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Micro-finance Crises: Effects of Economic and Psychological Threats on Group Processes

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Abstract

We report the findings of an experiment conducted around MFI group processes to parse the question of potential default by members, often the tipping point of crises. Micro-finance group processes entail economic and psychological costs to members. We defined these costs in terms of a given financial loss and reputation loss, perceived by members as economic and psychological threats. Participants responded to the measures of joint liability, fear of reprisal and peer pressure. The results show that members are able to make the subtle distinction between different types of peer pressure and joint liability. We also show that psychological threats perceived by borrowers are key to understanding MFI group processes, especially as triggers to a repayment crisis.

Keywords: micro finance - crisis, group processes, measurement model, field experiment

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Rapid expansion of micro-finance in India especially during 2006-07 to 2009-10 generated euphoria among micro-finance practitioners. However, this expansion did not continue for long, for there were reports of several smaller micro-finance crises in Karnataka in 2009 and a much larger one in Andhra Pradesh in 2010.

Researchers, who examined the reasons behind the foregoing crises, took different perspectives on the indebtedness of the clients and the extenuating circumstances. However, social and psychological perspectives of individual borrowers on the genesis of these crises in the micro-finance literature are few. In this study therefore, micro-finance group processes were investigated from the perspectives of the individual borrowers of micro-finance institutions (MFIs). In particular, attempts were made to study member's perceptions at the time of potential default to identify the reasons behind actual defaults, spiraling into repayment crises.

There were two key goals. One goal was to use social psychological perspectives on developing the measurement model for the micro-finance group process constructs. Another goal was to test the causal effects of the economic and psychological threats on each of these empirically distinguishable constructs. Accordingly, an experimental study, instead of the widely used survey, was carried out.

Toward the preceding goals, the broad measures for the three key micro-finance group constructs, namely, (1) peer pressure, (2) fear of reprisal, and (3) joint liability, were first developed. The data showed that we could further unbundle these constructs. MFI borrowers are able to unbundle peer pressure into direct peer pressure and indirect peer pressure. Indirect peer pressure was further differentiated by them into indirect *distal* peer pressure and indirect *proximal* peer pressure. Similarly, they perceived joint liability of being two types – genuine and reneging. Given satisfactory evidence for such construct distinction, we next investigated the joint effects of the economic and psychological threats on each of those responses. That is, how does psychological threat impact group lending mechanisms at the different levels of economic threat? This question is important because in most micro-finance lending negotiations, under normal circumstances, borrowing contracts are commonly framed in

economic terms and conditions. The social and psychological consequences of default on the borrowers are alluded to, by MFI field workers, only subtly and indirectly. However, given an advent of a potential repayment crisis, psychological threats gain prominence and are made upfront. Thus, what has heretofore been left out is the order effect of the psychological-economic terms and conditions on group processes. The experiment reported is novel because it presents information about the economic and psychological threats in counterbalanced orders (that is, the orders of presentation were economic-psychological threat (EP) as well as psychological-economic threat (PE)).

The experiment was performed on women members of two urban MFIs at Delhi (Indcare and Prayas) and two rural MFIs at Alwar (Humana People to People India and Matashree Gomati Devi Trust). Tests of the measurement model were highly encouraging. Responses formed the six hypothesized factors, stated above. Tests of causal effects further indicated that economic threat remains a key factor but that psychological threat assumes importance contingent upon the contexts, especially that of an impending crisis of non-repayment.

Collectively, our findings highlight the subtle roles of psychological threat to reputation in micro-finance group processes in ways never done before. It lays the ground for understanding the role of economic and psychological threats in a scenario of looming crises of non-repayment. Implications of these findings are discussed.

Background

The success of micro-finance was celebrated as a driver for poverty alleviation efforts in the early 1990s (Harris 2002). However, clear evidence on impact of micro-finance has been hard to come by over the long term (Banerjee, Duflo, Glennerster&Kinnan, 2015; Tarozzi, Desai&Johnson, 2015). Further, the sustainability of Grameen-type micro-finance model has been questioned due to the recent micro-finance crises in India (CGAP, 2010), which led to decline in outreach and lending activities of micro-finance institutions (MFIs) in 2012. It also raised questions regarding the role of MFIs in credit delivery to the rural poor and in its methods of recovery (RBI, 2011). The broad goal of our research was, therefore, to re-

examine the micro-finance group processes, given the backdrop of the micro-finance crises in India in 2010.

Theoretical models of micro-finance derived from the field of micro-economics focus on information asymmetry between borrowers and lenders. In models dealing with joint liability and peer monitoring, sustainability of group lending is based on costs incurred by each member. These models implicitly assume that each group member will undertake peer monitoring, that is, the peer has to observe the actions and revenue receipts of the borrower and enforce repayment (Aghion&Morduch, 2005) or else she has to pay a penalty (Stiglitz, 1990) such as loss of her savings. Further, a borrower who does not repay the loan will face social sanctions such as anger of peers and exclusion from local social and religious activities.

There are both economic and social costs that determine the sustainability of micro-finance credit groups. By economic costs, we mean interest payments on loans, loss of savings and/or payment for the defaulting member if there is a default by another member and denial of access to future credits. Social costs mean loss of reputation in case of default which may result in social sanctions as referred above.

A member will monitor the borrowers if the cost of monitoring is less than her expected gains from paying for joint liability. Further, a borrower will repay if gross interest amount to be paid is less than cost of social sanctions (Aghion& Murdoch, 2005). In the earlier mentioned theoretical models, both these costs are monetized in terms of interest rates to be charged. It forms the main rationale for an economist's understanding of the joint liability mechanisms in micro-finance group lending. Thus, these models take the perspective of the lender who would like to know the market clearing interest rates for joint liability contracts to be sustainable (Ahlin&Townsend, 2007).

It is also argued that dynamic incentives (higher future credits) and sequential financing (first sanction loan to a few members only, others will get if earlier loans are repaid), not joint liability, that will make the group lending mechanism function (Chowdhury, 2005, 2007). In this view, the threat of loss of future credits induces repayments and sustainability of groups.

Although these are economic costs, social implications in terms of loss of reputation are weighted more in this alternative view.

A number of studies assessed the social impact of group lending mechanisms on outcomes such as rates of repayment by the borrowers. In these studies, how social collateral, social ties and social capital impact repayment rates, were examined. Results were mixed regarding repayment behaviours of micro-finance clients. Some researchers found groups with high connectedness to have higher repayments (Zeller, 1998; Karlan, 2005); others found no connection between social ties and higher repayments (Ahlin&Townsend, 2007; Wydick, 1999). Nevertheless, most agreed that social collateral would facilitate repayments if it enabled social sanctions (Karlan, 2007). Clients might repay particularly because of fear of anger of their peers (Besley&Coate, 1995) and the desire to protect their own reputations (Giné&Karlan, 2009).

Group lending in the extant micro-finance literature can thus be seen as being driven by economic and social costs to the individual borrowers. Economic costs to the borrower in terms of joint liability contract, dynamic incentives and sequential financing are one set of mechanisms. In contrast, social collateral in terms of social capital and social ties are another set of group lending mechanisms.

In the extant literature, the economic and social costs have been studied separately. However, when a member of the MFI faces potential default by a borrower during the group repayment meeting, she is likely to perceive both these costs simultaneously. If so, the member has to decide whether to apply peer pressure to secure the repayment or to pay for the defaulting member. The consequences can be economic loss, reputation loss, or both. As in case of default, members have to pay or else they may get excluded from future credits and social activities.

Ex-ante, economic and social costs can be viewed as economic and psychological threats, respectively. The former implies a threat of loss of savings; the latter implies a threat of loss of reputation. As explained above, the member perceives these threats together. Thus, it is

important to look at the joint effect of economic and psychological threats and the interaction between them. As reputation also matters more in a collective society (Triandis, 1989) such as India, we specifically studied how psychological threats impact group lending mechanism at differing levels of economic threats.

Books and registers of the groups and the MFIs do not record the 'potential default'. Only a record of repayments is available. Hence, most of the literature using data from MFIs capture these final repayments only. The process that takes place during the meetings and the intervening period before the meeting is not recorded anywhere. Most MFI loans get repaid due to the intervening negotiations during the group processes which might have been a result of joint liability, applying peer pressure, and fear of social sanctions at the time of potential default. These social psychological processes that contribute to people's self-conception (economic or social self) of who they are seem too important to ignore in MFI processes. Accordingly, we capture members' perceptions at the time of potential default. Thus we made potential default, the focus of our research instead of final repayment of loans.

Methodologically, for our measurement models we relate to Pitt, Khandker and Cartwright (2006), who use latent variable models to study impact of participation in micro-finance groups on women's empowerment, measured through qualitative responses. Paxton and Tharen (2003) also advocate a mean covariance structure models to capture complex constructs for group lending behaviour. We use latent variable models and conduct confirmatory factor analysis using maximum likelihood estimates. Our structural model delineates these constructs. The use of latent variable models to capture complex constructs through multiple indicators is common in social sciences and is increasingly being used in development finance.

