Examining the adequacy of MFI multiple lending directive in India: A study of slum dwellers' loan-related choices

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Abstract

The Indian Financial Inclusion efforts have been quite paradoxical. While a significant number of households in the country is yet to have access to formal credit, many parts of the country have already experienced crises of over-borrowing, resulting in huge defaults. Although Indian financial inclusion experts have faced multiple setbacks in their efforts to push credit into low-income households, their pursuit has remained relentless. In order to put a plug on rising non-performing assets, the Reserve Bank of India (RBI) issued new directives for non-banking financial companies – micro finance institutions (NBFC-MFIs) in December 2011, with further modifications in August 2012, restricting the borrower's freedom in a bid to control over-indebtedness. However, we reason that with mostly illiterate and vulnerable customers, and with informational asymmetries in the micro-credit markets, people with a tendency to cheat can still defect, while credit-worthy households may be denied loans at a time of need, and rogue MFIs may pre-empt good customers from other MFIs. Therefore, we study the borrowing behaviour of slum-dwelling households in the city of Pune. We find that the RBI directives are inadequate in containing over-borrowing. We reason that this would be true elsewhere in the country as well. Through a logit model, we find that household characteristics predict over-borrowing behaviour, but only to moderate levels. Since monitoring of microloans is not feasible and not all borrower attributes are observable, we suggest that the RBI should amend these restrictions and allow MFIs to decide their own course of action after obtaining client loan information from credit information companies (CIC).

JEL Classifications – G2, D1, D8, I3

Abbreviations

CIC – Credit Information Company
MFI – Micro Finance Institution
NBFC – Non Banking Financial Company
NPA – Non Performing Asset
RBI – Reserve Bank of India

1. Introduction

Globally, development experts consider financial inclusion of low-income households as one of the potent ways to bring these households out of poverty on to the path of prosperity. A World Bank report found that 67% of the bank regulators in 143 jurisdictions have directives for promoting financial inclusion (World Bank 2013). Over 50 nations have joined hands to set up formal targets for financial inclusion (Alliance for Financial Inclusion 2015). However, translating financial inclusion into household wellbeing is not easy. For example, although the World Bank's Global Financial Inclusion (Global Findex) database shows that between 2011 and 2014, 700 million adults became account holders, and the number of those without an account (the unbanked) dropped by 20% (from 2.5 billion to 2 billion), it also notes in the same context that as high as 40% of these bank accounts remain dormant (Demirguc-Kunt et al. 2015). India also experienced a major exercise in 'banking the unbanked' when the Indian Prime Minister announced the *Pradhan Mantri Jan-Dhan Yojana* (PMJDY) in 2014. The scheme allows any household with a valid identity proof to open a zero-balance account at any public bank and most private banks. A Guinness world record was made when 18,096,130 bank accounts were opened in a single week (DoFS 2015a). As of 16 December 2015, 19.6 crore PMJDY accounts (60% rural) existed, with 33% having no balance (DoFS 2015b).

The World Bank report also poignantly note that previous financial inclusion efforts such as the promotion of credit without consideration of financial stability were a recipe for crisis, as observed in the United States in 2000 and in India in 2010 (World Bank 2013). Similarly, the report by the Committee chaired by Dr. Nachiket Mor remarked that even after Indian regulators and policy makers tried to bring in cooperative banks, bank nationalisation, self-help groups, regional rural banks, joint liability groups, and business correspondent models to improve access to finance in terms of both financial inclusion and financial depth, the overall situation still remains very grim and very uneven on a regional and sectoral basis (RBI 2014, 3). The reports presented by the Committee on Financial Inclusion chaired by Dr. C. Rangarajan in 2008 (Government of India 2008), and the Committee on Financial Sector Reforms chaired by Dr. Raghuram G. Rajan in 2009 (Planning Commission 2009) also discuss the similar state of financial exclusion despite initiatives to encourage financial inclusion.

Paradoxically, even though there is no dearth of Indian and global research on low-income households, there seems to be no clear Pareto optimal solution[a] for financial inclusion. All efforts are marred by a lack of consensus on the actionable items to achieve that end. Though the three aforementioned Indian government reports agree on the need for financial inclusion, they conceptualise it differently, and forward different recommendations based on their own rationale. Many of these recommendations have not yet seen the light of the day. However,

[a] Notwithstanding the imperfections of real world economies, a redistribution of resources that best enables universal access to a wide range of financial services is the fundamental goal.

one commonality between all the reports is the importance attributed to improving access to formal credit at affordable interest rates.

In imperceptible contrast to these reports, the report of the Sub-Committee of the Central Board of Directors of Reserve Bank of India to Study Issues and Concerns in the MFI Sector chaired by Mr. Y. H. Malegam (RBI 2011a) notes that the 'mere extension of micro-credit unaccompanied by other social measures will not be an adequate anti-poverty tool'. This is because high levels of heterogeneity exist; therefore, microfinance can be both successful and failed attempts at fighting poverty depending on the types of clients, the environment, and the combination of services (RBI 2011a). One of the major problems associated with improved access to credit is the creation of moral hazards. With multiple credit agencies competing in the same geographical area, over-lending and even ghost lending become rampant. As a consequence of over-borrowing without the capacity to repay, increased credit dependency and cyclical debt leading to higher default rates occur. Since the Malegam Committee was formed by the RBI in the wake of the microfinance crisis in the erstwhile Indian state of Andhra Pradesh, the report made several recommendations for the regulation of microfinance institutions (MFIs) and the protection of borrowers (RBI 2011a, 48-53). These recommendations were accepted by the RBI and issued to all non-banking financial companies – micro finance institutions (NBFC-MFIs) with modifications in December 2011 (RBI 2011b), and with further modifications in August 2012 (RBI 2012). Notably, these recommendations are similar to the self-regulations imposed by the Microfinance Institutions Network (MFIN 2016).

Though these directives are a welcome move in the previously unregulated microfinance sector, the adequacy of mandates related to 'Multiple-lending, Over-borrowing, and Ghost-borrowers' in tackling the problem has not yet been investigated. Multiple lending refers to a borrower taking loans from multiple sources. Over-borrowing occurs when a borrower becomes indebted above her repaying capacity. Ghost borrowers generally arise in three circumstances: (a) when the borrower on record is a substitute for the real borrower; (b) when fictitious loans are recorded in the books; and (c) when actual loans are given to fly-by-night borrowers without proper verification. Since the adequacy of the mandate is being questioned, a sampling location is selected to satisfy two important conditions: (a) over-borrowing was noticeably rampant before the directive, and (b) the directive has been implemented for more than 1 year. As this mandate is universally applicable to the entire nation, if it is sufficiently found to be inadequate for a region, it will necessarily remain so for other regions as well. This paper is therefore an attempt to explore the context of over-indebtedness and the ramifications of the current mandate in the slums of Pune, a city in the Western Indian state of Maharashtra. The selection of this region according to the given criteria was made possible because of our close association with one of the leading MFIs in Pune for a period of over three years.

The rest of this paper is organised as follows. Section 2 surveys the extant literature on multiple borrowing and over-indebtedness. Section 3 discusses the mandate and presents our arguments about its weaknesses. Section 4 presents the research questions that are examined

in this paper. Section 5 describes the sample collected and methodology followed for analysing the data. Section 6 presents and discusses the results of our analysis. Section 7 concludes the paper with some recommendations for both policy and MFI practice.

2. Literature Review

Informal credit from moneylenders and landlords was fairly common in India for many decades, but often at exploitative interest rates and with coercive recovery mechanisms. In order to bring normalcy into the realm of microfinance, the foundation of formal microcredit was laid by the National Bank for Agriculture and Rural Development (NABARD), in consultation with the Reserve Bank of India (RBI), in 1992 through the Self Help Group (SHG) – Bank Linkage program (Srinivasan and Tankha 2010, 14). Till date, this program has been successful in bringing together many women from poor households, and in the creation of a few million SHGs. However, the improvements in SHGs were slow, as groups are required to save some amount of money with banks before applying for a loan. Many SHGs could not achieve the financial stability required to obtain bank loans. To ease the impasse, these restrictions were removed for the newer Joint Liability Group (JLG) scheme, wherein a group of individuals could avail a bank loan either individually or through the group against mutual guarantee. However, for both SHGs and JLGs, two major issues that remain are (a) the usage of loans for consumption purposes (Taylor 2011), and (b) the inability to repay loans on time (Afroze, Rahman, and Yousuf 2014).

