

Economic and Social Impacts of Microfinance

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Potential Effects of microfinance on Households

- Wealth effects \Rightarrow consumption, more children, health, education, leisure
 - Substitution effects \Rightarrow less children, less schooling, less leisure
 - Gender effects \Rightarrow increased bargaining power of women within household
 - Program effects \Rightarrow family planning, schooling/health practices
- \hookrightarrow difficult to measure impact of strictly financial factors

Evaluation Basics

- A person's **income** depends on
 - (1) measurable fixed attributes (e.g. age, education experience)
 - (2) unmeasurable fixed attributes (e.g. entrepreneurial ability, access to social networks)
 - (3) location and local conditions
 - (4) broad economic factors
- To measure impact of microfinance on income, need to control for this stuff
- Also participation depends on this factors

"Difference-in-difference" approach

- Compare the change in the incomes of a "treatment" group with that of "control" group
- Need data collected at several points in time
- Typical specification

$$Y_{ijt} = \alpha \mathbf{X}_{ijt} + \beta \mathbf{V}_j + \gamma M_{ij} + \delta T_{ijt} + \eta_{ijt}$$

Y_{ijt} = income of household i in village j

\mathbf{X}_{ijt} = measurable household characteristics

\mathbf{V}_j = village dummy variables

M_{ij} = unmeasurable determinants of participation

T_{ijt} = value of loans received at date t

η_{ijt} = random factors

- Suppose we also have data at date $t + 1$ then the change in income would be

$$\Delta Y_{ij} = \alpha \Delta \mathbf{X}_{ij} + \delta \Delta T_{ij} + \Delta \eta_{ij}$$

- BUT this assumes the impacts of attributes are unchanging over time
- In reality, they may change or their contribution to income may change
- ↳ can control for the effect of measurables but what about unmeasurables?
- Need to ensure control and treatment groups are comparable
- ↳ this depends on participation decisions or "selection effects"

**“Treatment” group:
Individuals who get
microfinance access**

**“Control group”:
Individuals who never get
access**

Effects on
income of
various
factors:

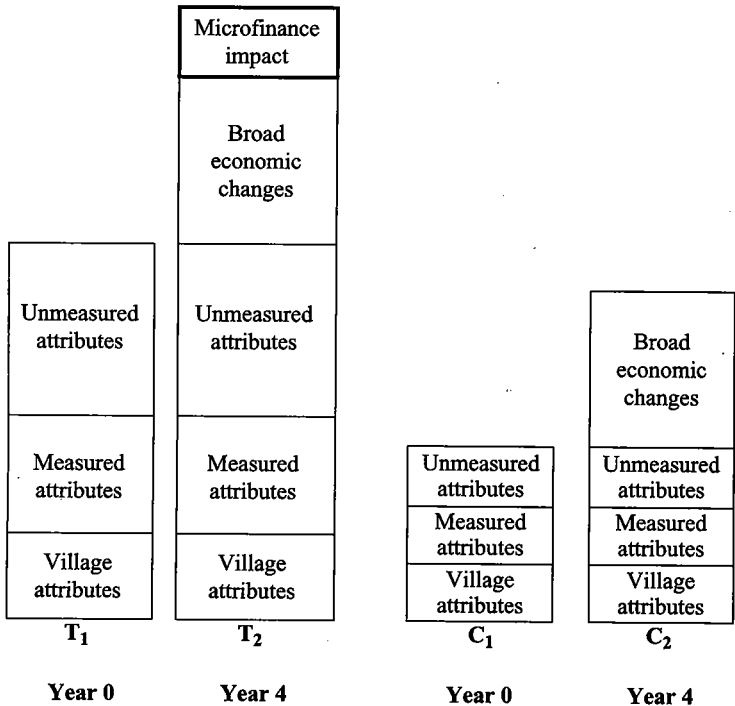


Figure 8.1

Sources of income for treatment and control groups.

The Selection Problem

- Participants may already have an unmeasurable advantage (or disadvantage): e.g. entrepreneurial ability
- Suppose we have data from another identical village with no program
↳ can now directly measure the effect of microfinance **access**, but not participation
- To measure impact of participation one could
 - (1) try to identify "future borrowers" in the control village and compare their income with that of participants in the treatment village, or
 - (2) compare older borrowers to newer borrowers

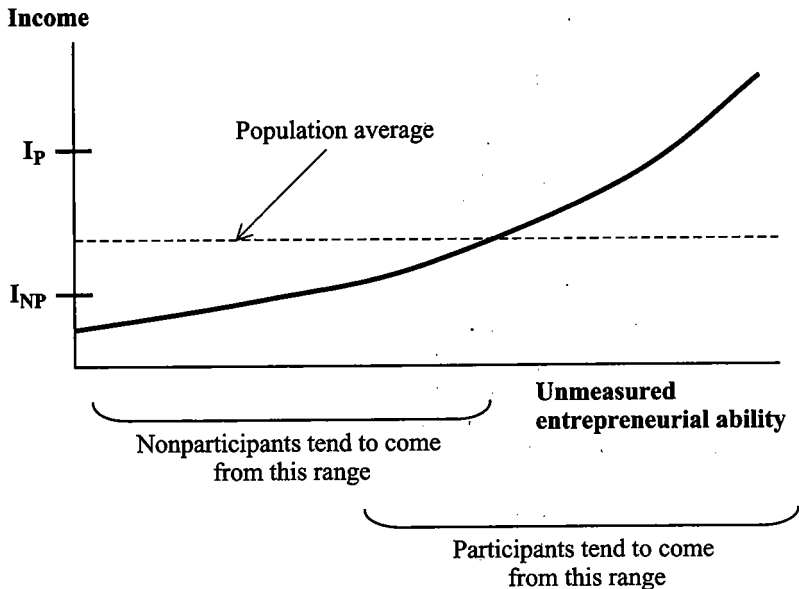


Figure 8.2

The hypothetical relationship between unmeasured entrepreneurial ability and income in a given village.