Current Research

Our research is built on the perceptions of the individual members of MFIs. In this regard, this study compares with some aspects of Wydick (1999), who elicited binary responses on willingness to apply pressure, moral obligation to pay, pay to remain on good terms and other aspects of group pressure, peer monitoring, and social ties. He showed that group pressure

variables rather than social ties had some impact on risky behaviour and repayments by the group. We explore further to estimate whether intention to apply group pressure is dependent on the differing levels of psychological threat perceived by the individual member. Thus, psychological threat perceived due to anticipated reputation loss is the key aspect of the enforcement mechanism in micro-finance group process which impacts an individual member's decision at the time of potential default.

Psychological threats following a loss of reputation exist in the Indian social context, where collective actions in villages in India was through fines and "reputation sanctions as its strategy" to increase the cost to an individual for disobeying (Wade, 1994, p. 193). Even social customs which are expensive for an individual to follow continue to persist due to perceived loss of reputation for not obeying the custom (Akerlof, 1980).

We discuss more on the economic and psychological threats perceived by MFI borrowers from three distinct aspects of group lending mechanisms that we adopt in our paper, namely, fear of reprisal, joint liability, and peer pressure. We elaborate on these from the perspective of an individual borrower.

Fear of Reprisal

Two important threat mechanisms function in informal credit markets. They are social sanctions and being cut-off from future loans. Such credible threat mechanisms increase repayment performance. In Peru, for example, living closer was associated with higher returns in repayment games (Karlan, 2005). As Aghion and Murdoch (2005) noted, "When participants share a common bond like go to same church, live in the same neighbourhood and work close by, social sanctions are available for enforcing contracts" (p. 69). Some very poor non-borrowers reported the reason for not borrowing as fear that they cannot repay (EDA & APMAS, 2006). Thus, fear of reprisal is an important micro-finance group process.

In the original Grameen model, if one borrower defaulted, all were denied access to future loans. This system is termed as contingent renewal but is the key mechanism due to which group members are forced to monitor and enforce repayments of peers. As Zeller (1998)

observed, "The threat of losing access to future credits exhorts borrowers to undertake a number of group liabilities" (p. 600). Similar threat is created through sequential financing as initially only two members are given loan, others get once these loans are repaid fully or partially.

In the later Grameen II models, only defaulters are penalised but public repayments are common. This practice uses threat of social stigma in case of non-compliance and obtaining reports on delinquent clients (Aghion&Murdoch, 2005). Though MFI literature has made solidarity and participation as the core philosophies, it is the fear of reprisal which is really critical (Rutherford, 2009). Hence, we measure this variable to understand the group processes. If the borrowers know that no reprisal would take place, most would no longer have the fear and the group may collude and stop repayments (Aghion&Morduch, 2005).

In MFI groups, fear is also driven by peers who may lose access to future credit and lose money. People usually refuse to help members who default regularly and force them to quit the group. Such exclusion results in loss of reputation. In villages, societal reputation matters more (Scott, 1976), and poor, relative to the rich, are more concerned about their reputation. Hence, we predict that psychological threat to reputation will lead to higher fear of reprisal among MFI members than no threat. Stated simply, psychological threat will be positively related to fear of reprisal.

Joint Liability

Joint liability contracts invoke sanctions on members who fail to repay. In case, one member of the group is unable to pay the loan instalment, all the members of the group are treated as defaulters (Besley&Coate, 1995). Accordingly, researchers argue that joint liability, which is the key feature of group lending, encourages self-selection of borrowers, peer monitoring, peer audit, and enforcement of repayments (Ghatak&Guinnane, 1999).

These threats are not applied uniformly because members use local knowledge. In cases where the group knows that the members are shirking from their responsibility, they take extreme steps and help of non-government organisations (NGO) and the community

coordinators. In a case study, for instance, a powerful local leader's wife defaulted on Rs. 20,000/- stating that she was not in a position to repay the loan as her rice business was not doing well. Given that she was well-off, the members did not accept her excuses. The group almost disintegrated when others refused to pay for her. Later on, with the help of a community coordinator, the members persuaded the defaulter to repay her loan after the rice harvest (EDA & APMAS, 2006).

Members show pity and concern for group members facing genuine problems as illustrated below:

> *... a member was defaulting on her loan repayments because her husband had died recently and she was struggling to support her family. The reaction of the group was one of pity and support. They decided to help her as much as they could at least not insist on immediate repayments...* (EDA & APMAS, 2006, p. 54).

Under genuine crises, people do help others financially. In such cases, economic threat is usually low (there is no fear of high economic loss) and psychological threat is coped with a belief that peers will pay for default to protect their own reputations. Under such circumstances, money is generally taken from the pooled fund or savings. Thus, when there is low economic threat, fear can arise from psychological threat. Considered from this angle, the presence of psychological threat at low level of economic loss may increase joint liability (willingness to pay) concerns.

Poor micro-finance members have been found to possess low threshold for economic loss (Rutherford, 2009). If the economic loss is high and they are unable to pay, they find themselves in a situation of hopelessness resisting joint liability, especially when the defaulter is insincere in her efforts (EDA & APMAS, 2006). Presence of both psychological and economic threats may actually have a dampening effect on joint liability. The poor cannot salvage the situation; they just do not have the money to pay. We argue, therefore, that such a circumstance due to high indebtedness of the poor might result in a sense of hopelessness.

It seems, then, that joint liability mechanism may function in two ways. One is that members are willing to pay (be jointly liable) when the peers have a genuine difficulty. Another is that members dislike joint liability payments when the peer is deliberately shirking from her responsibility. In fact, they may ensure that such reneging defaulters must pay back. We term these two as genuine joint liability (GJL) and reneging joint liability (RJL), respectively, and measure them accordingly.

Peer Pressure

In the group lending models, peer pressure is another important feature. People with bonds of kinship, neighbourhood, and the same occupation may be able to support credit contracts (Ghatak&Guinnane, 1999) through informal mechanisms of imposing penalties. This peer pressure can be undertaken in a numbers of ways. First, the members may rebuke the peers for causing them financial loss. Second, they may refuse to cooperate with the defaulting peer in future. Finally, they may report the behaviour to others in the village thus increasing reputational threat for the defaulter (Besley&Coate, 1995). All these have an impact when members are dependent on one another outside the lending group (Coate&Ravallion, 1993).

Sometimes, loan officers apply pressure on borrowers to repay even when there is a genuine problem. In a case description of such an event observed in ASA (an MFI in Bangladesh), the following were observed:

> *...weekly meetings are the best place to induce poor payers to find their repayments...; if all payments have not been made, he (loan officer) is able to keep them sitting until money is produced...; if this technique fails, he has no option but to visit each house individually sometimes with colleagues* (Rutherford, 2009, pp. 135-136).

Peer pressure also led to seizure of assets such as livestock or household goods.

In the group lending models, one does not know how the peer pressure mechanisms function in different groups. Some group members may be more willing than others to apply peer

pressure, some may be unwilling to take any action, and different cultures may show different effects. Thus, one would not know the real outcome in advance. Among the SHGs in India, for example, there was a pattern in escalation of social pressure with different kinds of actions such as "discussions within the group, giving a warning, imposing a fine, taking possession of defaulter's assets, or locking her out of the house... Follow-up on continued default involves usually visit to defaulter's house" (EDA & APMAS, 2006, p. 118).

Indirect distal actors are also involved at a much later stage. In the foregoing case study, "The group waited for a year and finally raised the issue in Mahila Sabha (women's council)" (p. 119). The NGO or SHG promoting agencies expect the group leaders to ensure repayments; they get involved only when she cannot repay, "then they meet the defaulter directly or raise the issue at the village level" (p. 122).

Peer pressure is also demonstrated by high peer audit. In a study in Peru (Marr, 2003), auditors applied pressure on borrowers to return the loan come what may. Similarly, control by lenders through intensive contacts between their credit officers and borrowers (Reinke, 1998) and use of strict accounting and audit procedures forced borrowers to repay. In analysis for repayment determinants of loans from a Bolivian micro-lender, higher enforcements led to lesser delay and higher repayments (Volgelgesang, 2003).

There appear to be different actors involved in applying pressure on the defaulter. Peer pressure is applied most of the time directly by the members individually or all group members together due to their immediate involvement and commitment to the group. We term this process as direct peer pressure. The loan officer or SHG coordinator also exhorts members to repay the loan and involves family members if required. Their presence itself creates the pressure in view of their status and repayments in public. We term this process indirect proximal peer pressure. Finally, the members may involve others such as neighbours of the defaulter or members of the village council who may form part of the larger interdependent networks. We term this process as indirect distal peer pressure.