There is a common belief that loans to borrowers will be used solely for investment into productive purposes such as the purchase of equipment (e.g., a tractor) or materials (e.g., inventory for a shop). However, since money is highly fungible, loans are often utilised for self-consumption such as to pay medical bills or to renovate one's house, or for other expenses. Households soon face the burden of debt, and when they are unable to cope, they resort to three basic strategies: (a) borrow from other sources to repay earlier loans, and therefore get trapped in a cyclical dependency on debt (RBI 2011a); (b) start making sacrifices (such as cutting down on eating), take children out of school, sell off assets, among many others (Schicks 2014), and ultimately fall back into poverty (Krishna 2006); and (c) declare bankruptcy to the MFI, forcing the MFI to write off the debt from their account books, often leading them into a crisis themselves (Taylor 2011). Even though repayment behaviour among microfinance clients has been widely studied (e.g., Vogelgesang 2003), a glimmer of hope for microcredit lingers through the benefits of woman empowerment (Weber and Ahmad 2014), women training (Radhakrishnan 2015), and house improvement (McIntosh, Villaran, and Wydick 2011). In order to achieve better results, micro-creditors and policy makers need to first tackle the reasons that create incentives for clients to engage in risky behaviour.

Over-borrowing leading to over-indebtedness is pervasive across disparate regions and even unrelated lending contexts. Schicks (2013) defined an over-indebted customer as one who 'is continuously struggling to meet repayment deadlines and structurally has to make unduly high sacrifices related to his/her loan obligations'. Though Schicks defined a customer as a

household, the definition can be extended to any economic entity such as an individual, a group of individuals, or firms. For example, Farinha and Santos (2002) find that firms are likely to have relationships with multiple banks over the duration of the firm's existence. Their data showed that this situation is more likely for firms with more growth opportunities, and also for firms with poor performance that are facing the unwillingness of banks to increase exposure to the firm. Similarly, Carletti, Cerasi, and Daltung (2007) analyse the optimality of multiple-bank lending when firms and banks are subject to moral hazard and monitoring is essential, and find a greater use of multiple-bank lending when banks have lower equity, firms are less profitable, and monitoring costs are high. Thus, opportunistic tendencies can exist from both parties to a loan contract.

Though over-indebtedness arising from multiple-loans between firms and banks are analogous to households and MFIs, there are some additional peculiarities. For instance, microfinance involves loans of much lower amount that often do not require a collateral, and there may be higher heterogeneity among clients. Further, the low number of loans, coupled with a low fund base for absorbing the risks of delayed payments and increasing competition often drive MFIs to supply a higher amount of loans into the market than what can be naturally supported through demand (Vogelgesang 2003). Working with a survey from Ghana, Schicks (2014) found significant associations of over-indebtedness with the male gender, the adversities faced, and the low returns on loans, and no associations with numeracy and financial literacy. However, not much is known about the effective demand that can match the supply or of the effective supply of loans at affordable rates that is required to attain financial inclusion.

Since both parties have profit incentives to deviate from the norm, and can further benefit from information asymmetries (Akerlof 1970), the regulation of microfinance markets to bring in greater transparency and accountability is required. In order to tackle this mismatch between supply and demand, Luoto, McIntosh, and Wydick (2007) studied the competition among micro-lenders and noted that if information of clients is shared among MFIs through credit information systems (or credit bureaus), then microcredit market performance can improve. Using a logical model of credit markets capturing the corresponding equilibrium between multiple banks and borrowers, Bennardo, Pagano, and Piccolo (2015) observed that if banks share information through credit reporting systems, multiple-lending and over-borrowing will decrease, which may improve access to credit, lower the interest rates, and reduce default rates. The mandate on 'Multiple-lending, Over-borrowing and Ghost-borrowers' by the RBI seeks to achieve a similar objective.

3. Inherent weaknesses of the RBI mandate

In order to put a plug on the rising non-performing assets (NPA) in the microfinance sector, the RBI—based on the recommendations of the report of the committee chaired by Mr. Y. H. Malegam (RBI 2011a)—created a new category of non-banking financial company–MFIs (NBFC-MFIs) in addition to the existing NBFCs, and issued new directives for all NBFC-MFIs in December 2011 (RBI 2011b), and with further clarifications in August 2012 (RBI

2012). On the issue of 'Multiple-lending, Over-borrowing and Ghost-borrowers', the RBI has directed that (excerpts):

a. A borrower can be the member of only one SHG or one JLG, or borrow as an individual.
b. An SHG or JLG or individual cannot borrow from more than 2 MFIs. Lending NBFC-MFIs will have to ensure that these conditions are strictly complied with.
c. Lending MFIs will have to ensure compliance with, among others, conditionalities relating to annual household income levels (INR 60,000 for rural and INR 1,20,000 for urban and semi-urban households), total indebtedness (not to exceed INR 50,000), membership of SHG/JLG, borrowing sources as well as percentage of qualifying assets (as stipulated in point d), and percentage of income-generating asset (as stipulated in point e).
d. NBFC-MFIs are required to maintain not less than 85% of their net assets as qualifying assets. However, only the assets that originated on or after January 1, 2012 have to comply with the qualifying assets criteria. As a special dispensation, the existing assets as on January 1, 2012 will be reckoned towards meeting both the qualifying assets criteria as well as the total net assets criteria. These assets will be allowed to run off on maturity and cannot be renewed.
e. NBFC-MFIs have to ensure that the aggregate amount of loans given for income generation should constitute at least 70% of the total loans of the MFI so that the remaining 30% can be used for other purposes such as housing repairs, education, and medical and other emergencies.
f. Every NBFC-MFI has to be a member of at least one credit information company (CIC) established under the CIC Regulation Act 2005, provide timely and accurate data to the CICs, and use the data available with them to ensure compliance with the conditions regarding membership of SHG/JLG, level of indebtedness, and sources of borrowing. While the quality and coverage of data with CICs will take some time to become robust, the NBFC-MFIs may rely on self-certification from the borrowers and their own local enquiries about these aspects as well as the annual household income.

These instructions are self-explanatory and are a welcome move in the previously unregulated microfinance sector. These tackle both the demand and supply side of multiple-borrowing by first restricting customers (points a, b, and c) and then laying down the ground rules for MFI (in points d, e, and f). If these points are followed reasonably well, these can be instrumental in bringing down over-indebtedness, and can reduce the need for government arbitration.

However, there are some inherent weaknesses. For example, instead of having a ratio of total indebtedness to total family income in order to calculate the repayment capacity, the mandate proposes some fixed income and total indebtedness figures in point (c). If a household is capable of repaying a higher amount of loan, then there is no point in preventing MFIs from serving them. In fact, households with better income sources can reduce the MFIs' risk

portfolios. Therefore, a ratio of indebtedness can serve a better purpose than fixed income restrictions. The Malegam Committee report had earlier specified that ‘a borrower…is a member of a household whose annual income does not exceed INR 50,000’ without giving any adequate reasons (RBI 2011a). The RBI extends this limit, but not to any logical end. Similarly, the percentages in points (d) and (e) do not appear to have a good rationale.

Being more considerate of the fate of borrowers than MFIs, we find the restrictions in points (a) and (b) to be more disturbing. Again these decisions seem to be random choices. It would appear that the Malegam committee report (RBI 2011a) and subsequently the RBI directives wanted to promote competition; hence, two MFIs are allowed instead of one. However, this could be a major problem in urban and semi-urban areas, where multiple MFIs operate. Three reasons are forwarded against points (a) and (b) in the following paragraphs.

