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The Impact of Digital Credit on Kenyan Households' Resilience to Financial Shocks

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Timeline

2015-2016

Sample Size

6,000 Individuals

Research Implemented by IPA

Yes

The Impact of Digital Credit on Kenyan Households' Resilience to Financial Shocks

Abstract

Digital loans, through mobile platforms such as Kenya's M-Pesa, may be a way to increase access to affordable credit. Researchers used a regression discontinuity design to measure the impact of M-Shwari, a short-term savings and loan service run through M-Pesa, on access to credit, resilience, and savings of Kenyan households. Results show M-Shwari increased access to credit from any source. Borrowers were better equipped to respond to negative financial shocks without cutting back elsewhere and reported spending more on education. Households of individuals eligible for M-Shwari loans did not save more than their ineligible peers, nor did their productive assets increase.

Policy Issue

Microcredit can be a helpful tool to cope with unexpected financial shocks, such as a trip to the hospital or the loss of a job.¹ This is especially true for low-income individuals in developing countries, where social safety nets are few and unreliable, and where the outcomes of income fluctuations can be more severe. Despite the potential benefits of microcredit, demand for traditional microcredit products is low.² Administrative costs are

high relative to the loan amount, leading lenders to charge high interest rates that many borrowers can't afford. This could be changing, however, as access to digital finance through mobile money technology expands. Instantaneous access to credit, lower overall costs, and deeper access to markets make mobile money technologies an attractive platform for banks to offer digital loans on. Additionally, with pre-existing mobile platforms, banks are able to sift through more information about the creditworthiness of potential borrowers, making them more likely to lend to individuals that may not have received credit otherwise.

Context of the Evaluation

M-PESA, a mobile based financial services platform, expanded rapidly in Kenya, eventually reaching 96 percent of households by 2016.³ In 2012 the Commercial Bank of Africa (CBA) and Safaricom launched M-Shwari, a fully digital bank account operating through M-PESA. One feature of M-Shwari is a small, short-term loan (30-day, 7.5 percent monthly interest rate) available to approved customers even if they had no banking or credit history. By 2014 there were more than 4.5 million active users (nearly 20 percent of the adult population) and approximately 10 million accounts had been opened.

Details of the Intervention

[Note: This evaluation is not a randomized controlled trial.]

Researchers used a regression discontinuity design to measure the impact that access to the M-Shwari short-term savings and loan service had on financial access, resilience, and savings for Kenyan individuals.

The M-Shwari program runs on the basis of a strict qualifying score, which is assigned immediately upon signing up for the service. The credit limit is initially small and increases over time as credit worthiness becomes more established. Researchers used administrative data of all customers who opened an account between January and March 2015 and supplemented it by surveying 6,000 randomly selected customers on topics including lending habits, spending habits, life events, and asset ownership. Of these randomly selected customers, researchers then compared outcomes of a narrow band of M-Shwari users just above and below the credit score cutoff, who are likely to have similar characteristics such as the likelihood to repay, over a period of approximately 18 months.

Results and Policy Lessons

Overall, access to the short-term digital microloans allowed some households to access credit that they wouldn't have been able to otherwise. Households were better equipped to respond to negative financial shocks without cutting back on other expenditures, and even spent more on education than those who were not offered the loans. However, access to M-Shwari microloans did not affect the amount that households saved or accumulated productive assets, which may indicate the limits of access to microcredit on long-term savings.

Access to Credit

Overall 34 percent of those offered M-Shwari loans took them. Researchers found that individuals who qualified for M-Shwari were 11 percentage points more likely to take a loan of any kind (digital or otherwise) than those who did not qualify, ultimately borrowing 37 percent more (from any loan source) than those who did not qualify for M-Shwari. Results indicate that M-Shwari expanded access to credit which would have otherwise been unavailable, rather than individuals substituting M-Shwari for other loan sources.

Resilience to shocks

Nearly 90 percent of survey participants reported experiencing a negative financial shock, such as an injury or loss of employment in the six months before being surveyed. Households of individuals who were eligible for the M-Shwari loan were no more likely to face negative financial shocks than those who do not qualify but were less likely forego other expenditures as result of the shock. Researchers also found that those offered M-Shwari were more likely to spend more on education than those who were not, despite reporting using the loan for purposes other than education. This may indicate that despite most borrowers reporting spending the loan on medication or medical bills, that borrowers were able to adjust their spending to respond to the shock without cutting back in other areas.

Savings and assets

Households who qualified for M-Shwari loans did not save more than their ineligible peers, nor did their productive assets increase.

It should be noted that given the study design, which looked at a relatively narrow band of borrowers close to the credit score cutoff, results could be different among borrowers with different characteristics.

Sources

[1] Abhijit Banerjee, Dean Karlan, and Jonathan Zinman, "Six Randomized Evaluations of Microcredit: Introduction and Further Steps," *American Economic Journal: Applied Economics* 7, no. 1 (January 2015): 1-21, <https://doi.org/10.1257/app.20140287>.

[2] Dean Karlan and Jonathan Zinman, "Microcredit in Theory and Practice: Using Randomized Credit Scoring for Impact Evaluation," *Science (New York, N.Y.)* 332, no. 6035 (June 10, 2011): 1278-84, <https://doi.org/10.1126/science.1200138>.

[3] Tavneet Suri and William Jack, "The Long-Term Effects of Access to Mobile Money in Kenya," Innovations for Poverty Action, December 8, 2016, <https://www.poverty-action.org/study/long-term-effects-access-mobile-money-kenya>.