BASIS BRIEF
Assets and Market Access CRSP

2008-04 May 2008

Understanding and Improving Financial Access for the Poor

by **Ernest Aryeetey** aryeetey@ug.edu.gh, **Dean Karlan** dean.karlan@yale.edu, **Justin Oliver**, **Laura Schechter**, *and* **Jonathan Zinman**

Reaching the poor

Improving the poor's access to credit, insurance, and savings first requires a clear understanding of the obstacles. Careful analysis of how demand and supply mechanisms, as well as market failures, block access can lead to the design of innovations that successfully overcome the obstacles. Critically, this new understanding will allow for clear explanations as to why some innovations work and others do not.

We plan to carry out several field experiments, mostly in Ghana but also expanding to other countries, to identify obstacles to credit, insurance, and savings. We then plan to use the findings to design interventions that expand the quantity and quality of the poor's access to financial markets. In an important further step, we plan to identify the impacts these interventions have on household welfare.

Most of the experiments will take advantage of a unique panel dataset from Ghana that allows for the study of medium- and long-term changes in households during the process of development. In addition, a new comprehensive survey of 5,000 households will include re-interviews every three years regardless of where each individual or household might have moved in the interval. By committing to a long term, comprehensive study that obtains information on people throughout their lives, the dataset will be a foundation for the investigation of issues that have remained outside the scope of scientific analysis.

Expanding access and increasing welfare

Interest rates. Policymakers often presume that the poor will borrow even at high rates, and then prescribe that microfinance institutions (MFIs) increase loan rates since that would not drive away poor customers. Recent studies in Bangladesh and South Africa, however, suggest that high interest rates may push poorer groups out of programs, while lowering rates may increase demand and widen the pool of those able to borrow profitably.

We are partnering with an MFI in Ghana to conduct direct marketing of an individual loan product to microentrepreneurs in the Accra metropolitan region. In the experiment, rates are assigned within a predetermined range based on the lender's market research. We plan to track how the various offers impact take-up rates, loan amounts, repayment rates, and client retention. Our goal is to measure how an MFI's change of interest rates changes the volume and socio-economic composition of the borrowers.

To determine if in fact financial access is expanding to new borrowers, we plan to analyze if clients brought in by lower interest rates are new to credit, taking on a second loan, or switching lenders to take advantage of the offer. The findings will enable us to distinguish a true expansion of borrowing from a crowd-out of other borrowing. Furthermore, the experiment will help us learn if and under what conditions the poorest of the poor are screened-out by higher interest rates.

Health insurance markets. Often, poor households are vulnerable not simply because they lack a sufficient level of resources, but also because their resources are subject to shocks from which they are not insured. Furthermore, low-income households in developing countries typically face limited access to formal sector insurance that could protect them. By exploring why insurance markets are incomplete, we can better understand how to design products so that institutions can offer individuals the insurance they need, at prices they can afford.

With this experiment, we plan to work in the Philippines to test health insurance products. An experiment will compare a control group that is not offered health insurance to treatment groups that are offered insurance as an add-on to microcredit. The treatment groups would include one group in which clients pay a higher premium that is then lowered after enrollment, and one group in which clients get a low premium from the start.

The experiment will allow us to estimate the impact of access to health insurance on individual risky behavior, investments, and health outcomes. The goal is to evaluate the impacts of such services on client health and increased labor as well as the impacts on microfinance institutions' ability to retain clients, extend larger loans and gather repayment.

The experiment will help show whether and how access to health insurance improves the performance of microcredit. For example, by collecting baseline risk characteristics and randomizing assignment to the high and low premium groups, we would be able to test for adverse (and advantageous) selection into the health insurance program. Adverse selection is the primary motivation for government intervention in health insurance markets, yet there is little convincing evidence on its prevalence or magnitude, particularly in developing countries.

We also would be able to see if having insurance changes borrowing behavior. Illness and injuries can have a major negative impact on poor farm families, and often the poor will keep themselves out of the credit markets due to the fear of being unable to repay the loan if they experience a health shock. By offering health insurance, MFIs presumably can increase the amount of borrowers, which in turn will increase the demand for loans. By tracking loan repayment rates, we can offer critical information to both financial providers and policymakers.