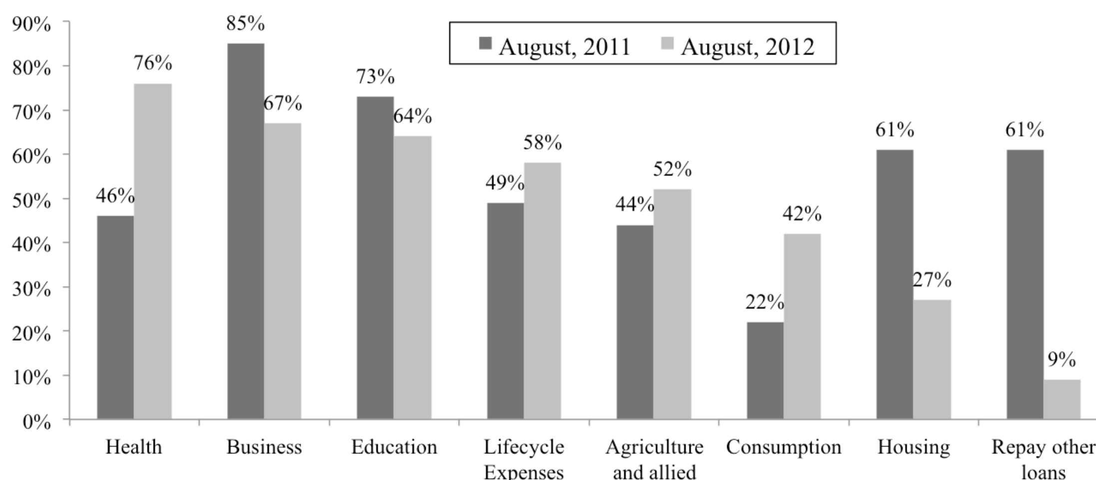
First, people who are prone to defect will try to under-report borrowings and may even register with multiple MFIs with different identity proofs such as ration card, driving licence, UID card, voter ID card, or passport. The name and address details may not match across the various identity proofs, leaving the CIC with no way of assessing the number of loans taken by the person or the household. Our concern was validated when we saw a private report generated by one such CIC for an MFI known to us. The CIC had matched the individuals based on some calculated estimates, leaving a wide margin for error.

Second, some MFIs may start taking advantage of the situation. Acquiring a new client entails significant costs involving visits to the client’s home, estimating potential income, formation of a joint liability group (optional), among others, whereas client retention is cheaper. Other MFIs may poach these members with offers of easy loans. Often new loans are required for health expenses, home repairs, or other utilities (table 2). Now, if the household unwarily takes loans from two other MFIs, the oldest MFI would have to let go of its hard-earned client. Hence, for well-meaning MFIs, the cost of client retention also escalates through monitoring costs.

Thirdly, most MFIs do not offer a new loan to a customer when the repayment of the previous loan is pending. Additionally, for a new customer, most MFIs restrict the loan amount to INR 10,000 or lower. Once credit-worthiness is established, larger loans are approved. Hence, the household is restricted to having only two loans outstanding, with their new loan often being of a very small amount. However, loans are used for many purposes. In case of medical emergencies such as accidents and major illnesses, which is common among low-income households, the family is forced to rely on informal sources; moreover, if the loan amount is inadequate for treatment, the household may lose a family member. If the illness is prolonged, the household may also lose the capacity to repay. In such contingencies, such households have no option but to borrow (Figure 1), often from multiple sources (Appendix 1), or to fall into a downward spiral of poverty. Further, the fact that none of the other NBFCs face such strong restrictions is surprising for us. The only probable reason we can ascribe for the RBI’s isolation of MFIs for this mandate is that the apex bank was acting

on the suggestions of the Malegam Committee report (RBI 2011a) that was formed to study 'Issues and Concerns in the MFI Sector' only.

Figure 1: ***Purposes of obtaining credit in Andhra Pradesh (Sample size: 343)***



Source: Ballem et al. (2013)

4. Research Questions

The RBI's limitation on the borrower to avail loans from only two MFIs and to be a part of either a single group or none raises the transaction costs not only for the borrowers but also for the well-meaning MFIs. For borrowers, the higher costs are because most of them are unaware of these new stipulations; for MFIs, it translates to higher costs in getting customers (around 30% are rejected) and for retaining them for repeat loans. Higher transaction costs may ultimately lead rogue MFIs to drive out good MFIs, resulting in significant societal loss. Therefore, it is evident from sections 2 and 3 that although the mandate wishes to curb wilful and wasteful over-borrowing among low-income households, it will remain inadequate in solving the problem unless it is improved through (a) targeting of the causes leading to non-productive loan usage, and/or (b) targeting of select households that require further assistance. In order to find an amicable solution, it is important to first understand the reasons for which low-income households take loans. This leads to our first question.

1. *What are the purposes for which loans are sought?*

There can be a difference between loan seeking and loan use behaviour. This occurs primarily because of the fungible nature of loans and the inability of these households to properly forecast their needs. If more loans are diverted to non-productive purposes, then these households may later face issues in the repayment of loans. This was also emphasised in point (e) of the mandate. This leads to our second question.

2. *What are the purposes for which loans are utilised?*

Monitoring the loan usage by clients is a very costly proposition, which no MFI would be willing to undertake at their own cost. However, if restrictions are not imposed, moral hazard on the part of both borrowers as well as MFIs could lead to many cases of over-borrowing

and could lead to a crisis as discussed earlier in section 2. However, it is observed that despite the easy availability of collateral-free loans and the absence of loan-use monitoring, there are many households that desist from multiple-borrowing behaviour. Therefore, it becomes pertinent to understand the systematic differences between these two groups of households: the ones that engage in risky borrowing behaviour and those that desist from it. This leads to our next significant question:

3. *Do households that have three or more loans differ from those with less in term of the following aspects?*
   a. *Total indebtedness*
   b. *Access to loans per requirement*
   c. *Financial behaviour*
   d. *Financial product portfolio*
   e. *Informal support systems*

Finally, given our improved understanding of the differences in household characteristics between households that lie on different sides of the new loan restrictions imposed by the RBI mandate in point (b), that is those who have two or fewer loans (and are therefore compliant) and those who have three or more loans (and are considered over-exposed), we arrive at the final question:

4. *Can household characteristics predict multiple-borrowing behaviour?*

We estimate null hypotheses of "no differences present" for question (3) and of "no predictive power" for question (4). If these null hypotheses are significantly rejected, we can deduce pathways for meeting the needs for the over-borrowing households, and thereby solve the issues of over-indebtedness among low-income households.

5. Sample Data and Research Methodology

We partnered with a well-known MFI, which is mainly based out of Pune for the purpose of collecting our data. By collating the reports generated by a CIC for the MFI for the months of February and March in 2015, we achieved a population of 575 unique households based out of Pune: 375 households with two or fewer active loans, and 200 households with three or more active loans (Table 1). From each set, we chose a random sample of 100 households each. We denote these samples as 'LESS' and 'MORE', respectively, for ease of identification during the discussion of our results.

Table 1: Descriptive statistics of population 1 (for LESS) and population 2 (for MORE)

Variable Description	**N_1**	**N_2**	**Mean (μ_1)**	**Mean (μ_2)**
Number of active loans	375	200	1.2	3.8
Total outstanding amount	375	200	17675.82	49037.01
Borrower's Age	375	200	36.45	37.68

We also restricted the samples to include only those households that had a valid phone number and a complete address. We then hired four field surveyors to obtain the survey responses from these 200 households (100 in each group). If any of the selected households were inaccessible or unwilling to participate, a new household was randomly drawn from the remaining sets of households in the relevant group. To answer the research questions, a questionnaire was designed in English and translated to Hindi and Marathi. To ensure accuracy of translation, these questionnaires were discussed with the MFI's staff over multiple rounds. This led to the correction of all errors, and the replacement of some difficult Marathi words with simpler alternatives that were common in the regional dialect. These questions were then thoroughly explained to the field investigators who were also trained about the requirements of the survey for two days. The questionnaires were answered over the span of three weeks in April–May 2015. After all the data were fed into spreadsheets, we had to exclude 3 observations from LESS (with two or fewer loans) and 5 observations from MORE (with three or more loans) because the responses were incomplete.

We use SAS software, Version 9.22, for our analysis. We sought to answer the first three questions through a comparison of the frequency distributions in loan instances for question (1) and loan usage instances for question (2). In question (3), we assess the difference in the means of the two samples for several variables indicating the sub-criteria. Most of these variables are constructed from the aggregates of household assets, expenses, or conditions, as explained in Table 2.