In conclusion, a large body of literature examined social mechanisms underlying group processes in joint liability contracts. The joint liability, peer pressure, and fear of reprisal seem to be key group process constructs which impact repayment behaviour of the individual micro-finance member. Considering how both economic and social costs impact an individual's decision making in micro-finance group processes is a novel step in the direction to understand the genesis of micro-finance crises. We also wish to emphasise that most of the studies reviewed were field studies in which causes and effects are difficult to discern. Consequently, we used the experimental method in which the causes precede the desired effects (Singh, Bhullar, & Sankaran, 2016). Further, this approach is in accordance with the growing popularity of experimentation in economics (Gine, Jakiela, Karlan, &Morduch, 2010; Field & Pandey, 2007; Karlan, 2007; Cassar, Crowley, &Wydick, 2007).

The virtue of this research lies in first testing the measurement model, that is, whether the constructs of genuine joint liability, reneging joint liability, fear of reprisal, direct peer pressure, indirect proximal peer pressure, and indirect proximal peer pressure are empirically distinguishable. In other words, are these constructs of micro-finance group processes empirically separable from each other, an issue that has remained largely ignored in micro-finance literature. Then, we tested the causal effects of economic and psychological threats, and their order of presentation on fear of reprisal, joint liability, and peer pressure.

Method

We first developed the measures of the three constructs discussed above, joint liability, peer pressure, and fear of reprisal. Informal discussions and interviews with some of the micro-finance coordinators and borrowers guided our operationalisation of the three constructs. The items generated were further discussed with subject matter experts (SMEs). Following 100% agreement among SMEs, the items generated were translated into the local language, Hindi for the ease of understanding of the participants.

To further check on the usability of the survey developed, we conducted a pilot survey with participants in micro-finance organizations and doctoral students at the Indian Institute of Management Bangalore. This helped us improve upon the language-formulation of the

questions. Feedback enabled further refinement of the information sought about the background of the respondents and responses sought from them about joint liability, peer pressure, and fear of reprisal.

Participants

As most of the micro-finance institutions (MFIs) in India consist of only women members, the participants in this study were women as well. Members of two urban MFIs at Delhi (Indcare and Prayas) and two rural MFIs at Alwar, Rajastan - India (Humana People to People India and Matashree Gomati Devi Trust) participated. The complete data was collected from only 186 of the 204 participants. Thus, the response rate was 91%.

Average age of the participants was 34.7 years. They were mostly illiterate with a mean education level of only 2.7 years. Average family size of the participants was 5.5 persons, with a mean of 2.2 children below 18 years per household.

Measures

Fear of Reprisal.— Fear of reprisal is usually induced by the anticipated loss of reputation and/or finance. The MFI members are almost hardwired by the lending institutions that they have to pay the loan installment regularly if they wish to avoid being denied loans in the future. It is the threat of losing access to future credits which exhorts members to undertake functions such as screening and monitoring of the borrowers as well as enforcing repayments by them through peer pressure (Zeller, 1998). Discussion with the participants and the SMEs suggested that persistent default by a member does result in loss of a member's reputation and her subsequent exit from the group. Such suggestion was further corroborated by case studies which showed about 27% of dropouts were seen due to financial difficulties (EDA & APMAS, 2006). We measured fear of reprisal with a set of the following seven items:

(i) I may lose my savings with the group.

(ii) I may not get loan from any NGO.

(iii) Any member of my family may not get loan under government schemes.

(iv) I may have to pay for loan instalment of other member.

(v) I may lose my reputation.

(vi) Other groups may not take me as member.

(vii) I may have to give more money.

Joint Liability.—In micro-finance group lending, even if the loan is granted to an individual, the group as a whole is held accountable for ensuring the repayment of the loan. Wydick (1999) measured joint liability as a moral obligation to pay in order to remain in good terms with the members. In experimental games, Giné, Jakiela, Karlan, and Morduch (2010) activated joint liability among players by making them liable for the partner's default. Taking these practices into consideration, we operationalised joint liability as the willingness to pay for the defaulting members. Accordingly, we framed the following four items to measure joint liability:

(i) I will pay if a member is in trouble.

(ii) My group members will pay if a member is in trouble.

(iii) I will pay if member misuses loan elsewhere.

(iv) My group members will pay if member misuses loan elsewhere.

Peer Pressure.—Peer pressure is an important behavioural component in group repayments. Wydick (1999) conceptualized peer pressure as a positive disposition to apply (a) pressure on others to pay and (b) sanction them if so required. Therefore, we operationalised peer pressure through a set of the following six items.

(i) I will put pressure on the member to return the loan.

(ii) I will put pressure on other group members to ask the member to return the loan.

(iii) I will put pressure on NGO coordinator to ask the member to return the loan.

(iv) I will put pressure on member's family to ask her to return the loan.

(v) I will put pressure on member's neighbours to ask her to return the loan.

(vi) I will put pressure on eminent local persons to ask the member to return the loan.

Notably, the first four items seemingly deal with direct and proximal pressure. In contrast, the last two items deal with generating pressure through distant agents of the society.

Experimental Booklet

The experimental booklet consisted of two parts. Part I included one of the eight vignettes prepared according to a 2 ×2 ×2 factorial design. The first two key factors were *economic loss* and *reputational loss*. The two levels of economic loss were *Rs. 100* and *Rs. 1600*; the corresponding two levels of reputational loss were *no loss at all* and *total loss of reputation*. We selected these levels in consultation with another group of participants (N = 40). To eliminate the confounding of the importance of factors with their order of presentation in the vignette, we added the third factor of order of presentation. Thus, the two key factors were presented at both the first and second orders of information presentation. Use of such method of information manipulation is common in social psychological research (Singh et al., 2012; Singh et al., 2014). In our case, it was of theoretical interest as well, as we noted in the introduction, presentation of psychological threat before economic threat might trigger hopelessness among the participants.

Part II of the booklet sought information about (i) the background of the participants, (ii) the checks on the manipulation made, and (iii) the resulting responses of joint liability, fear of reprisal, and peer pressure. Responses to the items forming the three constructs were sought along a 9-point Likert scale, anchored by 1(*very little*) and 9 (*very high*).

Procedure

One of the co-authors met the participants individually and instructed them and obtained their voluntary consent (Appendix A).

Since the respondents were illiterate or semi-illiterate, we collected the data through personal interviews. In the first part, the participants were read one vignette distributed randomly among them. In the second part, we interviewed each one individually. The interview sought responses to the vignette presented and the information about the background of the participants. Responses were recorded on the forms. Each session ended with a full debriefing.

Data Coding

The three factors of economic threat, psychological threat, and order of presentation of the factors consisted of two levels. we coded the low and high levels of economic and psychological threats as 0 and 1, respectively. For the factor of order of presentation, 0 represented economic threat–psychological threat order (EP) and 1 represented the reversed order (PE). As noted earlier, responses to each question ranged from 1 to 9, where 1 and 9 implied *very little* and *very high*, respectively. Thus, a higher score means higher perceptions of fear, higher willingness to apply peer pressure, and higher willingness to undertake joint liability.

Tests of the Measurement Model

Joint Liability and Fear of Reprisal.—To ascertain that the responses to the two measures of joint liability and fear of reprisal were empirically distinct, we first performed separate three-factor and two-factor confirmatory factor analyses (CFAs) in AMOS. The former checked whether the constructs of joint liability arising out of defaulting member being in genuine trouble (GJL: genuine joint liability), defaulting member misusing her loan elsewhere (RJL: reneging joint liability) and fear of reprisal were distinguishable. Whereas the first two factors had 2 items, the last one had 7 items. In the second CFA, we distinguished joint liability (4 items) from fear of reprisal (7 items).

The fit indices for the three-factor measurement model[1] were better than those for the alternative two-factor model[2]. The decrease in the chi-square value of the two-factor model to that of the three-factor model was statistically significant, $\chi^2_\Delta(2) = 50.83$, $p < .001$. Hence, we regarded the three factors of GJL, RJL, and fear of reprisal as empirically distinct.

Peer Pressure.—For ensuring construct distinction among the measures of the dependent variable (DV) of peer pressure, we performed similar three-factor and two-factor CFAs. The three-factor model conceptualized direct peer pressure (DPP), indirect proximal peer pressure (IPPP), and indirect distal peer pressure (IDPP) as distinct constructs, each represented by 2 items. In contrast, the two-factor model distinguished the direct peer pressure (DPP) from the indirect peer pressure (IPP). The first and second factors were represented by 4 and 2 items, respectively.

The fit indices for the three-factor model[3] were better than those for the two-factor model[4]. The decrease in the chi-square value of the three-factor model to that of the two-factor model was statistically significant, $\chi^2_\Delta(2) = 23.39$, $p < .001$. Hence, we regarded the three factors of DPP, IPPP, and IDPP as distinct constructs.

Overall CFA.—we also tested an overall six-factor measurement model with all the responses. In this analysis, we included the three constructs from the two aforementioned three-factor measurement models. The fit indices for the six-factor model[5] were satisfactory. Accordingly, we regarded the six factors to be distinguishable among the present sample of participants. This outcome is important, for the participants were illiterate or semi-literate. Table 1 lists the standardized regression weights of the responses to the items constituting the six factors. As can be seen, regression weights of the responses to the items forming a factor are nearly similar.