Savings products. Many MFIs offer savings products as part of their outreach and sustainability strategies. Savings are an important tool for the poor for smoothing consumption, mitigating shocks, and financing investments in human capital and businesses. Savings can also serve as collateral for a loan. Yet fixed costs and psycho-social barriers can limit the uptake of these products by the poor, and therefore designing viable formal savings mechanisms can be difficult.

Prior work in the Philippines found that offering clients a savings commitment device significantly increased savings rates and female empowerment. All savings products offered in our studies will have a commitment feature of various strength—some contractual, some psychological. The client sets her own savings goal item, goal amount, and goal date. The client will not be able to withdraw the savings until she reaches the goals.

The effectiveness, or non-effectiveness, of the products will increase our understanding of what drives household decision-making. The projects also will serve as pilot tests and "proof-of-concept" (or lack thereof) for specific savings innovations that can be replicated by MFIs worldwide.

The goal is to learn more about the psychological mechanisms that lead individuals to save, or not save, on a regular basis. This is critical for forming policies that help the poor build assets for both investment and reduction of vulnerability.

Crop price insurance. We plan to test the impacts of offering crop price insurance. Our partner is a rural bank in the eastern region of Ghana. Although most people in this area are farmers, agricultural loans make up less than 3% of the bank's overall loan portfolio. Lending to farmers is an overlooked business opportunity. Focus group meetings with farmers indicate that many farmers want to borrow under the right conditions but are unclear about the role of banks in general and fearful of default.

Working with the bank, we plan to roll out an insurance product that will forgive 50% of the principal and interest of farmers' loans if the average price of their crops at harvest falls below a given level. We calculated trigger prices for three crops prevalent in the region and particularly volatile in price: eggplant, maize, and tomatoes. Below the trigger price, farmers could not be expected to both feed their families and repay any outstanding debt.

The goal is to reduce farmer risk in investing in agricultural inputs, and thus encouraging productivity-enhancing investments. Farmers will know that if they take a loan to purchase fertilizer and other inputs they will either make the money back from improved crop yields, or, if the crop price is low, much of the loan will be paid back through the insurance.

Priced fairly, the product makes financial sense for many farmers; by investing more in their crops they are more likely to increase their farm income. We plan to conduct household surveys and measure farm output to determine the impact of the intervention on crop yields, farm profits, and household consumption.

Financial literacy training. Traditional insurance is not easy to understand for those unfamiliar with the concept. It is typical for farmers who do not file a claim to request a "refund." We plan to use a randomized controlled trial to test the new loan product and differential access to financial training to figure out which combination of product and training is most effective.

We plan to offer different models of financial training to the general adult population (not just clients of a specific program) and a control group that is not offered training during the study period. We can follow up to determine the impact of the training (and particular types of training) on household welfare and financial decision-making.

In some cases, we would offer the training to individuals who then later would be offered credit at randomly different interest rates. The results from these exercises will allow us to predict the interventions that will have the largest impacts at the least cost without actually having to try each alternative.

Financial literacy can impact the decision of a farmer to take a loan or not. We plan to work with the local bank to design financial education modules that will help farmers understand the crop-price insurance product. The bank would conduct this financial training for a selection of farmers before marketing them to gauge the impact of the training on the initial loan decision as well as later loan usage and repayment.

Prior to marketing the loans, the bank's employees would collect information on the farmers relating to their credit history, risk perception, financial management skills, and cognitive ability. Farmers' take-up of loans and repayment rates will be tracked over time. A follow-up survey would be conducted after two to three crop cycles to determine the impact of credit on households, the impact of the product on a farmer's decision to take a loan, and the impact of financial training upon farm outcomes and decision-making.

MFIs are rapidly expanding the range of services offered beyond credit, adding products such as savings, insurance, emergency loans, housing loans, and even retirement accounts. As competition between MFIs increases, the array of products choices grows. Where once entrepreneurs needed only to choose between the exorbitant moneylender and the MFI, clients must now decide between competing loan offers at different terms and interest rates.