Table 2: Aggregated variables calculated for each household

Variable Description	**Explanation**
Number of active loans	Count of the number of loans not fully repaid
Total outstanding amount	Sum of entire loan amounts to be repaid over time
Difference between requirement and loan	Average of the difference between the required loan amount and the sanctioned amount for each loan case
Household size	Count of living members in the household
Kind of identity cards	Count of the variants of identity cards[b] possessed
Number of identity cards	Sum of all identity cards possessed
Number of earning members	Count of members in household who earn an income
Number of earning females	Count of female members in household who earn an income
Total annual income	Sum of income of all members computed annually
Total annual expenses	Sum of all expenses of household computed annually
Annual food expenses	Sum of annual expenses on groceries, fruits/vegetables, milk/egg/meat, cooking fuel, and outside dining
Annual education expenses	Sum of annual expenses on school fees, private tuition, books/notepads, art/craft/dance, and sports
Annual healthcare expenses	Sum of annual expenses on hospital fees, doctor fees, medicines, and health/life insurance

[b] The different identity cards asked for were: Election Card, Ration Card, BPL Card, Passport, Pan Card, Shop License, Aadhar Card, Bank ATM Card, Driving License, NREGA Card, Kisan Credit Card, Company ID card, Jan Dhan Yojana Card, RSBY Card, and Others.

Annual loan repayment expenses	Sum of annual expenses on all loan repayments (assuming that the monthly outflow is constant)
Annual other expenses	Sum of annual expenses on clothing, transport, alcohol, smoking, and other narcotics
Different financial products availed	Count of the variants of financial products[c] availed by the household apart from credit
Health problems faced in past 2 years	Count of all household members who faced health problems in the past 2 years including maternity and death
Healthcare costs in past 2 years	Sum of all household expenses on health problems in the past 2 years including maternity and death (excluding preventive costs)
Household members currently studying	Count of all household members who are currently studying in either school or college
Annual cost of education	Sum of all household expenses on members who are currently studying in either school or college (excluding hobby classes)
Members who left education mid-way	Count of all household members who had left their education mid-way (did not complete standard 12)
Total social support expected	Sum of loan money expected from neighbours, parents, relatives, and friends, if each were requested for INR 10,000 (USD 150)

Apart from these variables, we also constructed five composite variables: (a) household condition, (b) household environmental condition, (c) health-related conditions, (d) education-related conditions, and (e) improvement in social dynamics. Each of these indices is the sum of several ordinal variables as shown in Table 3. To use these composite variables in our logistic regression, we make two simplifying assumptions: the sum of values, howsoever arrived at, represents the same condition, and the values of the sum are equally spaced. In short, we assume all indices are interval variables. Since even with dummy variables, an indicator is seldom accurately assessed,[d] we use this simplification to help avoid having multiple dummy variables.

Table 3: Construction of composite variables

(a) **Household condition** – sum of values given for the following indicators			
Floor	Mud (0) Brick (1) Cement (2) Tiles (3)	Roof	Plastic (0) Tin (1) Asbestos (2) Cement (3)
Walls	Plastic (0) Tin (1) Brick (2) Brick and plaster (3)	Rooms	One (1) Two (2) Three (3) > Three (4)
(b) **Household environmental condition** – sum of values given for the following indicators			
Locality	Dirty (0) Average (1) Clean (2)	Plants	None (0) Few (1) Many (2)
Drains	Bad (0) Average (1) Good (2)	Playground	None (0) Small (1) Big (2)
Roads	Mud (0) Tar (1) Cement (2)		

[c] The different financial products that could be availed by the household apart from loans were savings, insurance, investments (in business), and pensions.

[d] For example, even if 'the number of rooms' appears as a good indicator, there is no way to accurately measure and compare the sizes of each room, their age and state (some may be constructed later), the number of people staying in each room, and the usage of the room. Therefore, every socio-economic survey resorts to some meaningful approximations.

(c) **Health-related conditions** – sum of values given for the following indicators			
Own Private Toilet	Yes (1) No (0)	Tap providing clean water	Yes (1) No (0)
Regular Garbage Clearance	Yes (1) No (0)	Mosquito nets for sleeping	Yes (1) No (0)
Filtered drinking water	Yes (1) No (0)	Always eat fresh cooked food	Yes (1) No (0)
After a heavy shower, rain water stays for		Few hours (1) >1 day (0)	
(d) **Education-related conditions** – sum of values given for the following indicators			
Study table and chair	Yes (1) No (0)	Tube light in study area	Yes (1) No (0)
(e) **Improvement in social dynamics** – sum of values given for the following indicators			
Sharing each other's experiences	Yes (1) No (0)	Reducing conflicts within home	Yes (1) No (0)
Participation in occasions, festivals	Yes (1) No (0)	Husband/Son left drinking/smoking	Yes (1) No (0)
Can save more from earnings	Yes (1) No (0)	Coping with health emergencies	Yes (1) No (0)
Sense of security of family future	Yes (1) No (0)	Knowledge about recent news	Yes (1) No (0)

The purpose of including these composite variables is to determine which conditions impact the households' over-borrowing behaviour in a significant manner. We also made a conscious decision not to include any of the established composite indices such as the Wealth Index, the Standard of Living Index,[e] the Progress out of Poverty Index,[f] and other similar indices in this study because the indicators within each composite are often selected and weighted depending upon different theoretical considerations and underlying population distributions, which are not exact matches for our sampling frame (i.e., MFI clients).

In question (4), we perform binary logit regression analysis to understand which characteristics significantly contribute to the households' multiple-borrowing behaviour. For the regression analysis, we convert the variable 'number of active loans' to a binary variable (Y), where the household either meets the RBI mandate of not having more than two loans (Y = 1) or is overexposed (Y = 0). For this conversion, we do not rely on our collected active loan information, but on the information that we obtained from the CIC through the MFI. We do this for three reasons. First, our sampling frames for the LESS and MORE samples are based on the same criteria, and contrary to our expectations, the numbers of active loans reported are higher in the CIC reports than in our surveyed data (Table 1). Second, we want to remove household response biases that might have occurred, where because they were aware of the consequences, the households may have reported lower active loans and amount outstanding (known as the Hawthorne Effect). We expect the chance of misreporting for

[e] The Wealth Index and the Standard of Living Index are part of the National Family Health Surveys 2 and 3 administered by the International Institute for Population Sciences (IIPS 2007).

[f] The Progress out of Poverty Index® (PPI®) is a poverty measurement tool. The latest version for India was created in March 2012 by Mark Schreiner of Microfinance Risk Management, L.L.C. Indicators in the PPI for India are based on data from the Household Consumer Expenditure Survey - Round 66 (July 2009 to June 2010) conducted by the National Sample Survey Office (NSSO).

other indicators to be less, as households cannot gauge the relation between their household characteristics and over-borrowing. Third, the only information source available to any MFI and also to the RBI is the data collected and monitored by the CICs. Therefore, we use the same data to make our model replicable and comparable with other sample surveys without the need for any major adjustments.

For the binary response models, where X is a vector of the explanatory variables, if we suppose that $\pi = \Pr(Y=0 \mid X)$, then the linear logistic model has the form:

$$\mathrm{logit}(\pi) \equiv \log\left(\frac{\pi}{1-\pi}\right) = \alpha + \beta' \mathrm{X}$$

where, α is the intercept parameter, and β is the vector of s slope parameters. The logit distribution is therefore a cumulative distribution of the logit function. We performed the logistic (or logit) regression analysis multiple times, and the best-fit model was chosen that minimised the Akaike's Information Criterion (AIC) (Akaike 1974). We tried our best to minimise multicollinearity among the variables.

6. Results and Discussions

The data collected from a total of 192 households with 97 households in LESS (with two or fewer loans) and 95 observations from MORE (with three or more loans) reveal that LESS households could recollect taking 130 loans (both active and inactive) in the past 2 years; during the same time, MORE households took 298 loans (Table 4). Among them, a majority of the loans (> 95%) were from different MFIs. Since the data was collected from the city of Pune, loans were also availed from banks, some of which were controlled by cooperatives. None reported loans from informal sources such as local lenders, relatives, and friends in excess of INR 2000. There could be two possibilities: these loans might be small, or the households did not reveal them to the surveyors, which is very unlikely given the decent sample size. Small field-based interviews with a few clients indicate that even if they take loans from informal sources, it is mainly for very short durations such as 1–6 months, whereas from most MFIs, loans are taken for a period of 1–2 years.