[1] $\chi^2(45) = 116.15$, $p < .001$, non-normed fit index/Tucker–Lewis index (NNFI/TLI) = 0.91, incremental fit index (IFI) = 0.93, root mean square error of approximation (RMSEA) = .09, standardized root mean residual (SRMR) = .05

[2] $\chi^2(43) = 166.98$, $p < .001$, NNFI/TLI = 0.83, IFI = 0.87, RMSEA = .12, SRMR = .07.

[3] $\chi^2(6) = 19.44$, $p = .003$, NNFI/TLI = 0.92, IFI = 0.97, RMSEA = .11, SRMR = .04.

[4] $\chi^2(8) = 42.83$, $p < .001$, NNFI/TLI = 0.84, IFI = 0.92, RMSEA = .15, SRMR = .06.

[5] $\chi^2(108) = 233.33$, $p < .001$, NNFI/TLI = 0.89, IFI = 0.92, RMSEA = .08, SRMR = .05.

[Insert Table 1 About Here]

Reliability and correlation coefficients.

We checked reliability of the measures by Cronbach's alpha (α) for fear of reprisal (number of items = 7) and by Spearman–Brown's coefficient for other five constructs (number of items = 2). Given the high reliability coefficients of all the measures (see the diagonal values in parentheses of Table 2); we averaged the responses to the items forming a factor, and then checked correlations among them. Table 2 lists the means (Ms), standard deviations (*SD*s), reliability coefficients (see the diagonal values in parentheses), and correlations among the six responses.

Four trends are evident from the correlations reported in Table 2. First, the correlation coefficients range from low to moderate in value, indicating further that the factors are indeed distinct. Second, RJL is not correlated to any of the remaining variables except GJL. Third, the three types of peer pressure are moderately correlated among themselves. Finally, fear is correlated with all three types of peer pressure, but GJL is correlated with DPP only.

[Insert Table 2 About Here]

Causal Effects

Tests of the Causal Effects

To test the causal effects of the manipulations, we performed separate 2 ×2 ×2 (order of information presentation: EP *vs*. PE ×economic threat: Low *vs*. High ×psychological threat: No *vs*. Yes) between-participants analysis of variance (ANOVA), with unequal cell sizes (*n*s varied between 21 and 26 across eight cells), on the six measured responses. As can be seen, three responses of genuine joint liability, indirect proximal peer pressure, and indirect distal peer pressure, have had no significant effect at all. In contrast, the three responses of fear of reprisal, reneging joint liability, and direct peer pressure had statistically significant effects ($p < .05$) of the manipulations.

For simplicity in exposition, we have presented the results of two responses each in three tables, Table 3.1, Table 3.2, and Table 3.3. It deserves emphasis, nevertheless, that the

economic and psychological threats affected some, not all of the responses sought. Further, the effects of psychological threat were hardly uniform across three affected responses. Such divergence in results does point to high cognitive capacity of the mostly illiterate women of North India who participated in the experiment.

Main Effects on Fear of Reprisal.—Look at Table 3.1. Fear of reprisal had two statistically significant main effects. One effect was of the hypothesized psychological threat: Participants feared more when there was psychological threat to their reputation (M =5.61, n = 94, SD =1.86) than when there was no such threat at all (M =4.84, n = 92, SD =2.15). Another, and more important, effect is of the order of presentation of information. Mean fear of reprisal was consistently higher at the conventional EP order of micro-finance contracts (M =5.55, n = 92, SD =2.01) than that at the nonconventional PE order (M =4.92, n = 94, SD =2.03).

[Insert Table 3.1 About Here]

The foregoing two main effects are displayed in Figure 1. As it can be seen, the order of presentation of information and psychological threat had additive effect on fear of reprisal. Fear was higher at the EP order than at PE order as if a recency effect of psychological threat were operative. Put simply, the recently presented information about psychological threat generated greater fear among the participants than did the same information presented first (Anderson, 1981). Further, fear of reprisal was higher when there was threat to reputation than when there was no such threat at all.

[Insert Figure 1 About Here]

Two-way Interaction Effect on Direct Peer Pressure.—The two-way Order ×Psychological threat interaction effect was also statistically significant on direct peer pressure, $F(1, 178) = 5.42$, $p = .02$, $\eta^2_p = .03$. Figure 2 presents mean direct peer pressure resulting from the order of information presentation (separate lines) and the psychological threat listed on the horizontal axis. The mean direct peer pressure (M = 7.45, n = 48, SD = 1.59) at the EP order was greater than that at the PE order (M = 6.50, n = 46, SD = 1.41) when there was psychological threat,

$t(92) = 3.04$, $p = .003$, Cohen $D = 0.63$. However, there was no effect of order of presentation when psychological threat was absent ($M = 6.75$, $n = 44$, $SD = 1.83$ at EP order; and $M = 6.85$, $n = 48$, $SD = 1.42$ at PE order), $t(90) = -0.31$, $p = .76$, Cohen $D = 0.06$. Such interaction further points out that presence of psychological threat dampened direct peer pressure at the PE order.

[Insert Figure 2 About Here]

Finally, there was a main effect of order of presentation, $F(1, 178) = 3.79$, $p = .05$,$\eta^2_p = .02$. The conventional EP order induced a higher level of direct peer pressure ($M = 7.11$, $n = 92$, $SD = 1.74$) than the nonconventional PE order, ($M = 6.68$, $n = 94$, $SD = 1.42$). Thus, the direct peer pressure was dampened at the PE order.

Two-way Interaction Effect on Reneging Joint Liability.—Look at Table 3.2. There is a significant Psychological threat × Economic threat interaction effect on reneging joint liability, $F(1, 178) = 5.11$, $p = .03$, $\eta^2_p = .03$.

[Insert Table 3.2 About Here]

Figure 3 presents the mean reneging joint liability from economic threat (represented by lines) at the two levels of psychological threat listed on horizontal axis. As it can be seen, psychological threat was effective only when the economic threat was low, $F(1, 91) = 3.79$, $p = .05$, $\eta^2_p = .04$, rather than high. Consequently, the high and low levels of economic threat differed significantly at the level of psychological threat alone, $F(1, 92) = 3.89$, $p = .05$, $\eta^2_p = .04$.

[Insert Figure 3 About Here]

Overall Model.—Given no consistent patterns of significant effects across the three foregoing responses, it was not possible to represent the overall links among the manipulated causal variables and the three measured variables a structural equation modeling. Mediation analyses were not possible either (Hayes, 2013). At this stage, therefore, the three affected responses can be best regarded as distinct responses to the two kinds of threat and their order of presentation manipulated.

Discussions

The objective of this research was to understand the genesis of the micro-finance crises in terms social psychological aspects of the group lending processes. Accordingly, we re-examined micro-finance group processes from the perspective of the individual borrowers of micro-finance institutions (MFIs) using social psychological approaches. Most MFI loans are repaid due to intervening negotiations, at the time of potential default, which entail joint liability, applying peer pressure, and fear of social sanctions, by the group members. These social psychological processes contribute to people's self-conception (material or social) and are too important to ignore in MFI processes. Hence, we capture member's perceptions at the time of potential default.

We had two specific goals. One goal was to develop the measurement model for micro-finance group process constructs. Another goal was to test the causal effects of economic and psychological threats, and their order of presentation on each of the six constructs. Specifically, we studied the effects of psychological threat and economic threat on the constructs measured. Findings of our study show that impact of different levels of economic and psychological threat, differ.

Findings and implications

Measurement Models—

Through the literature review and discussions with borrowers and experts, we first developed the measures of peer pressure, fear of reprisal and joint liability. The data collected showed that six constructs, namely, direct peer pressure, indirect proximal peer pressure, indirect distal peer pressure, fear of reprisal, genuine joint liability and reneging joint liability underlie the responses of the borrowers. This result shows that borrowers made nuanced distinction and understood the basic implications of the micro-finance group processes. Correlations among the variables were low to moderate, further indicating that the variables are seemingly distinct. This demonstration is important, for micro-finance literature had suggested only three constructs of fear of reprisal, peer pressure and joint liability (Aghion&Morduch, 2005).

Causal Effects—

Given satisfactory evidence for construct distinction, we tested the joint effect of economic and psychological threats on these measures. Specifically, we studied how psychological threat impacts group lending mechanisms at different levels of economic threat. In doing so, the question of methodological and theoretical interest was whether the order of economic and psychological threat has any bearing on borrowers fulfilling their loan repayment commitments. As stated in the Introduction, when two variables are orthogonally manipulated their orders of presentation assume importance. To us, a difference in the order of the information presentation implied different perceptions of threat per se and hence it may activate different behaviours among of MFI members. In micro-finance settings, economic threat strictly implies loss of future loans and loss of savings. As a part of joint liability mechanism, this economic threat is upfront, explicit and induces borrowers to repay. In contrast psychological threat is implicit and comes later as peers invoke sanctions only when there is persistent default. In our experiment such micro-finance conception was represented by the economic-psychological (EP) order of threat information presentation.

