedeschi (2006) has suggested that there is a burgeoning interest in credit bureaus among MFIs as the likelihood of competition in microfinance sector is increasing. Information sharing is one of the best practices of microfinance (Campion and Velenzuela, 2001). Isern (2002) has opined that credit bureaus should be created specially for microfinance in every part of the world.

As the formal financial institutions and other financial intermediaries joined the microfinance movement in the second phase, the donor agencies adopted the strategy of reducing funds for microfinance activities. Cutting interest subsidies to socially motivated microfinance institutions (which have already delivered services to the least profitable borrowers in the most economic shock prone areas), is not a good strategy to cope with the competition (Tedeschi, 2006). It forces some of the MFIs out of business. In Ireland Irish Loan Funds became insignificant in presence of their competition with Joint-Stock Banks. It was not because of their inefficiency but the market where they used to operate was transitory and they were not acclimatized to diversify their portfolio. Moreover, these organisations did not have strong supervisory structure like banks (Hollis and Sweetman, 2001).

In this context this paper has attempted to study the socio economic phenomena which could explain why microfinance clients delayed their repayment in presence of competition. In the next section data and methodology of the study are discussed.

IV. Data and Methodology

The data used for this analysis was collected from the survey conducted in 1999-2000 in West Bengal [18]. Jeevika Development Society, an NGO is implementing SHG-Bank Linkage Programme in South 24 Parganas District since 1994. JDS formed 142 Self-Help Groups in 4

[18] West Bengal belongs to the Eastern part of India.

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blocks of South 24 Parganas in 1999-2000. This survey was conducted on 1074 members of 111 SHGs spread over 22 villages. The data set is discussed in more detail in Guha and Gupta (2005).

In surveyed villages, Sagar Grameen Bank (RRB), State Bank of India (Commercial Bank), NGO-MFIs and Informal moneylenders were providing financial services. In our dataset it was found that repayment rate of members of JDS was around 73 percent (Guha and Gupta, 2005). It was also observed that in presence of rising competition among MF lenders some of the SHG beneficiaries borrowed from multiple lenders. During the survey, members who did not repay on time were asked how many months they had not repaid their loan instalment and interest. It was also asked about their outstanding loans with other sources of credit apart from JDS.

For field level survey, a suitable questionnaire was designed to cover three aspects of the SHG members:

1) Socio-economic profile of SHG members;

2) Borrowing profile of SHG members (outside the groups) and

3) Profile of group savings and lending activities.

However, in this paper our main focus is on 2nd and 3rd aspects of SHG members. The data were collected through field level interviews of SHG members and were processed and analysed. The variables are statistically described in the next section and the parameters attached to variables explaining reasons for delayed repayment are estimated econometrically.

V. Socio-Economic Profile of SHG members

In this study we discuss three profiles of SHG members:

i) Age and occupation wise distribution of family members of all SHG members;

ii) Profile of household Income and Wealth of SHG members and

iii) Profile of Borrowing of SHG members inside and outside the groups.

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It was found that the share of children and adults in the members' family was higher than that of aged population (see table II in Annexure). Life expectancy rate at birth in this area might be lower than the State average. It was also found that average number of income earners was less than the average number of adults and school goers. It was one of the reasons for joining SHG as the household income of SHG members was not adequate to meet their daily expenditure.

Most of the microfinance institutions in India have claimed that they have targeted the poorest of the poor. It was seen that the average value of cultivated land was Rs. 72801.23 and the average value of residential land was Rs. 2,03,948 (see table II). Further it was found that only 3.8 percent members did not have residential land and around 54.5 percent members did not have cultivated land. So it is difficult to comment that the NGO under the study has been successful in targeting the poorest of the poor. During the survey it was found that around 55.7 percent members had outstanding loans with SHGs and average size of outstanding loan was about Rs. 884.92. In every SHG there was a rule that member borrower could apply for next loan after the repayment of her first loan. It was observed in the survey that most of the members had availed their first loan from the group. In most of the SHGs, the average size of first loan was around Rs. 500 per member. It was identified that SHG members required very small amount of credit. However, they were not able to meet even this small need for a long time before joining the group.

It was mentioned in the previous section that five MFIs were operating in surveyed area. As a result borrowers were able to access credit from more than one source. The members were asked about their profile of outstanding loans with other sources apart from SHGs. It was found that around 75 percent members had outstanding loan with one source, 26.8 percent members had outstanding loans with two sources and four percent members had outstanding loans with three sources other than the SHG. It was also observed that members borrowed larger loans from outside sources rather than their SHGs. It can be concluded here that credit provided by SHG was not adequate to meet their entire credit need.