Table 4: Frequency and percentage of loans borrowed from different sources

LOAN SOURCE	**LESS (130)**		**MORE (298)**	
	Frequency	**Percent**	**Frequency**	**Percent**
Banks	3	2.31	11	3.69
Cooperatives	1	0.77		
MFIs	126	96.92	287	96.31

Notably, in an effort to control adverse selection, most MFIs have a loan provision structure that is quite similar to a credit scoring mechanism. While a credit score takes into account an individual's income and assets, MFIs depend on a household's loan repayment history with the organization (called as loan cycles) by rewarding good borrowers with access to higher loans. When a new borrower approaches an MFI, even with proof of income, she can only

manage the starting loan size (around INR 10,000). After she moves up higher loan cycles, she can avail other benefits such as higher loan sizes and some repayment flexibilities. Given that loans from MFIs are taken for a period of 1–2 years, Table 5 shows an interesting aspect of the two samples: more than 54% the households in LESS have loan cycles of 3 or higher, compared to only around 34% households in MORE. This means that households in LESS had retained their relationships with the MFIs for longer durations, and therefore, had access to higher loan amounts.

Table 5: Frequency and percentage of loan cycles (for repeat loans)

LOAN CYCLE	LESS (129)			MORE (297)		
	Frequency	Percent	Average	Frequency	Percent	Average
1	11	8.8	18000.0	75	25.4	13813.3
2	44	35.2	19681.8	119	40.3	22159.6
3	29	23.2	28965.5	55	18.6	27400.0
4	23	18.4	33260.8	23	7.8	33521.7
5	13	10.4	33846.2	18	6.1	35000.0
> 5	5	4.0	47000.0	5	1.7	34800.0

We now start answering our research questions. The first question involved the stated purpose for which households had requested their loans from MFIs. The frequencies of different loan purposes are shown in Table 6. Apart from a single case in LESS, and 7 cases in MORE where loan purposes were not captured, the other purposes show the expected frequencies. The highest requirement was for business purposes, followed by house repairs and education. There is not much to distinguish between the results of the two samples. However, it must be noted that more than 50% of the loans were availed for consumption purposes (education, health, and house repairs) in both samples. Therefore, MFIs have a lot of work to do in order to comply with the guidelines in point (e) of the RBI directives. Further, the fungible nature of money and the multiple loan uses (as shown in Figure 1 and in Appendix 1), which are not easily monitored, make it even more difficult for MFIs to achieve such targets.

Table 6: Frequency and percentage of loans borrowed for different purposes

LOAN PURPOSE	LESS (128)		MORE (290)	
	Frequency	**Percent**	**Frequency**	**Percent**
Business	57	44.53	140	48.28
Education	26	20.31	45	15.52
Farming	1	0.78		
Health	1	0.78	4	1.38
House repairs	41	32.03	100	34.48
Shop	1	0.78		
Vehicle	1	0.78		
Repay loans			1	0.34

In the next question, we probe further into how loans actually get used. Since the households were surveyed only once and were not monitored for considerable lengths of time after they had taken the loans, it was not feasible to extract the quantum of loans used for different

purposes. Hence, we relied on the results reported in Johnson et al. (2010) and Ballem et al. (2013), as presented in Figure 1 and Appendix 1, respectively, to portray the various usages of loans. We further answer question (2) by showing that loans are used for various other purposes than that the main purpose for which it was sought. We illustrate this fact through two purposes that are more generic: health and education. These are displayed in Tables 7 and 8.

Table 7: Frequency and percentage of financial sources for health expenses

Health Expense Instances	**LESS (125)**		**MORE (149)**	
	Frequency	**Percent**	**Frequency**	**Percent**
Savings	105	84	98	65.77
Savings & loans	13	10.4	38	25.5
Loans	7	5.6	13	8.72

Table 8: Frequency and percentage of financial sources for education expenses

Education Expense Instances	**LESS (122)**		**MORE (156)**	
	Frequency	**Percent**	**Frequency**	**Percent**
Savings	68	55.74	80	51.28
Savings & loans	35	28.69	65	41.67
Loans	18	14.75	11	7.05

For health expenses, we see a remarkable increase in loan usage for both samples LESS and MORE, with differences of 19 and 47 cases, respectively. Similarly, for education, the differences are 27 and 31 cases for samples LESS and MORE, respectively. While the situation may be different in the case of illnesses and medical emergencies, where there may not be enough time to apply for a fresh loan, it is certainly unexpected to be diverted for education. This implies that either some households falsify information when applying for loans, or they may not have a pre-set plan for utilising the loan. Further, the diversions are much higher for MORE than for LESS, although there are similar numbers of households in both samples.

Going back to question (3) on the differences among households (in samples LESS and MORE), we draw our insights from the results presented in Table 9, and by considering the significant difference only at 5% levels or lower. Thus, we find little support for difference in terms of (a) total indebtedness: even though the numbers of active loans are significantly different, the total outstanding amount is not, and is in fact higher in the reverse order. Similarly, for (b) access to loans per requirement, we note that the means of the variable 'difference between requirement and loan' is high, but there are no significant differences in the means. For (c) financial behaviour, there are some significant differences in terms of food and education expenses, but not in terms of other expenses. In (d) financial product portfolio, we find significant differences for the variable 'different financial products availed'. Finally, for (e) informal support systems, a significant difference is found between the groups for the variables 'total social support expected' and 'improvement in social dynamics'.

Table 9: Results of t-tests for mean differences between LESS (L) and MORE (M)

Variable Description	n (L)	n (M)	Mean (L)	Mean (M)	P > |t|
Number of active loans	97	95	1.23	1.81	<0.0001
Total outstanding amount	97	95	28715.34	23668.84	0.1850
Difference between requirement and loan	97	95	3345.36	3684.47	0.5330
Household size	97	95	4.15	4.58	0.0216
Kind of identity cards	97	95	5.84	5.69	0.3751
Number of identity cards	97	95	7.47	13.13	<0.0001
Household condition	97	95	8.47	8.74	0.4558
Household environmental condition	97	95	4.64	4.33	0.2771
Health-related conditions	97	95	4.54	4.40	0.5047
Education-related conditions	97	95	0.86	1.11	0.0142
Number of earning members	97	95	2.19	2.27	0.4805
Number of female earning members	97	95	0.87	0.91	0.6085
Total annual income of household	97	95	255587.63	269747.37	0.5505
Total annual expenses of household	94	92	168968.09	182267.02	0.2865
Annual food expenses	97	95	66779.38	74153.68	0.0497
Annual education expenses	94	94	14419.15	21269.15	0.0738
Annual healthcare expenses	94	93	21569.89	17607.53	0.4000
Annual house-related expenses	94	94	13386.70	12875.74	0.6303
Annual loan repayment expenses	97	95	28619.38	33282.69	0.2336
Annual other expenses	94	93	21148.94	21136.56	0.9949
Different financial products availed	97	95	2.11	2.38	0.0295
Health problems faced in past 2 years	97	95	1.47	1.57	0.6614
Healthcare costs in past 2 years	97	95	13212.37	11192.63	0.6231
Household members currently studying	97	95	1.27	1.71	0.0041
Annual cost of education	97	95	14674.23	22193.68	0.0349
Members who left education mid-way	97	95	0.35	0.19	0.0567
Total social support expected	97	95	17520.62	20905.26	0.0181
Improvement in social dynamics	97	95	5.35	6.80	0.0014

Note: Only the 2-tailed t-test significance results of less than 5% are highlighted.

After answering question (3), we see that Table 9 still has other insights to offer. Firstly, it is important to highlight that even though the household size is significantly different between the groups, we did not resort to comparisons at a per-capita level because the RBI mandate considers a household as one entity irrespective of the number of members. Even with significant differences in household size, we do not see any major difference in household expenses, barring food (at 5%) and education (at 10%).