This order may be reversed in cases of persistent defaults, where the group may apply psychological pressure by conducting a meeting in front of the defaulter's house (EDA & APMAS, 2006). Meetings continue till repayments are made by all the borrowers and this may result in loss of work and wages for the poor. In such cases, the MFI coordinators may not relent or give concessions (Joseph, 2014). Thus, ex-ante psychological threat becomes verbalized and arises here before the economic threat. In our experiment, this scenario was represented by the psychological-economic order of threat information presentation (PE).

The details of findings and implications are discussed for the three constructs of direct peer pressure, fear of reprisal, and reneging joint liability, which showed significant effects.

Direct peer pressure: Peer pressure is seen to be implemented in field settings in a variety of ways. The most common method was:

...If one or two women did not pay, they would insist that all of us sat in the meeting until they received the total amount (Joseph, 2014, *p.* 281).

In the experimental settings, making psychological threat explicit resulted in enhanced direct peer pressure at EP order of information presentation. Thus, as predicted, the direct peer pressure is high when economic threat precedes psychological threat. Further, if sanctions were effective in the recent past, members will be more willing to apply peer pressure and sanctions on delinquent borrowers. Thus, availability heuristics/recency effect (Tversky &Kahneman, 1973) also plays a role in the micro-finance settings. This also endorses the argument of credible threat mechanism by the micro-finance researchers. These responses are consistent with the reports of women:

..... The women admitted that they had done wrong by taking loans that they could not honour but they said that they were in hopeless amount of debt and their situation was more dire because of the lending and collection practices of the MFIs. (Joseph, 2014, *p.* 278).

As discussed earlier, economic threat is explicit and primary in micro-finance groups. It is often repeated by the group leaders and coordinators, whereas the psychological threat is implicit. This usually leads to pre-meeting negotiations among the group members who may readily arrange payment for any likely default and collect money for such shortfall before the meeting.

Psychological threat becomes explicit in field settings in cases of regular or persistent defaulters, wherein members resort to peer pressure and social sanctions. This may lead to crises when women are indebted to many MFIs. This situation implies psychological threat is perceived before high economic threats (order PE) as:

...Many of us were members of several MFIs – so this (not allowed to leave the meeting till all pay) started happening twice or thrice a week. People began to get angry with the staff and with the women who were not paying regularly (Joseph, 2014, *p.* 281).

In such a situation when psychological threat is posed first, members may no longer feel solidarity due to much lower expectation of recovery and consequently high cost of monitoring. As observed in literature review, poor micro-finance members are very sensitive to economic thresholds. Case studies show that if better-off members avail higher amounts of loan and refuse to repay (EDA & APMAS, 2006) or members run away and the group is forced to repay indefinitely, it creates high economic threats and the peers may feel hopelessness. This would lead to lower willingness to apply peer pressure. It also shows desperation as narrated by Joseph (2014), while recounting a borrower's experience as the leader of the centre.

....I had no problem paying my share, and it was ok paying their share for few weeks, but there was no way I could keep paying double for an indefinite amount of time. My husband also put his foot down and said that I should stop. So, we tried to talk to the staff and asked them to help us out since people had run away and that wasn't our fault but they said, "You said you would pay and that was the reason that we gave you the loans", and they continued to harass us to pay (Joseph, 2014*p.* 287).

In other words, in a situation of persistent defaults, where the borrowers are already in a vulnerable situation – making explicit the psychological threat (in the order PE, in our setting) only triggers despair. Members would rather renege en-masse than putting pressure on peers to repay or making those repayments on their behalf.

Fear of reprisal: Fear of reprisal has been seen as fear of social sanctions, fear of not being included in other group activities, loss of future loans, and loss of access to benefits by NGOs or under government schemes. Researchers have argued that apart from the economic, social aspects of debt are very relevant for the poor. It is motivated by their struggle to remain creditworthy. "Maintaining creditworthiness is both a matter of eligibility of loans in future and of self dignity" (Guerin et al., 2014, *p.* 127). People care about their reputation and fear loss of reputation. This is a psychological threat faced by micro-finance borrowers.

Causal effects on fear of reprisal endorse the hypothesis that presence of psychological threat will lead to higher fear among the MFI members than no threat. Further, the order EP is more salient, that is, psychological threat presented later than economic threat in the order of information presentation, increases fear of reprisal. The group with situation of no reputation loss and order PE invoked least fear, whereas group with situation of threat to reputation loss and order EP invoked significantly higher fear of reprisal. Thus, one can infer that an event in the recent past of loss of reputation would invoke stronger fear of reprisal among the MFI members. In psychology, availability heuristics or recency effect will invoke higher fear if reputation loss is recent. Availability cascades are real as media picks up stories and may lead to exaggeration of minor problems (Kahneman, 2011).

Reneging joint liability: It is argued that members will undertake reneging joint liability, that is, pay for a defaulting member who is not sincere, to protect their creditworthiness for future loans from the MFI. In such cases, the cost of monitoring or social sanctions is too high or not effective. This may happen if the borrowers run away or are too powerful within the community. However, such a situation may not continue for long as members would resent continuous loss of their savings.

Proliferation of MFIs in southern states such as Andhra Pradesh and Karnataka in India has led to poor micro-finance members taking loan from several MFIs (Kamath& Srinivasan, 2009) and thus have a much larger debt burden than they can possible pay, leading to recycling of debt (Kamath, Dattasharma, &Ramanathan, 2013). This may pose high economic threats though, seemingly individual loans are small. Since micro-finance members have very low economic thresholds, due to limited income and irregular streams, such situation may quickly lead to a crisis of non-repayment when higher economic loss is perceived along with psychological threat. Thus, psychological threat may enhance reneging joint liability at low levels of economic threat but higher economic threat may dampen joint liability. Accordingly, the psychological and economic threats interacted with each other.

In particular, high economic threat eliminated the impact of psychological threat by dampened reneging joint liability. Field studies also corroborate the foregoing results. When members

find themselves in a situation of hopelessness, they resist joint liability especially when the borrower is insincere in her efforts (EDA & APMAS, 2006). Apparently most of the borrowers have a threshold of the amount of financial loss that they can absorb. In case of default by few persistent members, others also stop paying to limit their losses resulting in the disintegration of group itself (Rutherford, 2009).

When both prestige and money are at stake due to reneging borrowers in the group, participants perhaps do not perceive solidarity. In case of a repayment strike by Grameen Bank borrowers in 1995, for example Matin (1997) observed "unzipping of joint liability" as the crisis escalated. A similar situation was experienced in Karnataka, India when borrowers refused to pay for the fugitive defaulters (Joseph, 2014). This is the point when the group can disintegrate due to despair and lack of solidarity.

Conclusion

Our experiment suggests that psychological threats made to borrowers are key to understanding MFI group processes, especially as triggers to a repayment crisis. Our results shed light on what goes behind the emergence of a repayment crisis. We try and answer this question: when can psychological threat undermine micro-finance group processes, leading to borrowers reneging on their loan repayments? Firstly, psychological threat creates higher fear of reprisal. This implies that the effect of the veiled threats of social sanctions on the individual psyche of borrowers cannot be ignored. Recently presented psychological threat generates maximum direct peer pressure and higher fear of reprisal. Borrowers also distinguish between genuine defaulters and reneging defaulters. We find that for reneging joint liability, psychological threat was effective when economic threat was low. However, higher economic threat dampened reneging joint liability, paving the way for a repayment crisis. Psychological threat is a deterrent for members insofar as she is facing low economic threat. When economic threat is high, either because of persistent defaults of other reneging members, or due to their own over-indebtedness, psychological threats will only trigger despair, making members renege en-masse on their loan repayments. Thus, MFIs should consider recognizing the distinction in their processes that seemingly reduce distress among

poor borrowers. These insights can be seen as concrete takeaways of the experiment reported on group processes to deal with the crises that often plague the micro-finance sector.

