

Cross Sectional Impact Analysis: Bias from Dropouts

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Some microfinance organizations currently employ a cross-sectional impact assessment tool, developed by Assessing the Impact of Micro-enterprise Services (AIMS) at the United States Agency for International Development (USAID) as a cost-effective way to evaluate programs. This tool recommends that impact assessments compare veteran members to new members of a microcredit program, with any difference in those two groups then attributed to the impact of the program. While it attempts to correct for selection bias, by comparing only people who choose to borrow, this methodology introduces a different potential source of bias by not instructing organizations to include program dropouts in their calculations. Because unsuccessful or poorer clients may be more likely to drop out of the program, estimates of impact that fail to consider them are likely to overstate positive outcomes. This paper uses data from a longitudinal study in Peru to quantify some, but not all, of the biases in the cross-sectional approach. In these data, the failure to include dropouts is shown to overestimate the impact of the credit program. Furthermore, the authors find that the profile of the bank's new borrowers shifted over the two years, introducing further bias.

Comparing Methodologies

The authors surveyed borrowers from Mibanco, an MFI operating in Lima, Peru, and a control group of households that did not borrow from any source but were eligible to receive a Mibanco loan. Two waves of data were collected: a baseline in 1997, consisting of 400 borrower households and 301 non-borrower households, and a follow-up in 1999 on 76% of the original borrower households and 71% of the original non-borrower households. Authors used the 1999 data to produce the cross-sectional impact analyses; the 1997 baseline data served only to categorize the observations as veterans, dropouts, or new entrants. The authors used the survey data to conduct the analysis, and then recalculated impact on a data set that included dropouts. In several cases, they found that including dropouts lowered the estimated impact.

Results

For annual enterprise profits, the cross-sectional methodology estimated an increase of 4,083 nuevos soles per year for veterans; the recalculation estimates a decrease of 588 nuevos soles. The cross-sectional methodology finds that veterans worked 14.6 more days per month; the recalculation estimates an increase of only 4 days. For

household income from all sources, we see a change from an increase of 6,569 nuevos soles to 2,062 nuevos soles. Researchers also found a shifting composition of new borrowers by comparing borrowers who entered the bank in 1997 with data from the people who did not borrow in 1997 but did so in 1999. As a group, the 1999 new entrants were poorer in 1997 than the 1997 new entrants were at the same date. This change invalidates the key assumption that all new entrants are comparable groups; the characteristics of "new" borrowers did change over time.

Evaluation Implications

Although there is an additional cost to interviewing dropouts, the authors believe the expense is justified. This small correction can improve the accuracy and reliability of results. Furthermore, a closer look at the size and direction of the dropout bias could offer MFIs valuable evidence on why clients leave. This is not to say all problems are removed, or that an adjusted cross-sectional methodology would satisfactorily measure the impact of a microcredit program—other biases persist, such as the changing composition of new entrants over time. However, the authors have shown that dropout bias does exist, and correcting it would improve the accuracy of the widely-used cross-sectional methodology.