Secondly, we observe a difference in consumption patterns, with households in MORE spending more on education, while those in LESS spend more on healthcare. This is contrary to our expectations. It is further supported by the fact that the outstanding number of households in LESS is higher. This implies that these households have systematically been facing illnesses and therefore prefer to stick to a particular MFI to obtain the benefits of

higher loans with repeated loan cycles (as shown in Table 5).

Finally, we see that both groups of households are at par in terms of kind of identity cards, household condition, household environmental conditions, and health-related conditions, but not in terms of number of identity cards and educational conditions. This result shows that these sets of households are not entirely different in their endowments but vary in terms of their social participation, thereby allowing us to aggregate them for regressing their household characteristics to address our final question: Can household characteristics predict over-borrowing behaviour (more than two loans, according to the RBI mandate)?

The results of the likelihood ratio test, Wald test, and the efficient score test for testing the joint significance of explanatory variables are presented in Table 10, and the logit estimates with average marginal effects are presented in Table 11.

Table 10: Testing Global Null Hypothesis

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	109.41	18	<0.0001
Efficient Score test	81.17	18	<0.0001
Wald test	50.14	18	<0.0001

Table 11: Maximum Likelihood Estimates (LOGIT) and Average Marginal Effects

Parameter	MLE	Std. Error	Pr > ChiSq	Avg. M. Eff.
Household size	-0.7894	0.3061	0.0099	-0.1008655
Number of identity cards possessed	0.4629	0.0788	0.0001	0.0586937
Different financial products availed	-0.2989	0.2859	0.2959	-0.0379031
Household condition	0.0295	0.1162	0.7996	0.0037421
Household environmental condition	-0.3307	0.1566	0.0347	-0.0419373
Health-related conditions	0.2085	0.1812	0.25	0.0264361
Education-related conditions	0.0168	0.3404	0.9606	0.0021318
Total annual income of household	1.38E-06	2.07E-06	0.5028	1.75E-07
Annual food expenses	0.000023	0.000012	0.0553	2.94E-06
Annual education expenses	-7.23E-06	0.00001	0.4764	-9.17E-07
Annual healthcare expenses	7.08E-06	0.000011	0.5109	8.98E-07
Annual house-related expenses	-0.0002	0.000064	0.0017	-0.00002553
Annual loan repayment expenses	0.00001	0.000013	0.4465	1.28E-06
Health problems faced in past 2 years	-0.0992	0.1996	0.6192	-0.0125792
Household members currently studying	1.0411	0.3528	0.0032	0.1320237
Members who left education mid-way	-0.477	0.4416	0.2801	-0.0604867
Total social support expected	0.000061	0.00003	0.0423	7.74E-06
Improvement in social dynamics	0.1048	0.0885	0.2366	0.0132884

The extremely small *p*-values in the results of Table 10 therefore reject the hypothesis that all the slope parameters are equal to zero. This answers question (4): household characteristics do influence over-borrowing. In Table 11, we examine which of them are more likely to

influence this household decision. First, we notice that household size is negatively associated with over-borrowing and has a strong marginal effect. This means that younger households engage in thrifty behaviour. Second, the number of identity cards possessed by households is positively associated with over-borrowing. This is in line with our expectation that the household may take loans through different identifications (thus exploiting information asymmetries). However, it still cannot be said with certainty whether having multiple identity cards creates the tendency to over-borrow, or whether the tendency itself creates the necessity to possess multiple cards. Third, the different financial products availed, though not significant, had a deterring effect on multiple loan uptake. This is an important result for us, which we will discuss in the next section. Fourth, the composite variable of household environmental conditions shows a clear negative impact on over-borrowing behaviour, suggesting that poorer households have less access. However, the composite variable of household condition does not have any clear effect; neither do healthcare and education conditions within households. Fifth, when compared to other expenses of the household,[g] the annual food expenses and household expenses have positive impacts, albeit in different directions. Finally, although we expect improvement in social dynamics as an outcome of microfinance, it also predicts tendencies to over-indulge in loan seeking behaviour.

While the model shows that household characteristics are important predictors of over-borrowing, the model lacks variables to account for unobservable characteristics such as risk-aversion, bounded rationality, and transaction costs. In hindsight, we also feel that interactions and relationships with MFIs, which are not part of this model, may also significantly affect over-borrowing. In many instances, we noticed households had taken multiple loans from the same MFIs that were carefully disguised as 'top-up' loans and not separate loans. MFIs can also resort to many tricks to fool both their customers and their competitors. While 'top-up' loans are a good ploy to never lose the client to other MFIs, since CICs take the information passed on by MFIs at face-value and without verification (which is costly and time-consuming), MFIs can easily show their customers with completed loan repayments as still 'active', so as to deter other MFIs from swooping down on these clients. In a quick comparison of the descriptive statistics of samples LESS and MORE (Table 9) against the details in the overall sampling populations LESS and MORE (Table 1), we note a significant disparity. Though borrowers may have divulged lower numbers, there is no way to exclude moral hazard by MFIs in contributing to this disparity.

This study has shown that there are discrepancies in the loan purpose and loan usage of households, most of which is due to their household characteristics and endowments. Households that have two or fewer loans differ (though not entirely) from households with more than two loans. As a result, some household characteristic variables are found to be significant predictors of over-borrowing behaviour. We suggest that this study should be complemented with other studies that examine MFI and client interactions.

[g] Other items include clothing, transport, addictions, and rentals.

7. Conclusions

This study aimed to understand the adequacy of the RBI's multi-borrowing mandate through a study of households lying on either side of the divide. We examined households' loan purposes and uses, as well as the differences between the averages from both groups. We also tried to identify predictors of over-borrowing. We found that the major consumption purposes of loans were health and education. The major expenses for both groups arise from availing private services, which can boast of better service quality than the government. Even the poor households aspire for these services (Banerjee and Duflo 2011), and therefore, often engage in thrifty borrowing. We envisage that if other financial products such as savings, insurance, support for needy students, pensions, and remittances are extended to these communities, the real need for over-borrowing would be met.

Some of the antecedents of over-borrowing are information asymmetries leading to moral hazards from both MFIs and borrowers, and the consequence is often over-indebtedness leading to a crisis. The recent RBI mandate is meant to avert such a crisis. However, we found many inherent weaknesses in the restrictions, the major ones being the restrictions that borrowing households should be a part of only one group or none, and that they should have only two active loans at a time. Consequently, there could be several borrower and MFI strategies that can only lead to societal loss by pre-empting good MFI and good borrowers.

We conclude that in the absence of proper monitoring of both households and MFIs by an independent authority, the intended objective of the RBI mandate would be seldom achieved. We propose that the restrictions must be suitably amended for the creation of conditions that promote free and fair competition between MFIs. With more information sharing by the CICs, MFIs can afford to take their own decisions. This would also enable households to maintain client relationships with MFIs without being troubled by the number of active loans.

8. Postscript

At the time of completion of this study, the RBI made a few changes to the NBFC-MFI directives on April 08, 2015 as follows (in reference to section 3) –

1. [c] Annual household income not to exceed INR 1,00,000 (rural) or INR 1,60,000 (urban) – an increase of loan limit by INR 40,000 for all households
2. [c] Indebtedness not to exceed INR 1,00,000 after excluding loans availed towards meeting education and medical expenses – not only total indebtedness limit raised by INR 50,000 (or doubled) but exclusion of two major loan purposes have effectively raised indebtedness limits further.
3. [e] Loans given for income generation should constitute at least 50% of the total loans given by the MFI – a decrease by 20% of loans for income generating purposes.

However, the policy implications of this study still remain.