TABLE 1

STANDARDIZED REGRESSION WEIGHTS OF RESPONSES ON THE SIX HYPOTHESIZED FACTORS IN CFA(N=186)

Responses to the items	Factors
Fear of Reprisal (Fear)	
F1: I may lose my savings with the group.	0.70
F2: I may not get loan from any NGO.	0.70
F3: Any member of my family may not get loan under government scheme.	0.77
F4: I may have to pay for loan installment of other member.	0.74
F5: I may lose my reputation.	0.74
F6: Other groups may not take me as member.	0.78
F7: I may have to give more money.	0.72
Genuine Joint Liability (GJL)	
JL1: I will pay if member is in trouble.	0.78
JL2: My group members will pay if member is in trouble.	0.82
Reneging Joint Liability (RJL)	
JL3: I will pay if member misuses loan elsewhere.	0.86
JL4: My group members will pay if member misuses loan elsewhere.	0.88
Direct Peer Pressure (DPP)	
D1: I will put pressure on the member to return the loan.	0.69
D2: I will put pressure on the group members to ask the member to return the loan.	0.87
Indirect Proximal Peer Pressure (IPPP)	
IP1: I will put pressure on NGO coordinator to ask the member to return the loan.	0.78
IP2: I will put pressure on member's family to ask her to return the loan.	0.72
Indirect Distal Peer Pressure (IDPP)	
ID1: I will put pressure on member's neighbours to ask her to return the loan.	0.88
ID2: I will put pressure on eminent local person to ask the member to return the loan.	0.82

TABLE 2

DESCRIPTIVE STATISTICS, RELIABILITY COEFFICIENTS, AND CORRELATIONS AMONG THE VARIABLES

	M	SD	1	2	3	4	5	6
1. Fear of Reprisal	5.23	2.04	(0.89)	.14**	0.13	.43***	.45***	.42***
2. Troubled Joint Liability	5.34	2.1		(-0.75)	.43***	.17**	0.14	0.09
3. Rogue Joint Liability	3.68	2.34			(-0.88)	0.03	0.02	0.12
4. Direct Peer Pressure	6.89	1.6				(-0.75)	.53***	.38***
5. Indirect Proximal Peer Pressure	6.16	2.16					(-0.72)	.48***
6.Indirect Distal Peer Pressure	4.76	2.46						(-0.83)

Note. N = 186 *** p < .001; ** p < .05.

The value in parenthesis along the diagonal are corresponding reliability coefficient.

TABLE 3.1

ANALYSES OF VARIANCE OF FEAR OF REPRISAL AND DIRECT PEER PRESSURE

		Responses Measured					
		Fear of Reprisal			Direct Peer Pressure		
Source	*Df*	*F*	*p*	η^2	*F*	*p*	η^2
Order	1	**4.44**	**0.04**	**0.02**	**3.79**	**0.05**	**0.02**
Economic Threat	1	0.30	0.58	0.00	0.21	0.65	0.00
Psychological Threat	1	**6.81**	**0.01**	**0.04**	0.65	0.42	0.00
Order x Economic Threat	1	1.72	0.19	0.01	0.11	0.74	0.00
Order x Psychological Threat	1	0.04	0.85	0.00	**5.42**	**0.02**	**0.03**
Economic Threat x Psychological Threat	1	0.00	0.99	0.00	0.31	0.58	0.00
Order x Economic Threat x Psychological Threat	1	0.65	0.42	0.00	**8.25**	**0.00**	**0.04**
Error (within groups)	178	-4.01			-2.40		

See Note 1 on page 46.

TABLE 3.2

ANALYSES OF VARIANCE OF FEAR OF REPRISAL, RENEGING JOINT LIABILITY, AND DIRECT PEER PRESSURE

		Responses Measured					
		Reneging Joint Liability			Genuine Joint Liability		
Source	*df*	*F*	*p*	η^2	*F*	*p*	η^2
Order	1	0.04	0.85	0.00	2.75	0.1	0.02
Economic Threat	1	0.42	0.52	0.00	0.32	0.57	0.00
Psychological Threat	1	0.33	0.57	0.00	1.23	0.27	0.01
Order x Economic Threat	1	0.01	0.91	0.00	0.03	0.87	0.00
Order x Psychological Threat	1	0.87	0.35	0.00	0.37	0.54	0.00
Economic Threat x Psychological Threat	1	**5.11**	**0.03**	**0.03**	2.9	0.09	0.02
Order x Economic Threat x Psychological Threat	1	0.01	0.93	0.00	2.87	0.09	0.02
Error (within groups)	178	-5.5			4.32		

TABLE 3.3

ANALYSES OF VARIANCE OF INDIRECT PROXIMAL PEER PRESSURE AND INDIRECT DISTAL PEER PRESSURE

		Responses Measured					
		Indirect Proximal Peer Pressure			Indirect Distal Peer Pressure		
Source	*df*	*F*	*p*	η^2	F	P	η2
Order	1	2.7	0.10	0.01	2.16	0.14	0.01
Economic Threat	1	1.58	0.21	0.01	0.95	0.33	0.01
Psychological Threat	1	0.70	0.41	0.00	1.32	0.25	0.01
Order x Economic Threat	1	0.53	0.47	0.00	0.41	0.52	0.00
Order x Psychological Threat	1	0.43	0.51	0.00	0.03	0.87	0.00
Economic Threat x Psychological Threat	1	0.64	0.42	0.00	0.12	0.73	0.00
Order x Economic Threat x Psychological Threat	1	0.61	0.43	0.00	0.96	0.33	0.01
Error (within groups)	178	-4.68			-6.1		

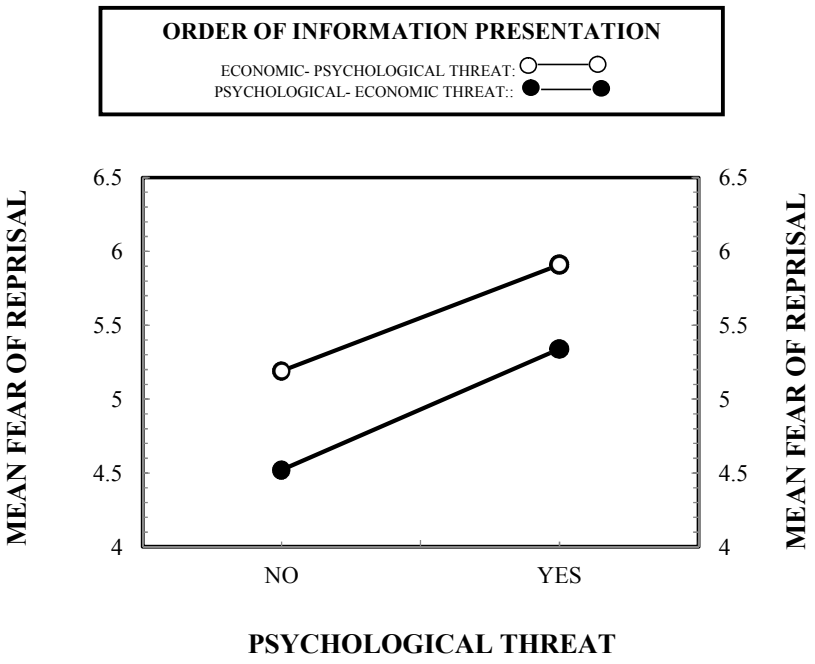

FIGURE 1. MEAN FEAR OF REPRISAL RESULTING FROM PSYCHOLOGICAL THREAT (LISTED ON HORIZONTAL AXIS) AT TWO ORDERS OF INFORMATION PRESENTATION (REPRESENTED BY LINES)

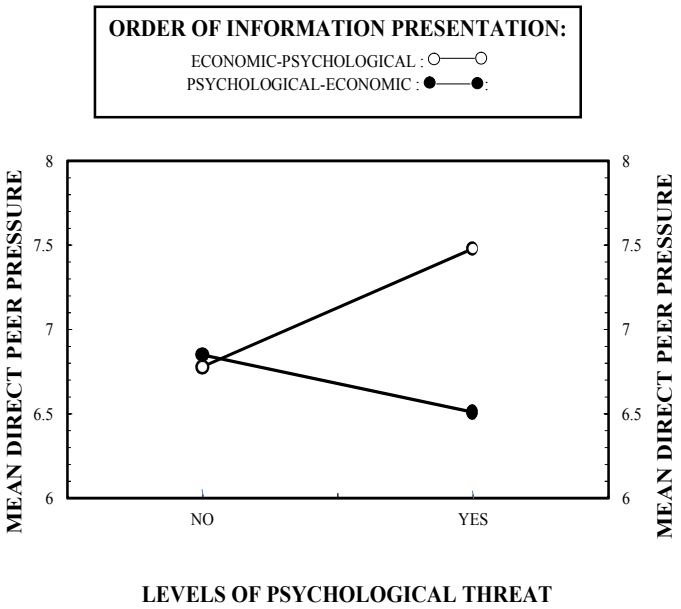

FIGURE 2.MEAN DIRECT PEER PRESSURE AFFECTED BY ORDER OF INFORMATION PRESENTATION (REPRESENTED BY LINES) AND PSYCHOLOGICAL THREAT (LISTED ON HORIZONTAL AXIS)

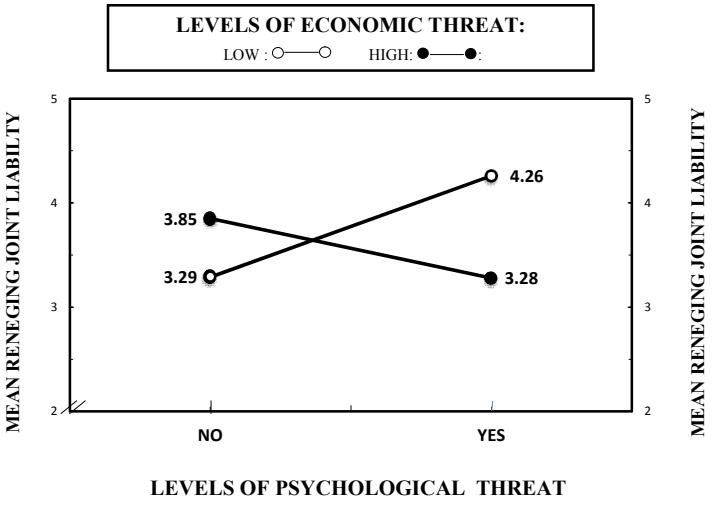

FIGURE 3. MEAN RENEGING JOINT LIABILITY FROM ECONOMIC THREAT (REPRESENTED BY LINES) AT TWO LEVELS OF PSYCHOLOGICAL THREAT (LISTED ON HORIZONTAL AXIS)

References

Aghion, B. A. De., &Morduch, J. (2005). *Economics of micro finance*. MA: The MIT Press Cambridge, MA, US.