If a member does not repay the loan instalment and interest within the stipulated time, she would be considered as a defaulter (Guha and Gupta 2005). It was noticed that members tried to recover the loan instalment and interest when a default was about to occur in the group. Sometimes they made some informal arrangements[19]. During the survey we posed a question as to understand for how many months the defaulting members did not repay the group loans.

[19] For an example, peer members repaid on behalf of the defaulter and they collected it from her later.

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According to rules of the SHG, every borrower member had to repay the group loan in ten equal instalments and each of them was charged interest rate of one percent per month on a reducing balance. It was found during the survey that on an average a defaulter missed two loan-instalments and interest payment.

VI. Factors Responsible for Delay in Repayment

In this section the reasons for 'delay in repayment' is analysed. The model I analyses the impact of individual specific variables on delay in repayment. In model II, the combined impact of group specific variables and individual specific variables on the dependent variable is carried out. The description of variables is as follows:

Table III: Description of Variables

Variable Name	Explanation
Extrtm	= Number of months a defaulter did not repay to the respective SHG.
Nchild	= No. of Children in the members' family.
Doubledip	=1; if a member borrowed from more than one source of credit
	=0; otherwise.
Finaprob	= 1, if a member had financial problem when she joined the group;
	= 0, otherwise.
Groupage	= Length of time for which the group has been in existence.
Grosize	= Size of the group (number of members in a group).
Peelonre	= 1, if member-borrower repaid her peer's loan which she borrowed to repay the SHG-loan;
	= 0, otherwise.

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Impact of Individual Specific Variables on Delay in Repayment

The objective of our analysis is to check the following hypotheses:

i) The number of Children in a member's family does not have any impact on her delay in repayment;

ii) The multiple loans taken by member does not have impact on her delay in repayment;

iii) Financial hardship faced by the member at the time of group formation does not have impact on her delay in repayment;

Model I

The dependent variable is how many months a member-borrower did not repay her instalment and interest to the SHG. For a successful borrower, it is zero. It might be negative if a member-borrower repaid in advance[20]. So the dependent variable is a censored variable. Due to this nature of the dependent variable, a Tobit model of 'delay in repayment of group loans' (Extrtm) on the number of children in the member's family (Nchild), borrowing from multiple sources by the member (Doubledip) and financial hardship faced by the member at the time of formation of the group (Finaprob) is employed. The model is as follows:

$$\text{Extrtm}^* = \alpha + \beta_1 \text{Nchild} + \beta_2 \text{Doubledip} + \beta_3 \text{Finaprob} + u$$

Where Extrtm = 0 if Extrtm*≤0 and Extrtm= Extrtm*, if Extrtm*>0

The theoretical justification of considering these independent variables is as follows:

Nchild

During our survey, it was told that there was more number of children than the income earners in the family of SHG members. Further, that all members were from the same income class (Guha and Gupta 2005). To measure the financial burden in the family of these members, we consider number of children in a member's family as an independent variable. Higher number

[20] However, no borrower had repaid before the stipulated time in our sample observations,

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shows the higher financial needs. It is expected that members, who have higher financial needs, have higher chance of default.

Doubledip

With the increase of competition among NGO-MFIs, NBFCs and banks, the members have more access to the credit market. They can borrow from more than one source at a time and invest it in productive activities. However, lack of opportunity of income generation is found in rural part of India. In this context, it is expected that members who have borrowed from multiple sources have high chance of default.

Finaprob

Guha and Gupta (2005) analyse that one of the important reasons for group formation is financial hardship faced by the member. The members who have financial hardship are likely to repay group loans on time as they would need this source regularly of credit to overcome their financial hardship. They do not have enough assets, which they can offer as collateral against individual formal loans. It is expected that finaprob has negative effect on the dependent variable.

Empirical Results of the Regression Analysis

The regression equation for estimation is given as:

Extrtm* = -1.2019 + 0.0659 Nchild + 2.1744 Doubledip – 0.250491 Finaprob

(0.1069) (0.0219) (0.09189) (0.0682)

Pseudo R^2= 0.5074 (Standard Errors are in the Parentheses).

The result of regression analysis is shown in table IV. It is observed that delay in repayment is significantly influenced by Nchild, Finaprob and Doubledip. The present analysis supports that the member who has large number of children in the family has delayed in repaying SHG loan. We would say from this analysis that members who borrow from multiple sources have overdue loans for a long time[21].

[21] From the field it was found that there was a lack of income generation activities and marketing facilities. Because of this fact, either member-borrowers were not able to earn positive return from their investment or they were not able to invest at all. We might get the above result for this reason.