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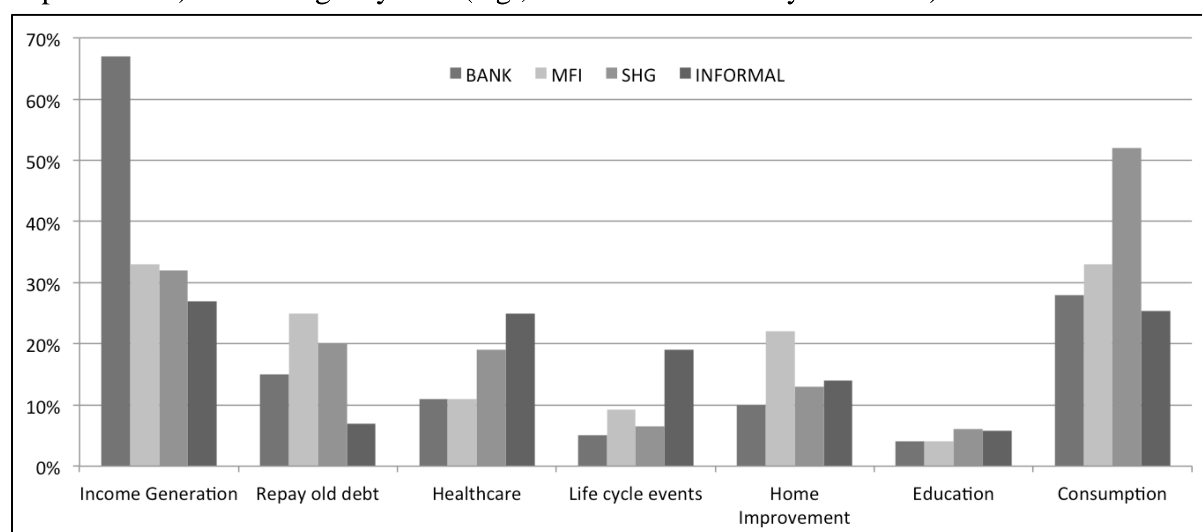
Appendix 1
Usage of Loan Money by Lender Type and Purpose

We have aggregated the several heads presented by Johnson and Meka (2010) into aggregates to enable comparison with a later study by Ballem et al. (2013).

Aggregates	Particulars	BANK	MFI	SHG	INFORMAL
Income Generation	New Business	2%	3%	2%	1%
	Agri. inputs	58%	13%	19%	20%
	Purchase stock	3%	10%	4%	3%
	Purchase land	1%	1%	1%	1%
	Buy livestock	3%	6%	6%	2%
Repay old debt	Repay old debt	15%	25%	20%	7%
Healthcare	Health	11%	11%	19%	25%
Life cycle events	Marriage	4%	5%	2%	12%
	Funeral	0.1%	0.2%	0.5%	2%
	Other festivals	1%	4%	4%	5%
Home improvement	Home improvement	10%	22%	13%	14%
Education	Unemployment	0.0%	0.0%	0.1%	0.8%
	Education	4%	4%	6%	5%
Consumption	Purchase of jewellery	1%	1%	2%	0.40%
	Consumption	27%	32%	50%	25%

Source: Johnson and Meka (2010)

When we chart these aggregates as shown below, it can be observed that loans from less formal sources have a higher chance of being diverted to non-productive (e.g., home improvement) and emergency uses (e.g., healthcare and lifecycle events).



Source: Johnson and Meka (2010)

Appendix 2
Maximum Likelihood Estimates (PROBIT) and Average Marginal Effects

Though the PROBIT model gives similar results as those of our LOGIT model, the fact that some of the estimates are 0 (while one of them remains significant) shows that approximation to a normal distribution is not correct.

Parameter	**MLE**	**Std. Error**	**Pr > ChiSq**	**Avg. M. Eff.**
Household size	-0.4857	0.1761	0.0058	-0.1084895
Number of identity cards possessed	0.2616	0.0408	0.0001	0.0581304
Different financial products availed	-0.1712	0.1619	0.2901	-0.0380476
Household condition	0.0174	0.0668	0.7945	0.0038696
Household environmental condition	-0.194	0.0874	0.0264	-0.0431187
Health-related conditions	0.1335	0.1023	0.1917	0.029673
Education-related conditions	0.0275	0.1953	0.8882	0.0061043
Total annual income of household	0	0	0.4414	1.96E-07
Annual food expenses	0	0	0.0514	2.95E-06
Annual education expenses	0	0	0.373	-1.13E-06
Annual healthcare expenses	0	0	0.6107	7.11E-07
Annual house-related expenses	-0.0001	0	0.0012	-0.00002484
Annual loan repayment expenses	0	0	0.2988	1.69E-06
Health problems faced in past 2 years	-0.0777	0.1133	0.4931	-0.0172578
Household members currently studying	0.6403	0.2011	0.0015	0.1422993
Members who left education mid-way	-0.2758	0.2426	0.2557	-0.0612919
Total social support expected	0	0	0.0398	7.93E-06
Improvement in social dynamics	0.0711	0.0507	0.1612	0.015793

Appendix 3

QUESTIONNAIRE ON LOAN RELATED CHOICES

I will be asking you a few questions about your family for our study on microfinance. Please try to answer all questions and do not skip any section. Date: _______

Section: Basic Family Information

Name		City	
Mobile Ph.		Pin Code	

How many members are there in your household according to age? [Write number for male/female]

Infant (<5)	Child (5–20)	Adult (20-40)	Senior (40-60)	Old (60-80)
M: F:	M: F:	M: F:	M: F:	M: F:

How many of following items do your household members possess? [Write number]

Election Card		Pan Card		Driving License		Company ID card	
Ration Card		Shop License		NREGA Card		Jan Dhan Yojana Card	
BPL Card		Aadhar Card		Kisan Credit Card		RSBY Card	
Passport		Bank ATM Card		Others: __________			

Please describe your household condition? [Tick any one]

Floor	Mud ( ) Brick( ) Cement ( ) Tiles( )	Roof	Plastic ( ) Tin( ) Asbestos( ) Cement( )
Walls	Plastic ( ) Tin( ) Brick( ) Brick and plaster( )	Rooms	One ( ) Two( ) Three( ) Four( )

How do you consider your household environment to be? [Tick any one]

Locality	Dirty ( ) Average( ) Clean( )	Plants	None ( ) Few( ) Many( )
Drains	Bad ( ) Average( ) Good( )	Playground	None ( ) Small( ) Big( )
After heavy rain, water stays for: Few hours ( ) 1-2 days( ) 3-4 days( ) a week( )		Roads	Mud ( ) Tar( ) Cement( )

Section: Details on loan usage

Now I will ask you about loans your family has taken in past 1 year to understand your household needs. Please start from recent loans. [Do not write petty loans (less than Rs. 500)]

Name of lender	[Loan 1]		
Lender type	Bank ( ) Cooperative ( ) Microfinance ( ) Lender ( ) Relative ( ) Friend ( )		
Loan Purpose		Amount Needed	
Loan Amount		Application date	
Outstanding		Received date	
Loan Cycle		Any other benefit	

Name of lender	[Loan 2]		
Lender type	Bank ( ) Cooperative ( ) Microfinance ( ) Lender ( ) Relative ( ) Friend ( )		
Loan Purpose		Amount Needed	
Loan Amount		Application date	
Outstanding		Received date	
Loan Cycle		Any other benefit	

Name of lender	[Loan 3]		
Lender type	Bank ( ) Cooperative ( ) Microfinance ( ) Lender ( ) Relative ( ) Friend ( )		
Loan Purpose		Amount Needed	
Loan Amount		Application date	
Outstanding		Received date	
Loan Cycle		Any other benefit	

Name of lender	[Loan 4]		
Lender type	Bank ( ) Cooperative ( ) Microfinance ( ) Lender ( ) Relative ( ) Friend ( )		
Loan Purpose		Amount Needed	
Loan Amount		Application date	
Outstanding		Received date	
Loan Cycle		Any other benefit	

Name of lender	[Loan 5]		
Lender type	Bank ( ) Cooperative ( ) Microfinance ( ) Lender ( ) Relative ( ) Friend ( )		
Loan Purpose		Amount Needed	
Loan Amount		Application date	
Outstanding		Received date	
Loan Cycle		Any other benefit	

How many loans the family has taken in past 1 year?	

Section: Details on Assets, Income and Expenses

Mention the monthly income of all earning members? [No need to note names]

Age		M ( ) F( )	Job		Permanent (Yes / No)	Income (Rs.)	
Age		M ( ) F( )	Job		Permanent (Yes / No)	Income (Rs.)	
Age		M ( ) F( )	Job		Permanent (Yes / No)	Income (Rs.)	
Age		M ( ) F( )	Job		Permanent (Yes / No)	Income (Rs.)	
Age		M ( ) F( )	Job		Permanent (Yes / No)	Income (Rs.)	