Akerlof, G. A. (1980). A theory of social customs, of which unemployment may be one consequence. *The Quarterly Journal of Economics,* 94, 4, 7, 749-775.

Ahlin, C., & Townsend, R. M. (2007). Using repayment data to test across models of joint liability lending. *The Economic Journal*, 117, 517, F11-F51.

Anderson, N. H. (1981). *Foundations of information integration theory*. New York: Academic Press.

Banerjee, A., Duflo, E., Glennerster, R., & Kinnan, C. G. (2015). The Miracle of microfinance? Evidence from randomized evaluation. *American Economic Journal: Applied Economics,* 7, 1, 22–53.

Besley, T., &Coate, S. (1995). Group lending, repayment incentives and social collateral. *Journal of Development Economics*, 46, 1-18.

Cassar, A., Crowley, L., &Wydick, B. (2007). The effect of social capital on group loan repayment: Evidence from field experiments, *The Economic Journal*, 117,517, F85-F106.

Coate, S., &Ravallion, M. (1993). Reciprocity without commitment: Characterisation and performance of informal risk-sharing arrangements. *Journal of Development Economics*, 40, 1-24.

Chowdhury, P. R. (2005). Group-lending: Sequential financing, lender monitoring and joint liability. *Journal of Development Economics*, 2005, 77, 2, 415-439.

Chowdhury, P. R. (2007). Group-lending with sequential financing, contingent renewal and social capital. *Journal of Development Economics*, 2007, 84, 450-506.

CGAP. (2010). Andhra Pradesh 2010: Global Implications of crises in Indian Microfinance. http://www.cgap.org/sites/default/files/CGAP-Focus-Note-Andhra-Pradesh-2010-Global-Implications-of-the-Crisis-in-Indian-Microfinance-Nov-2010.pdf

EDA& APMAS (2006).*Self help groups in India: A study of lights and shades*. India: EDA Rural Systems Private Limited and Andhra Pradesh MahilaAbhivruddhi Society.

Fernandes, A., P. (1998). *The MYRADA experience: Alternate management systems for savings and credit of the rural poor (2nd edition).*India: MYRADA, Bangalore.

Field, E. &Pande, R. (2007) Repayment Frequency and Default in Microfinance: Evidence from India. *Journal of the European Economic Association*,6, 2/3, 501-509.

Ghatak, M. (1999). Group lending, local information and peer selection. *Journal of Economic Development,* 60, 27-50.

Ghatak M. &Guinnan,T. W. (1999). The economics of lending with joint liability, theory and practice. *Journal of Development Economics*, 60, 195-228.

Giné, X., Jakiela, P., Karlan, D., &Morduch, J. (2010).Microfinance games.*American Economic Journal: Applied Economics*, 2, 3, 60-95.

Guerin, I. & Roesch M. (2014).The social meaning of over-indebtedness and creditworthiness in the context of poor rural South Indian households (Tamil Nadu), In I. Guerin, S. Morvant-Roux, & M. Villarreal (Eds.) *Microfinance, debt and over-indebtedness: Juggling with money*, (pp. 125-150) London and New York: Rutledge.

Harper, M. (2004).Self-help groups and grameen bank groups: what are the differences? In Fisher T. and Sriram M.S.(Eds). *Beyond micro credit- Putting development back into microfinance*, (pp. 168-198) New Delhi: Vistaar Publication.

Harris, S.D. (2002). *State of the microcredit summit campaign report 2002*.http://www.microfinancegateway.org/gm/document-1.9.26655/11.pdf

Hayes, A.F. (2013).*Introduction to mediation, moderation and conditional process analysis: A regression based approach.* New York: The Guilford Press

Joseph, N. (2014). Mortgaging used sari-skirts, spearheading resistance: narratives from the microfinance repayment stand-off in a South Indian town, 2008-2010. In I. Guerin, S. Morvant-Roux, & M. Villarreal (Eds.) *Microfinance, debt and over-indebtedness: Juggling with money*, (pp. 272-294). London and New York: Rutledge,

Kahneman,D. (2011). *Thinking fast and slow.* New York: Farrar, Straus and Giroux.

Kamath, R., Dattasharma, A. &Ramanathan, S. (2013). MFI (Microfinance Institutes) borrowers: Their loans and repayments- A study in Ramamnagaram, India, *Indian Institute of Management, Bangalore,* Working Paper No. 397.

Kamath, R. & Srinivasan, R. (2009). Microfinance in India: Small, ostensibly rigid and safe. *Indian Institute of Management, Bangalore,* Research Paper No. 288. Available at SSRN: http://ssrn.com/abstract=2124618.

Karlan, D. S. (2005). Using experimental economics to measure social capital and predict financial decisions. *American Economic Review*, 95,1688-1699.

Karlan, D. S. (2007).Social connections and group banking. *The Economic Journal*, 117, 517, F52-F84.

Marr, A. (2003). A challenge to the orthodoxy concerning microfinance and poverty reduction. *Journal of Microfinance*, 5, 2, 7-42

Matin, I. (1997). The renegotiation of joint liability: notes for Madhuphur. In G. Wood & I. Sheriff (Eds.), *Who needs credit?* (pp. 262-270). Dhaka: University Press.

Reinke, J. (1998). How to lend like mad and make a profit: A micro-credit paradigm versus the start up fund in South Africa. *The Journal of Development Studies*, 34, 3, 44-61

Reserve Bank of India (2011). *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.* Mumbai: RBI, India.

Rutherford, S. (2009). *The pledge, ASA: Peasant politics and microfinance in the development of Bangladesh*. London: Oxford University Press.

Scott, J. (1976). The *Moral economy of the peasant: Rebellion and subsistence in Southeast Asia*. New Haven and London: Yale University Press.

Shetty S.L. (2012).*Microfinance in India, issues, problems and prospects: A critical review of literature*. India: Academic Foundation,New Delhi.

Singh, R., Bhullar, N., & Sankaran, K. (2016). Leader-versus-member and fair-versus-biased categorisations as safeguards against negative effects of racial diversity on group attraction. *IIMB Management Review*, **28**, in press.

Singh, R., Simons, J.J P., Self, W. T. Tetlock, P. E., Bell, P. A., May J., Crisp, R. J., Kaur, S., Benfield, J. A., &Sziemko, W. J. (2012). From wrongdoing to imprisonment: Test of a causal-moral model. *IIMB Management Review*, 24, 73-78.

Singh, R., Bell, P. A., Sinha, R. B. N., Singh, S., & Sankaran, K. (2014). Crime against woman and punishment goals: Social order and country moderate the public protest effect. *IIMB Management Review*, **26**, 82-90.

Stiglitz, J. E. (1990). Peer monitoring and credit markets. *The World Bank Economic Review*, 4, 3, 351-366.

Tarozzi, A., Desai, J. & Johnson, K. (2015). The Impacts of Microcredit: Evidence from Ethiopia. *American Economic Journal: Applied Economics*, 7, 1, 54–89.

Taylor, M. (2011).Freedom from poverty is not for free: Rural development and the micro-finance crises in Andhra Pradesh, India. *Journal for Agrarian Change*, 11, 4, 484-504.

Triandis, Harry C. (1989).The self and social behaviour in differing cultural contexts.*Psychological Review*, 96, 3, 506-520.

Tversky, A., &Kahneman, D. (1973). Availability: A heuristics for judging frequency and probability. *Cognitive Psychology*, 5, 207-232.

Vogelgesang, U. (2003). Microfinance in Times of Crisis: The Effects of Competition, Rising Indebtedness, and Economic Crisis on Repayment Behaviour. *World Development*, 31, 12, 2085-2114

Wade, R. (1994). *Village republics: Economic conditions for collective action in South India.* CA: Institute for Contemporary studies, San Francisco, California.