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Table IV: Impact of individual specific variables on Delay in Repayment

Variable	Sign of Coefficient	t-ratio	P-value	95% confidence interval	
Constant	-	-11.24	0.000	-1.4116	-0.9921
Nchild	+	+3.00	0.003	0.0229	0.1090
Doubledip	+	+23.66	0.000	1.9941	2.3547
Finaprob	_	-3.67	0.000	-0.3843	-0.1167

Number of observation is 1074; LR $\chi^2(3)=920.03$; $P > \chi^2 = 0.0000$; Log likelihood = -446.52784. Observation summary: 786 left-censored observations at extrtm<=0, 287 uncensored observations and one right-censored observation at extrtm>=5.

We expect that Finaprob has negative impact on Delay in repayment. The sign of the parameter supports our expectation. We would say that members who were facing the financial hardship tried to avail every opportunity to access the credit during their financial problem. They did not want to lose the credit facility provided by SHGs by defaulting on their group loans.

Impact of Individual Specific and Group Specific Variables on Delay in Repayment

In this section three group specific variables are introduced as independent variables along with the individual specific variables in the model. Our objective is to check whether there is any combined impact of these two types of variables on delay in repayment or default. The additional hypotheses are:

i) The age of the group does not have any impact on delay in repayment;

ii) The size of the group to which the member belongs does not have any impact on her delay in repayment;

iii) The repayment of peer's loan by the defaulting member does not affect the delay in repayment.

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Model II

To see the combined impact of individual specific variables such as number of children in the family, double dipping, financial hardship and group specific variables like age of the group, size of the group and repayment of peer's loan on delay of repayment, a Tobit model is designed as follows:

$$\text{Extrtm}^* = \alpha + \beta_1 \text{Nchild} + \beta_2 \text{Doubledip} + \beta_3 \text{Finaprob} + \beta_4 Groupage + \beta_5 Grosize + \beta_6 \text{Peelonre} + u$$

Where Extrtm = 0 if Extrtm*≤0 and Extrtm= Extrtm*, if Extrtm*>0

The justification of considering these group specific variables is discussed below.

Groupage

SHGs which exist for a long time are expected to be successful in conducting group savings and lending activities. Members of these groups are interested to keep the groups alive. They might be efficient at peer monitoring and recovering group loans. It is expected that groupage has negative impact on the dependent variable.

Grosize

Besley et al, (1993) and Handa et al, (1999) suggest that the group, which contains large number of members, may fail to achieve sustainability. This group might face the monitoring problem. It is expected that if the borrower belongs to the SHG with large size, there is a chance of default.

Peelonre

During the survey it was found that some groups adopted informal arrangements to reduce the chance of default. In this case, defaulter was offered another loan from her peer member for repaying group loan for continuing the group activities. For a borrower, it is not possible to repay the group loan and peer's loan simultaneously. It is expected that member would have a chance of default if her peers pressurise her for repaying their loans. Peelonre has positive impact on delay in repayment.

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Empirical Results of the Regression Analysis

The regression equation for estimation is given as:

Extrtm* = -1.2215 + 0.06944 nchild + 2.0026 doubledip – 0.2002 finaprob – 0.0192 grosize

(0.2991) (0.0223) (0.0928) (0.0693) (0.0255)

– 0.0023 groupage + 0.4150 peelonre

(0.0167) (0.0880)

Pseudo R^2= 0.5205 (Standard Errors are in the Parentheses).

Table V: Impact of Individual Specific and Group Specific Variables on Delay in Repayment

Variable	Sign of Coefficient	t-ratio	P-value	95% confidence interval	
Constant	-	-4.08	0.000	-1.8086	-0.6345
Nchild	+	+3.10	0.002	0.0255	0.1134
Doubledip	+	+21.57	0.000	1.8204	2.1847
Finaprob	_	-2.89	0.004	-0.3363	-0.0642
Groupage	_	-0.14	0.888	-0.0351	0.0304
Grosize	_	-0.75	0.452	-0.0692	0.0308
Peelonre	+	+4.72	0.000	0.2424	0.5877

Number of observation is 1074; LR $\chi^2(6)$=943.71; P > χ^2 = 0.0000; Log likelihood = -434.68539. Observation summary: 786 left-censored observations at extrtm<=0, 287 uncensored observations and one right-censored observation at extrtm>=5.

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Results of testing hypotheses are shown in table V. It is observed that Nchild, Doubledip and Finaprob have similar impact on delay in repayment like model I. With respect to variables Groupage and Grosize, we expected that Groupage has negative impact and Grosize has positive impact on delay in repayment. However, both coefficients are insignificant and close to zero. Peelonre has significant effect on delay in repayment. The sign of the estimated parameter shows that it has positive impact on delay in repayment. It is easily discerned that no member is able to repay two loans at a time when enough income is not generated from investment. In this state, if peers pressurize her to repay their loans which they have given her for repaying the loan installment, the member borrower would skip the next installment and interest on SHG loans.