Mention the total monthly expenses for these items below? [For yearly, put "Y" beside it]

Food Items >	Groceries	Fruit/Vegetable	Milk/Egg/meat	Cooking fuel	Tiffin/Mess
Education Items >	School fees	Pvt. Tuition	Books/notepad	Art/Craft/Dance	Sports
Health Items >	Hospital fees	Doctor fees	Medicines	Insurance	Others
House Items >	Electricity	Water	Rent	Repairs	Tax
Loan Items >	Loan 1	Loan 2	Loan 3	Loan 4	Loan 5
Other Items >	Clothing	Transportation	Addiction	Cable Fees	Other fees

Mention details of the five most valuable assets? [e.g. Gold, house, vehicle, shop, electronics, etc.]

Asset 1		Cost (Rs.)		How old is it?	
Asset 2		Cost (Rs.)		How old is it?	
Asset 3		Cost (Rs.)		How old is it?	
Asset 4		Cost (Rs.)		How old is it?	
Asset 5		Cost (Rs.)		How old is it?	

Mention total amount kept in the past 1 year for financial products below? [Tick all that applies]

Savings (Rs.)		Bank ( ) Cooperative( ) MFI( ) Relative( ) Friend( )
Insurance (Rs.)		Life ( ) Family( ) Health( ) Lender( ) Accident( ) Shop( ) Vehicle( )
Investment (Rs.)		Shop ( ) Land( ) Self-Business( ) Other's business( )
Others (Rs.)		Pension ( ) Stock market( ) Others( )

Section: Details on Health

Do you have or follow these facilities in your house? [Tick yes or no]

Own Private Toilet	Yes / No	Tap providing clean water	Yes / No
Regular Garbage Clearance	Yes / No	Mosquito nets for sleeping	Yes / No
Filtered drinking water	Yes / No	Always eat fresh cooked food	Yes / No

Mention for all women who have given birth in last 2 years [Ask cost for giving birth]

Age at Birth		Total Children		Cost		Source: Saving() Insurance() Loan()
Age at Birth		Total Children		Cost		Source: Saving() Insurance() Loan()
Age at Birth		Total Children		Cost		Source: Saving() Insurance() Loan()

Mention for all deaths in the household in last 2 years [Ask for funeral costs]

Age of Death		Natural ( ) Accident( )	Cost		Source: Saving() Insurance() Loan()
Age of Death		Natural ( ) Accident( )	Cost		Source: Saving() Insurance() Loan()
Age of Death		Natural ( ) Accident( )	Cost		Source: Saving() Insurance() Loan()

Mention for all major health problems in the household in last 2 years [Ask for costs of treatment]

Age		Illness( ) Accident( ) Others( )	Cost		Source: Saving() Insurance() Loan()
Age		Illness( ) Accident( ) Others( )	Cost		Source: Saving() Insurance() Loan()
Age		Illness( ) Accident( ) Others( )	Cost		Source: Saving() Insurance() Loan()
Age		Illness( ) Accident( ) Others( )	Cost		Source: Saving() Insurance() Loan()
Age		Illness( ) Accident( ) Others( )	Cost		Source: Saving() Insurance() Loan()
Age		Illness( ) Accident( ) Others( )	Cost		Source: Saving() Insurance() Loan()

Did any member visit medical facilities close to your house in last 2 years? [Number of times visited]

Pharmacy	Times visited:	Facility: Poor( ) Average( ) Good( )	Trust: Yes / No
Pvt. Clinic	Times visited:	Facility: Poor( ) Average( ) Good( )	Trust: Yes / No
Govt. Clinic	Times visited:	Facility: Poor( ) Average( ) Good( )	Trust: Yes / No
Homeopathy	Times visited:	Facility: Poor( ) Average( ) Good( )	Trust: Yes / No
Ayurveda	Times visited:	Facility: Poor( ) Average( ) Good( )	Trust: Yes / No
Pvt. Hospital	Times visited:	Facility: Poor( ) Average( ) Good( )	Trust: Yes / No
Govt. Hospital	Times visited:	Facility: Poor( ) Average( ) Good( )	Trust: Yes / No

Section: Details on Education

Do you have or follow these facilities in your house? [Tick yes or no]

Study table and chair	Yes / No	Tube light in study area	Yes / No

Mention for all members who are currently studying. [Tick appropriately]

Age		M( ) F( )	Cost		Govt.( ) Pvt.( )	Source: Saving() Insurance() Loan()
Age		M( ) F( )	Cost		Govt.( ) Pvt.( )	Source: Saving() Insurance() Loan()
Age		M( ) F( )	Cost		Govt.( ) Pvt.( )	Source: Saving() Insurance() Loan()
Age		M( ) F( )	Cost		Govt.( ) Pvt.( )	Source: Saving() Insurance() Loan()
Age		M( ) F( )	Cost		Govt.( ) Pvt.( )	Source: Saving() Insurance() Loan()
Age		M( ) F( )	Cost		Govt.( ) Pvt.( )	Source: Saving() Insurance() Loan()

Mention average hours spent in 1 day for members in the age group (5-25 years). [Estimates are ok]

Age		M( ) F( )	School:	Studying:	Play:	Paid work:	House work:	Sleep:
Age		M( ) F( )	School:	Studying:	Play:	Paid work:	House work:	Sleep:
Age		M( ) F( )	School:	Studying:	Play:	Paid work:	House work:	Sleep:
Age		M( ) F( )	School:	Studying:	Play:	Paid work:	House work:	Sleep:
Age		M( ) F( )	School:	Studying:	Play:	Paid work:	House work:	Sleep:
Age		M( ) F( )	School:	Studying:	Play:	Paid work:	House work:	Sleep:

Has any member stopped going to school or college? [Did not complete]

Age		M( ) F( )	Class:	Why?
Age		M( ) F( )	Class:	Why?
Age		M( ) F( )	Class:	Why?
Age		M( ) F( )	Class:	Why?

Do any member visit educational facilities close to your house in last 2 years? [Number of times]

Day-care	No( ) Sometimes( ) Daily( )	Facility: Poor( ) Average( ) Good( )	Trust: Yes / No
Nursery	No( ) Sometimes( ) Daily( )	Facility: Poor( ) Average( ) Good( )	Trust: Yes / No
Govt. School	No( ) Sometimes( ) Daily( )	Facility: Poor( ) Average( ) Good( )	Trust: Yes / No
Pvt. School	No( ) Sometimes( ) Daily( )	Facility: Poor( ) Average( ) Good( )	Trust: Yes / No
Govt. College	No( ) Sometimes( ) Daily( )	Facility: Poor( ) Average( ) Good( )	Trust: Yes / No
Pvt. College	No( ) Sometimes( ) Daily( )	Facility: Poor( ) Average( ) Good( )	Trust: Yes / No

Section: Details of Social Dynamics

For this section, only consider friends, relatives and neighbours who you speak to often. [Read out]

How many times did you meet them in past 1 month? [Estimate is ok]

Neighbour:	Parents:	Relatives:	Friends:

If you urgently need Rs. 10,000, how much can you ask from them? [Estimate is ok]

Neighbour:	Parents:	Relatives:	Friends:

If you ask for Rs. 10,000, how much will they give you? [Estimate is ok]

Neighbour:	Parents:	Relatives:	Friends:

If they urgently need Rs. 10,000, how much can they ask from you? [Estimate is ok]

Neighbour:	Parents:	Relatives:	Friends:

If they ask for Rs. 10,000, how much can you give to them? [Estimate is ok]

Neighbour:	Parents:	Relatives:	Friends:

Did you join any new community group for getting loans within past 2 years? (Yes / No)

After you joined your new group, did the following improve? [Tick Yes or No]

Sharing each other's experiences	Yes / No	Reducing conflicts within home	Yes / No
Participation in occasions, festivals	Yes / No	Husband/Son left drinking/smoking	Yes / No
Can save more from earnings	Yes / No	Coping with health emergencies	Yes / No
Sense of security of family future	Yes / No	Knowledge about recent news	Yes / No

Signature of Interviewee Signature of Interviewer

----------THANK YOU FOR YOUR TIME -----------