

## **Repayment Schedules Write-up**

*Rohini Pande and Erica Field*

When the Grameen Bank model was formulated in the 1970s, it provided an initial blueprint of how lending to the poor could be structured to maintain low default rates without requiring collateral. In the last few years, academic and policy attention has turned to the question of how the design of micro-finance contracts can be improved to lower transaction costs for MFIs, so as to make micro-credit easier to scale up and to ensure that the poor get credit in its most flexible form. Lowering transaction costs is now considered a key priority in the micro-finance sector, for it will allow MFIs to reach a set of clients that is broader, both in terms of geography and level of need.

Our research has focused on one such improvement to the micro-finance contract—specifically, the flexibility of micro-finance loan repayment schedules. In stark contrast to bank debt contracts, most micro-finance contracts require that repayment start almost immediately after loan disbursement and occur weekly thereafter. Even though economic theory suggests that a more flexible repayment schedule would benefit clients and potentially improve their repayment capacity, micro-finance practitioners have traditionally argued that the fiscal discipline imposed by frequent repayment is critical to preventing loan default. Despite the sharp disjunction in the predictions afforded by the rational economics model and the behavioral model, there is not enough evidence on whether repayment frequency influences default rates in micro-finance.

Since 2006, we have been working with a large urban micro-finance institution in West Bengal, India – the Village Welfare Society – to investigate this issue. We have completed a field experiment in which clients were randomly assigned to either a weekly or monthly repayment schedule.<sup>1</sup>

Over the course of the loan cycle, we conducted a baseline survey, a series of group meeting surveys, and an endline survey. The baseline and endline surveys were used to help us better understand clients' repayment schedule preferences, credit history, business history, and household demographics. The group meeting surveys were used to calculate loan delinquency rates as well as to generate basic social capital measures (which were constructed based on questions about how often clients interacted with group members outside of meetings and how well clients knew one another).

Our initial findings suggest that, among micro-finance clients who are willing to borrow on either weekly or monthly repayment schedules, a more flexible schedule can significantly lower transaction costs without increasing client default. Using a sample size of 150 loan groups and a total of 1278 clients, we found clients on a weekly repayment schedule had a default rate of 1.7%, while we experienced zero default among monthly repayment schedule clients (the difference is significant at the 1% level).

---

<sup>1</sup>Random assignment addresses the key empirical concern in program evaluation that clients with different income levels or investment opportunities may prefer different schedules.

While the fact that increased repayment flexibility did not increase default rates is promising, there remains an important concern that frequent group meetings play a vital role in strengthening group member's social networks. These networks, in turn, may serve as a source of informal insurance, as group members help one another to mitigate each other's income/spending shocks.

To investigate the possibility that there are high social capital returns to frequent loan group meetings, we constructed a social capital lottery. In this lottery, 450 clients from our repayment frequency intervention were randomly selected to participate. Each of these clients was visited by a surveyor who asked whether the client wanted to give additional lottery tickets to fellow group members. The lottery was constructed so that clients kept one ticket for themselves regardless of their decision. As a result, clients had to weigh the benefits of providing group members with a chance of winning against the costs of increasing the number of lottery tickets being circulated, and thereby decreasing their own chances of winning. Along with asking clients how many tickets they wanted to give out, surveyors also asked them a series of questions about group-level and group member-level social capital. Questions dealt with whether group members ever lent to or borrowed from one another, whether they had stayed together in future loan groups, whether they perceived their groups as more cohesive than other groups, etc.

A second randomization was also introduced to the lottery intervention in which half of the clients were told that their lottery would have a single 200 Rs. gift certificate as a prize, while the other half of the clients were told that their lottery would have four 50 Rs. gift certificates as a prize. The logic behind this randomization was that it would help us disentangle altruism from risk-sharing. If clients were giving tickets to fellow group members for altruistic reasons, we would suspect that there should be no difference in ticket giving based on prize type. Conversely, if clients were giving tickets in an effort to share lottery-related risk, they would give out more tickets when the prize was divisible (since if one of the group members they gave a ticket to won, the group member could return a portion of the prize to them).

Our preliminary results reveal that weekly repayment clients are significantly more likely to give tickets to group members if they are faced with the four 50 Rs. voucher prize type (there is no statistical difference in ticket giving for the single 200 Rs. voucher prize type). We interpret this to mean that more frequent loan group meeting may help promote risk sharing among group members. Additionally, we find that measures of social capital, such as how often group members visit one another outside of group meetings, are highly correlated with ticket giving. This suggests that our lottery design is indeed effectively measuring social capital.

A final concern with decreasing the frequency of repayment schedules is that if clients' fiscal discipline is weak and/or they have limited means of consumption smoothing (for example, no access to a safe place to save money), then less frequent repayment could worsen their well-being by increasing the volatility in their consumption and work habits (since when they do repay, these clients are responsible for larger

installments). On the other hand, if clients are able to smooth their consumption (for example, by putting money aside in a savings account), then a more flexible repayment schedule may help them meet unanticipated spending needs such as those that arise on account of health or other shocks. In order to better understand these issues, we conducted a daily consumption survey, in which surveyors asked clients about daily household income, consumption, and savings. Our initial results suggested that monthly clients were able to spend more on food, education, and housing, but we are currently conducting a second phase of the daily consumption survey in the hopes of producing more robust results.

In terms of practical implications relevant for policy, we hope to generate a body of literature that will offer MFIs information about the potential costs and benefits of increased repayment flexibility, and thereby help MFIs to optimize loan contracts and use efficiency gains to expand to unserved and underserved areas.

In addition to our work on repayment schedules, we are finishing a randomized trial based in Kolkata that examines the impact of allowing clients to wait two months after loan disbursement before requiring them to begin repaying their loans. A third randomized trial looks at the impact of increased repayment flexibility when loan size is increased.