Financial education may be able to help poor households and poor entrepreneurs make better financial decisions by helping them manage their money better, understand the implications of the choices they make, and thus make the optimal choices regarding their use (or not) of financial services. We seek to find out how individuals choose financial services and products, and how individuals make use of the products to which they have access.

Development Impact

Our focus country of Ghana is one of the partner countries of the Initiative to End Hunger in Africa, which aims to reduce hunger by promoting agricultural growth and increasing agricultural investment by small-scale farmers. Up to 52% of Ghana's population live in rural areas and 44% of the rural population live below the poverty line. Our findings will illuminate the barriers the poor face to entry into business and will offer insight into mechanisms that work (and do not work) for reducing those barriers.

A primary goal is to develop research experiments that can be implemented in other developing countries. Results from our field experiments in Ghana can be a foundation for replication at low cost in other countries, settings, and markets, thus helping policymakers in different contexts expand and improve the quality of financial access for the poor. Importantly, our tests will also give clear evidence for why some interventions do not work, thus discouraging replications of failed policies.

BASIS support is critical for disseminating these key policy prescriptions. BASIS Briefs will be the main vehicle for distilling major lessons to policymakers. Each brief will discuss lessons learned around access to and impact of credit, savings, and insurance for the poor. BASIS support also allows us to make formal presentations of findings at key policy forums and institutions.

A vigorous dissemination program will ensure that the findings get to organizations, donors, and policymakers worldwide in order that microfinance programs can improve their sustainability and targeting, and hence maximize their overall social impact. With partners in numerous developing countries worldwide and professional linkages to relevant policymakers and practitioners, we are well poised to disseminate important findings that make a far-reaching impact. The mission of our activities is to make sure the results of the projects are disseminated effectively to the broader world of policymakers and businesspeople. In this way, successful ideas can be successfully replicated and scaled.

Further reading

Ashraf, N., D. Karlan, et al. 2006. "Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines." *Quarterly Journal of Economics* 121(2): 673-97.

Boucher, S., C. Guirkinger, et al. 2006. "Direct Elicitation of Credit Constraints: Conceptual and Practical Issues with an Empirical Application to Peruvian Agriculture." <repositories.cdlib.org/cgi/viewcontent.cgi?article=1084&context=are>

de Mel, S., D. McKenzie, et al. 2007. "Returns to Capital in Microenterprises: Evidence from a Field Experiment." <papers.ssrn.com/sol3/papers.cfm?abstract_id=1004493>

Kaboski, J. and R. Townsend. 2007. "Testing a Structural Model of Credit Constraints using a Large-Scale Quasi-Experimental Microfinance Initiative." <chd.ucla.edu/BREAD13/7kaboski.pdf>

Karlan, D. and J. Zinman. 2007. "Credit Elasticities in Less Developed Economies: Implications for Microfinance." Center for Global Development working paper number 110. Available at <www.cgdev.org>

Todd, P. and K. Wolpin. 2006. "Assessing the Impact of a School Subsidy Program in Mexico: Using a Social Experiment to Validate a Dynamic Behavioral Model of Child Schooling and Fertility." *American Economic Review* 96(5): 1384-1417.

BASIS Briefs

Authors

Ernest Aryeetey
University of Ghana

Dean Karlan
Yale University, USA

Justin Oliver
Innovations for Poverty Action

Laura Schechter
University of Wisconsin, USA

Jonathan Zinman
Dartmouth College

Publication made possible by support in part from the US Agency for International Development Cooperative Agreement No. EDH-A-00-06-0003-00 through the Assets and Market Access CRSP.

USAID
FROM THE AMERICAN PEOPLE

Edited and layout by
BASIS CRSP
Comments encouraged:
Department of Agricultural and Applied Economics, University of Wisconsin, Madison, WI 53706 USA
basis-me@facstaff.wisc.edu
tel: +608-262-5538
fax: +608-262-4376
http://www.basis.wisc.edu