

Annex 1.2: Does Microfinance Really Help the Poor? New Evidence from Flagship Programs in Bangladesh

I. Introduction

Project Description. The microfinance programs of the Grameen Bank, the Bangladesh Rural Advancement Committee, and the Bangladesh Rural Development Board are flagship programs for those instituted in many other countries. These programs provide small loans to poor households who own less than one-half acre of land. Loans are accompanied by innovative contracts and loan schedules. The programs have served over 4 million poor clients in Bangladesh and have apparently been quite successful. For example, the top quartile of borrowers from the Grameen Bank consume 15 percent more and have almost twice as high a proportion of sons in school and a substantially increased proportion of daughters in school compared with the bottom quartile.

Highlights of Evaluation. The evaluation investigates the impact of the programs on 1,800 households in Bangladesh and compares them with a control group of households in areas without any microcredit financing. The major contribution of the study is to demonstrate that simple estimates of the impact of programs can be substantially overstated: correction for selection bias nullifies apparently impressive gains. The evaluation shows that much of the perceived gains is driven by differences in who gets the loans: they tend to be wealthier and work more than control groups. Once appropriate techniques are used, there is no impact of borrowing on consumption, and children in program areas actually do worse than children in control areas. The key determining factor is the fact that program lending has not followed eligibility guidelines—in fact, many of the borrowers had landholdings in excess of the half-acre maximum.

The evaluation both uses an interesting survey technique and makes imaginative use of econometric techniques. Another interesting angle is that the evaluation also looks at the effect of the impact on the variance as well as the mean outcome and finds that the main gain from the programs is risk reduction rather than increasing mean outcomes.

II. Research Questions and Evaluation Design

The researchers are interested in identifying the impact of microfinance programs on log consumption per capita, variance of log consumption, log labor per adult in previous month, variance of per adult log labor,

adult male labor hours in past month, adult female labor hours in past month, percentage of male school enrollment (ages 5 to 17), and percentage of female school enrollment (ages 5 to 17).

The evaluation is survey-based and covers 87 villages surveyed three times during 1991 and 1992. Villages were chosen randomly from a census and administrative lists, from 5 subdistricts that served as controls and 24 subdistricts where the programs were implemented. Twenty households were surveyed per village.

This enabled the researchers to split the households into five different types, depending on the eligibility criterion of holding one-half acre of land. It is worth reproducing the schematic, which illustrates how to create dummy variables that characterize the typology and how to think about selection bias.

Village 1: With program			Village 2: Control
A Not eligible [b=1;e=0;c=0]		Households with more than 1/2 acre	B would not be eligible [b=0;e=0;c=0]
C eligible but does not participate [b=1;e=1;c=0]	D Participants [b=1;e=1;c=1]		E Would be eligible [b=0;e=1;c=0]

Comparing outcomes for group D with those for group C is fraught with selection problems: evidence suggests that group C households do not participate because they are afraid of not being able to pay back. If landholding is exogenous, groups C and D can be compared with group E, however, because outcome difference depends on program placement rather than self-selection. This is not true, of course, if there are differences across villages. If there are differences (due, possibly, to nonrandom placement), then it is better to take a difference-in-difference approach. Thus, an evaluator can calculate mean outcomes for C and D, mean outcomes for A, and then calculate the difference. Similarly, the difference between mean outcomes for E and mean outcomes for B can be calculated, and then the within-village differences can be compared.

III. Data

The researchers collected data on 1,798 households; 1,538 of these were eligible to participate and 905 actually participated. The surveys were col-

lected in 1991 and 1992 after the harvests of the three main rice seasons. The key variables of interest were consumption per capita in the previous week, the amount of credit received, amount of land held, labor supply in the past month, and demographic characteristics. A secondary data source on land transactions is also used to check on market activity in land.

IV. Econometric Techniques

There are three interesting components to the techniques used. The first is the use of administrative data to check the key assumptions necessary to use a regression discontinuity design strategy: the exogeneity of landholding. The second is a very nice use of nonparametric graphing techniques to describe both the probability of being found eligible and the probability of getting a loan as a function of landholdings. This is combined with a very good discussion of when it is appropriate to use a regression discontinuity design—since the graphical analysis suggests that there is no clear breaking point at 0.5 acre. Finally, the study primarily uses difference and difference-in-differences techniques.

V. Who Carried It Out

The data were collected by the Bangladesh Institute for Development Studies on behalf of the World Bank. The analysis was performed by researcher Jonathan Morduch.

VI. Results

The results suggest that almost all the apparent gains from the program are due to selection bias resulting from loan mistargeting. In particular, the authors find that 20 to 30 percent of the borrowers own more land than the half-acre maximum requirement for the program, which suggests that program officers are likely to bend the rules in unobservable ways. When the comparisons are restricted to only those borrowers who meet the land restriction, the authors find that average consumption in the villages with access to microfinancing is less than the controls with both the difference and difference-in-differences methods. This suggests that there was substantial mistargeting of program funds, and as a result regression discontinuity approaches cannot be used to analyze program effects.

The evaluation is also useful in the comparison of results from different econometric techniques: results differ markedly when fixed effects and difference-in-differences or simple difference approaches are used.

The evaluation makes a convincing case that the former is less appropriate when unobservable target group differences are used in making the location decision. However, there are conflicting results in the two approaches about whether the programs reduced variation in consumption and income, highlighting the need for longitudinal data. The impact on education is actually reverse after correction for selection bias.

It is also worth noting that although this analysis shows little impact of the treatment relative to the control group, the control group may not, in fact, have lacked access to financing because this may be supplied by NGOs. The expenditure of millions of dollars to subsidize microfinance programs is, however, called into question.

VII. Lessons Learned

There are several very important lessons from this study. The first is the importance of checking whether the program functions as prescribed. The second is the consideration of the appropriateness of regression discontinuity design versus difference in differences or simple difference techniques. The third is considering the impact of an intervention on the second as well as on the first moment of the distribution, since the reduction in risk may, in itself, be a useful outcome. There is a more fundamental lesson that is not directly addressed but is clearly learned from the study. That lesson is one of political economy: if there is a strong incentive to bend the rules, those rules will be bent.

VIII. Sources

Morduch, Jonathan. 1998. "Does Microfinance Really Help the Poor? New Evidence from Flagship Programs in Bangladesh." Processed, June 17.

Also see:

Khandker, Shahidur R. 1998. *Fighting Poverty with Microcredit: Experience in Bangladesh*. New York: Oxford University Press for the World Bank.