Using Data on Prospective Clients in Northeast Thailand

Based on Coleman (1999)

- Data on 445 households in 14 villages at end of 1995
- ↳ 8 villages had banks operating at start of 1995
- ↳ 6 were due to introduce one in 1996, but participants were already determined
- Estimates the following regression

$$Y_{ij} = \alpha \mathbf{X}_{ij} + \beta \mathbf{V}_j + \gamma M_{ij} + \delta T_{ij} + \eta_{ij}$$

where

$$M_{ij} = \begin{cases} 1 & \text{participant (actual or prospective)} \\ 0 & \text{non-participant} \end{cases}$$

$$T_{ij} = \text{months that credit was available}$$

Implications

- Average program impact not statistically significant after controlling for endogenous selection
 - Only finds significant impact for village bank committee members, not "rank and file"
 - Note: this region is relatively wealthy and villages have access to other credit sources
 - Difficult to replicate this study in other places
- ↪ usually no delay between participation decision and actual borrowing

Using New Borrowers as a Control Group

- If characteristics of borrowers don't change over time this should work
- Problems:
 - (1) timing of entry may depend on unobservable attributes
 - (2) borrowers experiencing problems may have dropped out — 25-60% drop out rates
 - (3) if richer households leave the pool of borrowers may look poorer
- Possible Solutions:
 - (1) Track down dropouts and include them in survey (Karlan 2001) — costly
 - (2) find observables that predict dropouts and use prediction to adjust estimate

Using a "Quasi-Experiment" in Bangladesh

- Panel data from surveys 1991/2 and 1998/9
- Large scale expansion of micro lending \Rightarrow difficult to know whether the effects are direct or indirect
- Microlenders in Bangladesh (Grameen, BRAC and RD-12) restrict services to the "functionally landless" — less than half an acre
- Eligibility rule \Rightarrow can distinguish target non-participants from non-target non-participants
- Khandker (2003) estimates that microfinance contributed to $1/3 - 1/2$ of decline in poverty rates
- Also finds bigger impact on women than men.

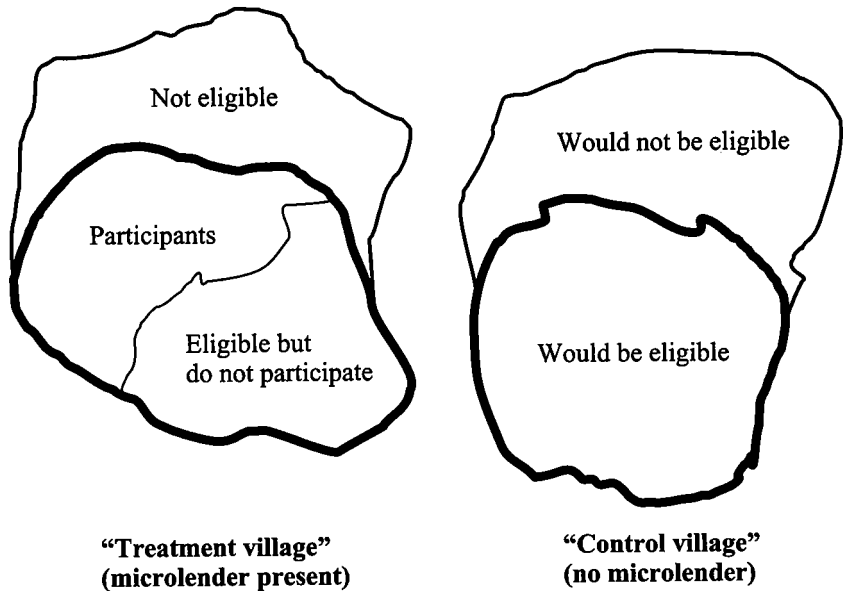


Figure 8.3
Example of impact evaluation strategies using eligibility rules.

Table 8.1

Falling poverty in Bangladesh: Program participants versus nonparticipants

	Headcount for moderate poverty			Headcount for extreme poverty		
	1991–1992	1998–1999	Difference	1991–1992	1998–1999	Difference
<i>Program area</i>						
All program participants	90.3	70.1	20.2	52.5	32.7	19.8
Target nonparticipants	91.1	72.0	19.1	58.9	44.0	14.9
Nontarget nonparticipants	69.8	50.8	19	23.6	19.3	4.3
Total	83.7	65.5	18.2	45.0	31.4	14.6
<i>No program in 1991–1992</i>						
All program participants	90.8	71.6	19.2	56.6	43.8	13.2
Target nonparticipants	87.4	82.9	4.5	57.0	51.2	6.8
Nontarget nonparticipants	72.7	53.2	19.5	35.5	26.0	9.5
Total	80.3	67.7	12.6	46.6	38.3	8.3

Source: Khandker 2003, Table 14, and calculations by the authors.

Note: Program and nonprogram area is based on 1991–1992 program placement. All villages had programs by 1998–1999.