Wenner, M.D. (1995). Group Credit: A means to improve information transfer and loan repayment preference. *The Journal of Development Studies*, 32, 2, 263-281.

Wilson, Kim. (2002). The new microfinance: An essay on self help movement in India. *Journal of Microfinance*, 4, 2, 217-245.

Wydick, B. (1999). Can social cohesion be harnessed to repair market failures? Evidence from group lending in Guatemala. *The Economic Journal*, 109,457, 463-475.

Zeller, M. (1998). Determinants of repayment performance in credit groups: The role of program design, intragroup risk pooling, and social cohesion. *Economic Development and Cultural Change*, 46, 3, 599-620.

Note 1.

Three-way Interaction Effect on Indirect Peer Pressure

In Table 4.1, there was a significant three-way interaction effect. For simplicity in exposition, I take up that interaction effect in Figure 4 below. Consider the profile of the two-way Psychological threat x Economic threat effect on direct peer pressure at the two orders of threat presentation. There is a strong recency effect at the Economic-psychological order of the left graph. Although the right graph has a similar pattern, the interaction and main effect were nonsignificant. So, the most defensive interpretation seems to be the recency explanation at the conventional economic-psychological threat way of stating micro-finance terms and conditions to the borrowers to generate direct peer pressure. Nevertheless, it must be admitted that more work is needed to check on the reliability of the three-way interaction effect obtained.

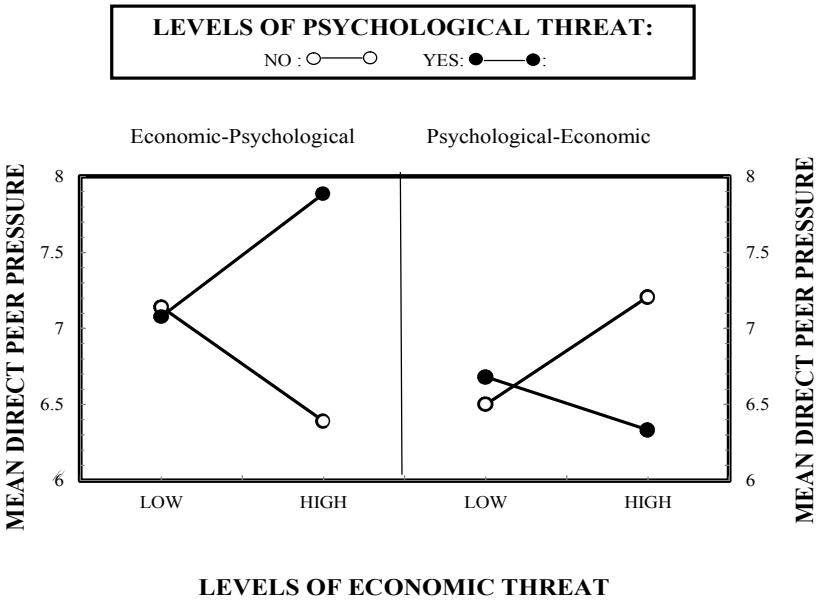

Figure 4.*Mean direct peer pressure resulting from psychological threat (represented by lines) and economic threat (listed on horizontal axis) at two orders of information presentation.*

Appendix A:

My name is. I am doing research at the Indian Institute of Management Bangalore. My research is regarding micro-finance institutes and self-help groups. I would like to get information on your demographic and socio-economic aspects. I will also ask questions regarding the working of your groups. These data will be used for research purpose only. Your identity will be kept confidential, and will not be shared with anyone. In fact, your replies are anonymous.

I am not affiliated to any non-governmental organization (NGO), micro-finance institute, or government agency which gives money. For your time spent with me, I will give you a token gift. Nevertheless, taking part in this survey is voluntary. In case of any doubt or if you want me to remove your data later, you can always contact me through your NGO. If you agree to participate, please sign the consent form

Consent Form

I have been informed about this study in my local language. I agree to participate in the survey.

Name:

Signature:

Date:

Appendix B:

Vignette1

You are a member of a group with 5 members. You all save Rs 100 each month. The group has requested an NGO to give loan. The NGO gave loan on condition that Rs1600 loan installment should be returned to it regularly every month. The loan will be given initially to two members only.

In case any member of the group defaults you will pay Rs100 and there will be no reputation loss.

Vignette2

You are a member of a group with 5 members. You all save Rs 100 each month. The group has requested an NGO to give loan. The NGO gave loan on condition that Rs1600 loan installment should be returned to it regularly every month. The loan will be given initially to two members only.

In case any member of the group defaults you will pay Rs100 and there will be reputation loss.

Vignette3

You are a member of a group with 5 members. You all save Rs 100 each month. The group has requested an NGO to give loan. The NGO gave loan on condition that Rs1600 loan installment should be returned to it regularly every month. The loan will be given initially to two members only.

In case any member of the group defaults you will pay Rs1600 and there will be no reputation loss.

Vignette4

You are a member of a group with 5 members. You all save Rs 100 each month. The group has requested an NGO to give loan. The NGO gave loan on condition that Rs1600 loan installment should be returned to it regularly every month. The loan will be given initially to two members only.

In case any member of the group defaults you will pay Rs1600 and there will be reputation loss.

Vignette 5

You are a member of a group with 5 members. You all save Rs 100 each month. The group has requested an NGO to give loan. The NGO gave loan on condition that Rs1600 loan installment should be returned to it regularly every month. The loan will be given initially to two members only.
In case any member of the group defaults there will be no reputation loss and you will pay Rs100.

Vignette 6

You are a member of a group with 5 members. You all save Rs 100 each month. The group has requested an NGO to give loan. The NGO gave loan on condition that Rs1600 loan installment should be returned to it regularly every month. The loan will be given initially to two members only.

In case any member of the group defaults there will be reputation loss and you will pay Rs100.

Vignette 7

You are a member of a group with 5 members. You all save Rs 100 each month. The group has requested an NGO to give loan. The NGO gave loan on condition that Rs1600 loan installment should be returned to it regularly every month. The loan will be given initially to two members only.

In case any member of the group defaults there will be no reputation loss and you will pay Rs1600.

Vignette 8

You are a member of a group with 5 members. You all save Rs 100 each month. The group has requested an NGO to give loan. The NGO gave loan on condition that Rs1600 loan installment should be returned to it regularly every month. The loan will be given initially to two members only.

In case any member of the group defaults there will be reputation loss and you will pay Rs1600.

Appendix C:

Survey Questions.

Q1. Tick on one option 1-9 on the scale below (√): 1 means very little and 9 means very high. After knowing that a member of your group does not pay back the loan amount (there is a default), how much do you fear....?

	1	2	3	4	5	6	7	8	9
1. Fear I may lose my savings	❍	❍	❍	❍	❍	❍	❍	❍	❍
2. Fear no MFI may give me loan	❍	❍	❍	❍	❍	❍	❍	❍	❍
3. Fear I may not get loan under government scheme	❍	❍	❍	❍	❍	❍	❍	❍	❍
4. Fear I may have to pay for default	❍	❍	❍	❍	❍	❍	❍	❍	❍
5. Fear I may lose my reputation	❍	❍	❍	❍	❍	❍	❍	❍	❍
6. Fear other groups may not take me as member	❍	❍	❍	❍	❍	❍	❍	❍	❍
7. Fear I may have to give more money	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q2. Tick on one option 1-9 on the scale below (√): 1 means very little and 9 very high.

A member of your group does not pay back the loan amount. What do you think?

	1	2	3	4	5	6	7	8	9
1. I will put pressure on the member to return the loan.	❍	❍	❍	❍	❍	❍	❍	❍	❍
2. I will put pressure on other group members to ask the member return the loan.	❍	❍	❍	❍	❍	❍	❍	❍	❍
3. I will put pressure on MFI coordinator to ask the member to return the loan.	❍	❍	❍	❍	❍	❍	❍	❍	❍
4. I will put pressure on the member's family to ask her to return the loan.	❍	❍	❍	❍	❍	❍	❍	❍	❍
5. I will put pressure on the member's neighbours to ask her to return the loan.	❍	❍	❍	❍	❍	❍	❍	❍	❍
6. I will put pressure on a local eminent person to ask the member to return the loan.	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q3. Tick on one option 1-9 on the scale below (√): 1 means very little and 9 means very high. A member of your group does not pay back the loan amount (becomes defaulter). What do you think?

	1	2	3	4	5	6	7	8	9
1. I will pay if the member is in trouble.	❍	❍	❍	❍	❍	❍	❍	❍	❍
2. My group will pay if the member is in trouble.	❍	❍	❍	❍	❍	❍	❍	❍	❍
3. I will pay if the member uses loan elsewhere.	❍	❍	❍	❍	❍	❍	❍	❍	❍
4. My group will pay if the member uses loan elsewhere.	❍	❍	❍	❍	❍	❍	❍	❍	❍