Discussion Paper BRIEFS

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Discussion Paper 90

Empirical Measurements of Household's Access to Credit and Credit Constraints in Developing Countries: Methodological Issues and Evidence

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This paper presents a new methodological framework for measuring the level and determinants of household access to credit and credit constraints, and the effects of access to credit on household behavior and welfare. It also exemplifies the new methodology with data collected in Malawi and Bangladesh on the extent of rural households' access to credit and credit constraints in developing countries.

Background

Most policy and research interests regarding rural credit markets revolve around the perception that poor rural households in developing countries lack ade-quate *access to credit*, which is believed to have sig-nificant negative consequences on various aggregate and household-level outcomes, including technology adoption, agricultural productivity, food security, nutrition, health, and overall household welfare.

Access to credit affects household welfare outcomes through at least two channels:

1. It alleviates the capital constraints on agricultural households, and thus can significantly increase the ability of poor household with no or little savings to acquire needed agricultural inputs. Access to credit also reduces the opportunity costs of capital-intensive assets relative to family labor, thus encouraging labor-saving technologies and raising labor productivity.

2. It increases its risk-bearing ability and alters its risk-coping strategy. Just the knowledge that credit will be available to cushion consumption against an income shortfall should a potentially profitable—but risky—investment turn out badly can induce a household to bear the additional risk. A household may also benefit from mere access to credit, even if it is not borrowing, because with the option of borrowing it can avoid adopting risk-reducing, but inefficient, income diversification strategies or engaging in precautionary savings with negative returns.

For these reasons, most developing countries' governments and donors during the past 40 years have set up credit programs aimed at improving rural households' access to credit. The vast majority of these programs, especially the so-called "agricultural development banks" that provide credit at subsidized interest rates, have failed both to achieve their objectives to serve the rural poor and be sustainable credit institutions. Meanwhile, most rural households in developing countries continue to rely on the informal credit market for their intertemporal transfer of resources.

This paper "illustrate[s] the usefulness of using the credit limit to assess the extent of households' access to credit and the binding of their credit constraints."

The Need to Measure the Level of Household Access to Credit and the Effects of Access to Credit on Household Welfare

One hypothesis, often advanced by researchers and policymakers, is that government and NGO-supported credit programs may crowd out the financial services offered by these informal financial institutions. Hence, understanding how the nonmarket informal institutions serve households' demand for financial services and interact with the formal credit institutions set up by governments and NGOs is critical in identifying policies, institutional designs, and financial services that expand and complement rather than substitute for the services offered by the existing informal credit market. An important step for obtaining this policy-relevant information is to quantify the extent and determinants of households' access to nonformal and formal credit markets as well as the severity of their credit constraints.

Previous Methodologies and Their Shortcomings

The paper briefly reviews the two main methodologies that have been used to measure household access to credit and credit constraints. The first method tries to detect credit constrained households through tests of violation of the life-cycle/permanent income hy-pothesis. Empirical evidence from this methodology regarding presence or absence of credit constraint has been inconclusive, mostly because violation of the implications of life cycle/permanent income hy-pothesis is neither a sufficient nor necessary condition for being credit constrained.

The second main method of measuring access and detecting credit constraint collects household-level credit market information directly from household surveys to determine whether households are credit constrained. This classification is then used in reduced-form regression equations to analyze the determinants of the likelihood of a household being credit constrained and the effects of this likelihood on various household outcomes. Despite representing a substantial improvement in comparison to the first method, it is still incapable of providing the frame-work that allows one to quantify the extent to which households are credit constrained or to satisfactorily assess the impact of access to credit on household welfare outcomes.

The New Methodology

The methodology presented in this paper corrects the shortcomings of the direct method by developing a conceptual framework and data collection method-ology that focus on the concept of credit limit. This focus is justified by the fact that every potential borrower faces a credit limit because of asymmetries of information between borrowers and lenders and the imperfect enforcement of loan contracts. Therefore, a household's credit limit from any given source of credit is the best measure of its degree of access to that source of credit.

Furthermore, the changes in household behavioral and welfare outcomes in response to changes in its credit limit represent the effects of access to credit (or improvement in access) on those household outcomes. Hence, once data are collected on households' credit limits, econometric analysis allows one to quantify the determinants of the extent of households' access to credit as well as the effects such access have on household welfare outcomes. This data has been collected for the first time in IFPRI surveys conducted in Bangladesh and Malawi.

The authors present descriptive summary statistics from the two surveys, which illustrate the usefulness of using the credit limit to assess the extent of households' access to credit and the binding of their credit constraints.

Keywords: credit, Bangladesh, Malawi, research methods

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