

Microfinance Games

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Giné, Xavier, Pamela Jakiela, Dean Karlan, and Jonathan Morduch. "Microfinance Games." American Economic Journal: Applied Economics 2 (2) (2010): 60-95.

One of the most celebrated ideas to come out of microfinance is that group-based, joint-liability contracts can be used in place of collateral to secure loan repayment. Joint-liability lending strategies are widespread in microfinance, but they are not without risks. The assurance that co-borrowers will repay a loan if a group member cannot acts like insurance against investment losses and creates space for free-riding and collusion. Xavier Giné, Pamela Jakiela, Dean Karlan, and Jonathan Morduch investigated these mechanisms in a framed field experiment. The authors set up an experimental economics laboratory in a large, urban market in Lima, Peru where they conducted eleven different versions of an experimental economic game over seven months. They found that “dynamic incentives” – making the availability of a future loan contingent on the repayment of a current loan – strongly reduce risk-taking, even without group-based mechanisms. They also found that group lending increases risk-taking by pushing risk-averse borrowers to take greater risks than they otherwise would but would, but that this effect is moderated when borrowers self-select groups.

The Framed Field Experiment

Framed field experiments bridge the laboratory and the field. They are highly controlled, but they are not totally artificial: they include elements of the context researchers ultimately want to draw conclusions about. Giné, Jakiela, Karlan, and Morduch created eleven variants of an experimental economic game that simulated microfinance transactions. The authors set up a laboratory in a large, urban market in Lima, Peru and recruited subjects who fit the profile of microfinance clients. They played each of the eleven variants an average of 29 times over seven months. The simulated transactions involved players receiving loans, choosing between risky and safe investments, and managing the risk of default. By designing the games to replicate actual microfinance scenarios, the authors sought to explore behavioral responses to common components of micro-loan contracts. Furthermore, by playing a sequence of games with the same individuals, the authors were able to control for innate risk preferences and isolate the impact of each lending mechanism on risk-taking and loan repayment.

The Results

The authors found that adding dynamic incentives to any loan contract decreased the rate of risky project choice and default. Joint liability increased rates of

risky investment choice, but only when borrowers were able to communicate freely. The most risk averse borrowers were significantly more likely to choose risky investments when matched with more risk-tolerant partners. However, in spite of these effects on project choice, joint liability increased the loan repayment rate by forcing borrowers to insure each other. The authors also found that allowing borrowers to form their own groups led to “assortative matching” – self-selected groups were comprised of people with similar levels of tolerance for risk.

Policy Implications

The results clarify the costs and benefits of group-based contracts. Group contracts raise loan repayment rates by creating an implicit insurance mechanism, allowing borrowers to remain in good standing with lenders despite investment losses. Thus, group-lending can facilitate profitable risk-taking while maintaining high rates of loan repayment. However, the costs are borne by fellow borrowers and fall most heavily on the most risk averse participants. In addition, this study provides an example of how to use framed field experiments as a methodological bridge between laboratory and field experiments.

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