Identifying Information Asymmetries in a Consumer Credit Market in South Africa

Researchers:

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Sector(s): Finance

Fieldwork: Innovations for Poverty Action (IPA)

Location: South Africa

Sample: 5028 loan applicants

Target group: Adults

Outcome of interest: Credit balance/repayment

Intervention type: Information Risk mitigation

AEA RCT registration number: AEARCTR-0001241

Partner organization(s): BASIS Research Program on Poverty, Inequality and Development, National Science Foundation (NSF), Gates Foundation

In credit markets, borrowers have better information about themselves than lenders. Lenders do not have full knowledge of the prospects of the investment activities for which the funds are borrowed, nor of the likelihood of default. This asymmetry of information may lead to a higher risk of default or make lenders hesitant to offer credit. Researchers sought to understand different types of information asymmetries and how they relate to loan default rates in South Africa. Borrowers given high interest rates had a greater incentive to default as it was more costly to repay the loan, but there was little evidence that borrowers defaulted because they had never intended to repay the loan.

Policy issue

Access to credit may enable the poor to start or expand a business, increase investments in health and education, and cope with risks, such as medical emergencies or droughts. However, in the presence of strong competing demands for limited resources, the poor may be more likely to default on a loan and as higher-risk borrowers, may find it difficult to obtain a loan, even when they are willing to pay high interest rates. This problem is often exacerbated by the presence of information asymmetries, or differences in information available to the lender and borrower. In credit markets, borrowers usually have better information than the lender. Borrowers have better information about themselves, the prospects of the investment activities for which the funds are borrowed, the risks associated, and their likelihood of default. If lenders do not have full, accurate information about a borrower, they may be more hesitant to offer credit, particularly to poor borrowers who have a higher initial risk of default.

There are two types of information asymmetries. The first, which is often called "hidden information," supposes that only borrowers who know beforehand that they will not be able to repay the loan will accept the high interest rates that accompany high-risk loans. The second type, commonly referred to as "hidden action," supposes that borrowers given high interest rates have greater incentives to default since it becomes more costly to repay the loan. If lenders know which of these effects is more

responsible for loan defaults among high-risk borrowers, they may be better able to design policies that increase the likelihood of repayment, which would allow them to extend access to credit to those who are generally considered to be too high of a risk.

Context of the evaluation

The partner lending institution was one of the largest and most profitable micro-lenders in South Africa, with a network of more than 100 branches across the country offering small, high-interest, short-term credit with fixed monthly repayment schedules to the working poor. The lender's median loan size was R1000 (US$150), which was about one-third of the average monthly income of its borrowers. The partner typically offered four-month loans with an interest rate between 7.75 and 11.75 percent per month depending on observable risk, with 75 percent of clients in the high-risk (11.75 percent) category. Risk was determined through a combination of a centralized credit scoring system and loan officer discretion. Half of new loan applicants were denied for a variety of reasons including unconfirmed employment, suspicion of fraud, poor credit rating, and excessive debt burden. Of those who were approved, many did not repay their loans; about 30 percent of first-time borrowers and 15 percent of repeat borrowers defaulted.



People talking outside of a market in South Africa.

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Details of the intervention

Researchers sought to determine the presence and relative importance of "hidden information" and "hidden action" effects to explain the high rate of default amongst high-risk borrowers in South Africa. In the summer of 2003, the partner lender mailed a

brochure to 57,533 former clients with a good repayment history offering a randomly-assigned interest rate, which was conditional on their previous designation as low, medium, or high-risk borrowershigh-risk borrowers were offered high rates, low-risk borrowers low rates. In all, 5028 clients accepted the offer, of which 4348 were approved for a loan.

While meeting with loan officers to determine the conditions of their loan, 41 percent of borrowers were randomly selected to receive an offer for a new interest rate (the contract rate) that was lower than the original offer rate they received in the brochure.

After the loan contracts were finalized, a random 47 percent of the borrowers who had received the lower contract rate were informed that they would receive that same low rate on all future loans for the next year as long as they repaid the initial loan on time. The guaranteed future rate was designed to give borrowers a greater incentive to repay their initial loan.

By randomizing the interest rate along three dimensions(i) the initial offer rate featured in the mailer, (ii) the contract rate that was revealed only after the borrower agreed to the initial offer rate, and (iii) the future rate that extended preferential pricing on future loans to borrowers who remained in good standingthe researchers essentially created five different groups whose repayment rates could be compared to determine whether hidden information or hidden action effects have a larger impact on loan repayment.

1. High offer rate, high contract rate, no low future rate
2. High offer rate, low contract rate, guaranteed low future rate
3. High offer rate, low contract rate, no low future rate
4. Low offer rate, low contract rate, guaranteed low future rate
5. Low offer rate, low contract rate, no low future rate

Results and policy lessons

Hidden Information: To identify any hidden information effect, within the sample that received the low contract rate, the repayment behavior of clients who received a higher initial offer rate was compared to that of clients who received a low initial offer rate. The hidden information effect would occur if the higher initial offer rate attracted those with a (unobservable) lower probability of repaying the loan. However, the results indicate that the initial offer rate had no effect on the rate of default; those who received the high offer rate were no more likely to default than those who received the low offer rate, which suggests that borrowers did not accept the high interest rate because they knew they would not be able to repay.

Hidden Action: To detect any effect of hidden action, within the sample that accepted the high initial offer rate, researchers compared the repayment behavior of clients that were offered the high contract rate with that of clients that were offered the low contract rate. If clients that received the high contract rate were more likely to default because it was more costly to repay the loan that would indicate hidden action effects. Conversely, the results indicate that borrowers who were offered the higher contract rate were no more likely to default.

Comparing the repayment behavior of groups that received the same initial offer rate and contract rate, but different repayment incentives, can also identify hidden action effects. The results indicate that borrowers who were guaranteed a low future rate if they repaid their initial loan were 13 to 21 percent less likely to default on their loan than the average borrower, and the larger the discount on future loans, the less likely borrowers were to default. This suggests that high-risk borrowers may normally deem it too costly to repay their loans, even when given a lower interest rate, but they may be more motivated to repay when offered an additional incentive.

Karlan, Dean, and Jonathan Zinman. 2009. "Observing Unobservables: Identifying Information Asymmetries with a Consumer Credit Field Experiment." Econometrica 77 (6): 1993-2008.