Estimating the Impact on the Lender's Bottom Line and Borrowers' Household Welfare of Expanding the Supply of Consumer Credit to the Working Poor in South Africa

Researchers:

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Sector(s): Finance

Fieldwork: Innovations for Poverty Action (IPA)

Location: South Africa

Sample: 58,168 former clients with good repayment histories

Target group: Adults

Outcome of interest: Take-up of program/social service/healthy behavior

Intervention type: Credit Pricing and fees

AEA RCT registration number: AEARCTR-0001354

Data: Credit Elasticities in Less-Developed Economies: Implications for Microfinance

Microfinance institutions face tightening pressure from policymakers to eliminate their reliance on subsidies. For many institutions, microloan terms are critically related to their reliance on subsidies. Researchers evaluated how microcredit clients in South Africa responded to changes in loan terms. They found that clients adapted both their demand and compliance based on loan terms, and were particularly sensitive to above-average interest rates.

Policy issue

Microcredit is one of the most visible innovations in anti-poverty policy in the last half-century, and in the past three decades it has grown dramatically. While some microfinance institutions (MFIs) focus on maximizing profits, others carry a social mission and seek to maximize access to credit for low-income households, subject to their available budget. Regardless, nearly all MFIs face tightening pressure from policymakers, donors, and investors to eliminate their reliance on donor or government subsidies. Economic modeling, policy, and practice suggest that loan pricing (selecting interest rates and repayment conditions) is critically related to reliance on these subsidies. Yet existing research offers little insight into interest rate sensitivities in MFI markets, and little methodological guidance on how to determine optimal interest rates. Instead MFIs and policymakers rely largely on intuition, and often presume that low-income individuals are insensitive to interest rates.

Context of the evaluation

The cooperating Lender has operated for over twenty years as one of the largest, most profitable microlenders in South Africa. The Lender competes in a "cash loan" industry segment that offers small, high-interest, short-term, uncollateralized credit with fixed monthly repayment schedules to working, low-income individuals. Cash loan sizes tend to be small relative to the fixed costs

of underwriting and monitoring them, but substantial relative to a typical borrower's income. For example, the Lender's median loan size of ZAR 1000 (US$150) was 32 percent of the median borrower's gross monthly income. Cash lenders focusing on the highest-risk market segment typically offer one-month maturity loans at 30 percent interest per month. As a comparison, informal sector moneylenders charge 30-100 percent per month.



Man using credit card in South Africa.

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Details of the intervention

Researchers test how low-income individuals respond to changes in interest rates using data from a field experiment in South Africa. Researchers worked with the cooperating Lender to randomize the interest rate offered in "pre-qualified," limited-time loan offers that were mailed to over 50,000 former clients with good repayment histories. Most of the offers were at relatively low rates, and the offer rate randomization was stratified by the client's pre-approved risk category. The standard interest rate schedule for four-month loans was: 7.75 percent per month for low-risk clients, 9.75 percent for medium-risk, and 11.75 percent for high-risk. At the Lender's request, 96 percent of the offers were at lower-than-standard rates, with an average discount of 3.1 percentage points on the monthly rate. The final range of interest rates faced varied from 3.25 percent per month to 14.75 percent per month.

Loan price is not the only parameter that could affect demand. Liquidity constrained individuals may respond to loan maturity as well, since longer loan maturities reduce monthly payments and thereby increase the amount of cash available each month. To test this theory, a subset of clients eligible for maturities longer than four months also received a maturity suggestion as well. The suggestion took the form of non-binding "example" loan showing one of the Lender's most common maturities (four, six, or

twelve months), where the length of the maturity was randomly assigned. Clients wishing to borrow at the offer rate then went to a branch to apply, as per the Lender's standard operations.

Results and policy lessons

Demand Response to Price: Among the sub-sample of clients that received interest rate offers below the standard rate for their risk category, a price decrease from the maximum to the minimum rate offered in this sample increased take-up by 2.6 percentage points, or 31 percent of the baseline take-up rate. High interest rates, on the other hand, depressed the level of take-up: clients that received interest rate offers above the standard rate for their risk category were 3 percentage points (36 percent) less likely to apply. Higher rates also reduced repayment. Taken together, these results indicate that people's demand for credit increases moderately when interest rates are lower than the market price, but drops off steeply when interest rates are above average.

Maturity Date: While the sub-sample for the maturity estimate is small, loan size is found to be far more responsive to changes in maturity date than to changes in the interest rate, which is consistent with the hypothesis that liquidity constraints affect loan size, since longer maturities reduce monthly payments and thereby improve cash flows. There is also some evidence that only relatively poorest borrowers are sensitive to maturity, whereas for price sensitivity this does not appear to be the case. A practical implication is that some MFIs should consider using maturity rather than (or in addition to) price to balance profitability and targeting goals.

For this particular lender, the cost of reducing interest rates (lost gross interest revenue) slightly exceeded the benefits (increased gross revenue from marginal borrowing, increased net revenue from higher repayment rates). Thus this Lender, which had no social targeting objectives, had no incentive to cut rates. Policymakers keen on avoiding subsidies often prescribe that MFIs should raise rates. However, evidence from this study also shows that this would have been disastrous for the Lender, as increasing interest rates above standard reduced both loan take up and eventual repayment.

Karlan, Dean S., and Jonathan Zinman. 2008. "Credit Elasticities in Less-Developed Economies: Implications for Microfinance." American Economic Review 93(8): 1040-68. Karlan, Dean, and Jonathan Zinman. 2010. "Expanding Credit Access: Using Randomized Supply Decisions to Estimate the Impacts." The Review of Financial Studies 23(1): 433-464.