Improving Loan Repayment through Positive Incentives in Uganda

Researchers:

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Sector(s): Finance

Fieldwork: Ideas42

Location: Uganda

Sample: 1121 loan recipients

Target group: Small and medium enterprises

Outcome of interest: Credit balance/repayment

Intervention type: Credit Nudges and reminders Monetary incentives

AEA RCT registration number: https://www.socialscienceregistry.org/trials/1868

Partner organization(s): Ideas42, International Finance Corporation (IFC), Uganda Microfinance Limited (UML)

Credit markets in low- and middle-income countries can be hampered by a lack of basic financial mechanisms, such as the ability to screen loan applicants to improve repayment rates. Researchers evaluated the effect of (a) simple text message reminders and (b) financial incentives on borrowers' loan repayment. These methods had similarly positive effects, which suggests that the text message reminders may be a more cost-effective intervention. The reminders proved particularly effective for younger borrowers.

Policy issue

Financial markets in low- and middle-income countries can be hampered by a lack of basic financial infrastructure such as functioning credit bureaus, uniform disclosure rules or the ability to use collateral. These limitations can substantially increase the cost of lending for many banks since there is much less information about the overall applicant pool and enforcement of loans is more difficult. The lack of functioning financial systems can impede any enforcement or screening mechanism that operates through negative incentives, if borrowers who have defaulted on one bank can easily access other lenders. To ensure timely repayment, banks therefore have to rely on more innovative positive incentive schemes.

Context of the evaluation

Uganda Microfinance Limited (UML) is a microfinance institution, which primarily lends to small businesses through its 27 branches located across Uganda. In 2008, UML (now called Equity Uganda) had over 25,000 borrowers, a loan portfolio of US$24 million, and a default rate of 4 percent. Although all UML borrowers must have some form of collateral to cover at least 80 percent of the principal loan amount, it is very hard to actually seize the assets if a customer defaults. As Uganda did not have a credit bureau at the time of the study, UML did not have the ability to incentivize timely repayment based on the threat of affecting a borrower's credit history.

Group of women making cloths with sewing machines.

Photo credit: Jonathan Torgovnik/Getty Images/Images of Empowerment

Details of the intervention

In collaboration with UML, researchers evaluated the effectiveness of three positive incentive schemes designed to help to reduce late loan payments among small business owners.

In 2008, all UML customers who had been approved for a business loan were randomly assigned to one of the three treatment groups or a comparison group. In the first intervention - "Cash Back" - which provided incentives for on-time repayment, borrowers received a cash back payment equivalent to a 25 percent reduction of the interest rate if they made all their monthly payments on time. However, fast-growing firms with significant investment opportunities might be willing to forgo the cash back payment if the returns from investing are higher than the benefit of paying on time. In attempt to isolate the incentive effect for such fast growing firms, the second intervention - "Future Interest Rate Reduction" - gave customers a 25 percent reduction in the interest rate of their next loan, if current loan payments were all made in time. In the third intervention - "SMS Reminders" - borrowers received SMS reminders every month three days before the payments are due.

If small businesses strategically delay repayment since they know that lenders have only limited enforcement mechanisms, then the provision of incentives for on-time payments should increase repayment by reducing the benefits of this behavior, while sending SMS reminders should not have any impact. In contrast, if late payments were predominantly a function of the inability of small business to manage their finances, steeper incentives would not help, since payment failures are simply a function of their inability to manage the finances of the business. SMS reminders, on the other hand, might help prevent firms missing payment due to oversight.

Monthly loan repayment information was collected from the bank between March 2008 and June 2009. This data was complemented by personal and business characteristics obtained from the loan application and loan appraisal forms.

Results and policy lessons

Impact on Loan Repayment: The three interventions had similar effects on borrower repayment behavior. Borrowers in the "Cash Back" incentive group were 8.6 percent more likely to make all payments on time than the control group. The offer of a "Future Interest Rate Reduction" increased the probability of paying on time by 7.3 percent, relative to the comparison group. Perhaps most interestingly, borrowers in the "SMS Reminder" group, which was almost costless for the bank to implement, were 9 percent more likely to pay every installment on time.

Heterogeneous Treatment Effects: The effect of the treatments varied significantly across different subgroups of borrowers. The impact of "Cash Back" incentives were stronger for customers with smaller loans and less banking experience, the "Future Interest Rate Reduction" seemed to be most effective for customers with larger loans, while the "SMS Reminders" were particularly effective for younger customers.

Evidence supports the hypothesis that small businesses in low- and middle-income countries pay late not because of strategic reasons but because they suffer from a lack of financial management, which affects their ability to make payments on time. This has broader implications for the design of credit products. The repayment behavior of a borrower may be partly driven by simple product details, such as the ease with which the borrower can pay the loan. Thus, loan programs that facilitate easy repayment or frequent reminders may improve loan repayment behavior and reduce the cost of lending.

Cadena, Ximena, and Antoinette Schoar. "Remembering to Pay? Reminders vs. Financial Incentives for Loan Payments." Working Paper, National Bureau of Economic Research, May 2011.