VII. Conclusion and Suggestion

Microfinance movement in India has entered into its second phase. Formal, Semi formal and Informal microfinance agencies are operating simultaneously. Competition among the Microfinance Institutions is very common in India like in Bolivia, Indonesia and Bangladesh etc. In presence of competition problem of default increases due to lack of income opportunity. The present paper tried to analyse the factors which caused delay in repaying SHG loans.

Presently microfinance beneficiaries have access to more than one source of credit and other financial products such as insurance and savings etc. In absence of adequate income generation activities, microfinance borrowers (who have borrowed from multiple sources) are not able to repay the loans within the stipulated time. Our analysis shows that members have delayed in repaying loans because of double-dipping and the present financial burden because of having more children in the family. Their income is not enough to maintain a descent living standard. It is very interesting that members who had financial hardship during the group formation are very good at repaying the group loans. This result is due to interconnected reasons. Firstly, since these members have been identified and marked as poor by their peers and the financial institutions they are not able to access credit from more than one source and hence in such a situation these members do not want to loose the opportunity they have acquired of accessing credit from their group. Another noticeable point is that group specific variables do not have much impact on the decision of default. As a result group intervention can hardly reduce the level of indebtedness of the borrowers.

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Microfinance has emerged as a poverty alleviation tool. However, in the second phase of its development it has raised the indebtedness of a section of beneficiaries. This could be due to i) the growth rate of outreach per institution is quite high and monitoring mechanism is not adopted according to the changing scenario; ii) No information sharing mechanism is available among the lenders. It has increased the problem of information asymmetry. Every institution concentrates on raising their outreach without thinking about the quality of their clientele and iv) the growth rate of accessing credit and the growth rate of income generation are not the same.

Some important factors come to the limelight from the analysis. These are : - i) Microfinance Institutions should adopt lending strategy according to the changing scenario of microfinance sector for providing better services. For example, MFIs can design loan product in such a manner that size of the loan and repayment stipulations be determined in accordance with the specific requirements and circumstances of each client rather than being decided mechanically for the entire clientele on a uniform pattern. They can offer need-based insurance services to the clients; ii) they should maintain the synergy among themselves. They should set up common forum or platform for information sharing about the clientele. For example Credit Information Bureau of India Limited can allow MFIs to access the information; iii) they should monitor the borrowers in the post loan disbursement period. They can monitor how the funds are used up. It might help them to reduce the probability of default and iv) they should organise capacity building training for their clientele or link up them with some other capacity building programme along with their financial services. It could help the borrowers in taking up low-risk and profitable projects. MFIs should make effort in linking credit with marketing facilities. Without integration of credit services with marketing initiative, the beneficiaries of microfinance services can hardly be expected to graduate themselves to micro entrepreneurs and it would not be possible for MFIs to achieve the sustainability and reach the objective of poverty alleviation.

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Annexure

Table1: Region wise Cumulative Distribution of Outreach and Loan

	2005		2006	
Region	**Cumulative Outreach**	**Cumulative Loan (in million)**	**Cumulative Outreach**	**Cumulative Loan (in million)**
Northern	86,018	2395.18	133,097	3985.85
North-Eastern	34,238	1,019.61	62,517	1,657.01
Eastern	265,628	5,183.06	394,351	9,354.19
Central	197,365	5,014.56	267,915	8,050.07
Western	96,266	2,950.77	166,254	5,251.39
Southern	938,941	52,421.42	1,214,431	85,676.92
Total	**1,618,456**	**68,984.60**	**2,238,565**	**113,975.43**

Source: NABARD, 2005 and 2006

Table II: Descriptive statistics of observed Variables

Variable	Observation	Mean	Standard Deviation
Number of family members	1074	5	1.80
Number of aged member in the family	1074	0.44	0.66
Number of Adult in the family	1074	2.3	0.93
Number of Children in the family	1074	2.4	1.48
Number of School Goers in the family	1074	1.9	1.42
Number of Income earners in the family	1074	1.4	0.73
Value of Cultivated Land (in Rs.)	1074	72801.23	186938.7
Value of Residential Land (in Rs.)	1074	203948	160443.1
Outstanding Loan with the group (in Rs.)	587	884.92	707.97
Outstanding Loan with the other lenders (in Rs.):			
1st Loan:	804	2594.28	3736.22
2nd Loan:	288	1737.16	2224.44
3rd Loan:	43	1725.58	1752.97
SHG members who have delayed in repaying group loans	288	1.13	0.40

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