The Impact of Credit-Scoring on Small and Medium Enterprise (SME) Lending and Performance in the Philippines

Researchers:

Daniel Keniston

Dean Karlan

Gharad Bryan

Pamela Jakiela

Sector(s): Finance

J-PAL office: J-PAL Southeast Asia

Fieldwork: Innovations for Poverty Action (IPA)

Location: Philippines

Sample: 250 small and medium enterprises

Target group: Small and medium enterprises

Outcome of interest: Business investment Credit balance/repayment Profits/revenues

Intervention type: Credit

AEA RCT registration number: AEARCTR-0000159

Partner organization(s): John Templeton Foundation, ShoreBank, The Development Bank of the Philippines (DBP)

How does access to credit affect the growth of small and medium enterprises, both firms receiving loans as well as their competitors, suppliers, and customers? Limited access to credit is commonly identified as a key constraint to SME growth, but little evidence exists of the direct and indirect effects of loans on small firms in a given market. Researchers are working with a large bank in the Philippines, using random assignment to offer loans to SME applicants who fall just below the threshold to be automatically approved for a loan. Comparing firms that received the loans to a similar group that did not will allow for a better understanding of the impact of loans on firm performance and growth as well as any additional effects on firms in the same market or in the loan recipient’s supply chain.

Policy issue

Small businesses are often thought to be an important source of employment, innovation, and economic growth. In many developing countries, small and medium enterprises (SMEs) make up a large share of registered businesses, but a much smaller share of GDP. Data from several countries suggest that few SMEs grow to become larger businesses. One reason could be that unlike larger businesses, SMEs have limited access to credit, preventing them from making larger investments to improve their operations, upgrade to new technologies, or expand.

Most SMEs’ financing needs exceed the small loans that microfinance institutions provide. Yet larger commercial banks often find it too expensive to lend to SMEs because the cost of assessing whether an SME is creditworthy is high relative to the return banks could earn by lending to them. Many banks also perceive SMEs as being too risky and more likely to default on loans. Credit scoring has been used extensively in developed countries to reduce the cost and time required to process loan applications and to assess the riskiness of loan applicants in order to make small business and consumer lending profitable for banks. Can a credit-scoring system increase lending to SMEs in emerging markets, and does access to credit improve these businesses' profitability? How does increased access to credit affect other businesses in the same market, namely the competitors, suppliers, and customers of businesses receiving loans?

Context of the evaluation

In the Philippines, the vast majority of registered enterprises are small or medium sized. Nationwide, there are over 800,000 micro, small, or medium enterprises. These businesses span a range of industry sectors, including wholesale and retail trade, manufacturing, and services. Promoting SME growth is a central focus of national policy and all banks are mandated to set aside at least 8 percent of their total loan portfolios for SMEs. The Development Bank of the Philippines (DBP) is a development banking institution mandated to provide medium and long term loans to SMEs. In 2013, DBP began to roll out its new Retail Lending Program for Micro and Small Enterprises in 45 bank branches across the country. Under this program, DBP will make lending decisions using credit scoring software, which will determine loan approvals based on verifiable client information and an objective credit score, replacing the current approval process which relies on loan officers' perceptions about applicants' creditworthiness.

Bank staff fills out paperwork in the Philippines

Details of the intervention

Researchers are conducting a randomized evaluation in partnership with the Development Bank of the Philippines (DBP) to test how access to credit affects both borrowing businesses' performance and that of their competitors and suppliers.

Each of the 45 DBP branches will advertise the new Retail Lending Program to SMEs in their area and encourage them to apply. The branches will be assigned to either target SMEs in certain randomly chosen industries for loans (e.g. bakeries or water purification plants) or to not target any industries in particular. After SMEs submit an application, the credit scoring software will assign each applicant a score. Applicants whose scores fall in a pre-defined range just below the minimum score that automatically qualifies someone for a loan will be randomly assigned to either receive a loan or serve as part of the comparison group. In branches that are randomly assigned to target certain industries, marginally qualified applicants in the targeted industries will have a 90 percent chance of receiving a loan. This randomized "bubble" will include approximately 250 of these marginally qualified applicants.

DBP's credit committee will then review all loans approved by the credit scoring system prior to final approval, reserving the right to deny loans based on information not included in the credit scoring model, such as criminal history. Loan officers will separately record whether they would have normally approved the loan without the credit scoring system, allowing researchers to compare credit scoring to the current, more subjective lending approach.

Businesses in the treatment group will receive loans between PHP 300,000–10,000,000 (US$5,590–186,200). The terms of the loans will range from three months to five years. A baseline survey will be conducted with all sample firms prior to loan disbursement. One year after the loans are disbursed researchers will conduct a follow-up survey to measure the SMEs' investment and profits. Administrative data from DBP will be used to measure loan repayment and default.

Researchers will also survey the SMEs' competitors and suppliers to examine whether receiving a loan had an impact on those firms. Increased access to credit may make SMEs more efficient and profitable, potentially taking away business from their competitors. On the other hand, if increased access to credit leads some businesses to develop better methods of production that their competitors can copy, access to credit could potentially indirectly benefit their competitors. Similarly, access to credit may have spillovers on a loan recipient's suppliers as a result of business expansion or adoption of new technologies. This study will examine whether increased access to credit indirectly benefits or harms borrowers' competitors and suppliers.

Results and policy lessons

Project ongoing.