

Microfinance Impact

- What are we trying to measure?
- How can we “accurately” evaluate the impact of microfinance?
- Attempts to measure impact thus far?

Microfinance may impact households in various ways via income for example:

- Income effect:

- ↑demand for children

- ↑health

- ↑children's education

- ↑leisure

- Substitution effect

- ↓demand for children (i.e., women's opportunity cost increases)

- ↓children's education

- ↓leisure

Other channels

- Women's bargaining power
- Social capital

And, more direct interventions via services added to financial services:

- Education and training (i.e., Freedom for Hunger, Pro Mujer, BRAC)
- Health (i.e., "Health Banks")

Narrow down our search: impact on income

Attributes

Measurable: age, education, experience..

Non-measurable: entrepreneurial & organizational skills, valuable networks.....

Challenge: disentangling the role of microfinance from measurable and non-measurable attributes

Challenge even greater when the decision to participate in a microfinance program depend on those same attributes

Problems:

- Make sure that control groups are comparable to treatment groups
- need to consider who joins the microfinance program that cannot be compared to those who do not

Why?

Unmeasured attributes (i.e., entrepreneurial ability of those who join)

→ “selection bias”

Potential solution: consider a similar village without microfinance

Problem: again, unmeasured attributes of villagers that have not yet self – selected themselves → selection bias

Potential solutions: a) measure the effects of microfinance “access” & b) try to identify potential borrowers in the control village

Well-known attempts:

- Bret Coleman (1999) & (2002) on Thailand

Tries to address the selection bias by identifying potential borrowers in villages where microfinance is not yet present

In particular:

He gathers data in 1995 from 14 villages, 8 of which already have a microfinance program in operation, and the other 6 do not but would-be borrowers have already been identified

Estimates:

$$Y_{ij} = X_{ij} \alpha + V_j \beta + M_{ij} \gamma + T_{ij} \delta + \eta_{ij} \quad (8.1)$$

Findings:

After controlling for selection and program placement:

- Impact not significantly different from zero
- Some impact for the “wealthier” participants

However: Thailand is relatively wealthy, village members have multiple sources of credit

- Karlan (2001) on Peru

Comparing “old borrowers” with “new borrowers” using cross – sectional data

→selection bias due to the timing of entry (early entrants may differ from late entrants, i.e., more entrepreneurial, more motivated.....)

And Karlan’s experience in FINCA Peru, points out two additional biases, both due to dropouts:

1)Dropouts may be the “failures” → impact is overstated, or vice versa

2) Non random attrition: If dropouts are “failures” → pool of borrowers are richer on average → impact overstated, and viceversa

Potential solutions: Hunt down the drop outs which is expensive, or estimate “predictors” which has a problem in that the “reweighing scheme” does not take into account the size of the impact

- USAID AIMS on India, Peru, and Zimbabwe

Use data collected at several points in time allowing for “before versus after” comparisons

Control for nonrandom participation and nonrandom placement

However, approach subject to biases due to unobservable attributes that change over time

Nevertheless:

Data collected from a random sample of participant households in several programs that were resurveyed two years later

As for the control groups: random sample from nonparticipants (India and Peru)

Or

A “random walk” (Zimbabwe)

Researchers followed dropouts to avoid attrition biases

However:

Researchers decided against analyzing difference-in-differences

→ Biases due to omitted variables that do not change over time

In particular, researchers should have estimated:

$$Y_{ijt} = X_{ijt} \alpha + V_j \beta + M_{ij} \gamma + C_{ijt} \delta + \eta_{ijt}, \quad (8.2)$$

→ Problem: Potential bias due to omission of unobservable variables that do not change over time

Addressing the problem:

$$Y_{ijt+1} = X_{ijt+1} \alpha + V_j \beta + M_{ij} \gamma + C_{ijt+1} \delta + \eta_{ijt+1} \quad (8.3)$$

And, subtract (8.2) from (8.3) to obtain:

$$\Delta Y_{ij} = \Delta X_{ij} \alpha + \Delta C_{ij} \delta + \Delta \eta_{ij}, \quad (8.4)$$

→ a consistent estimate of the impact of δ

Additional problem: reverse causality

→ Next class: AM, pp. 213 – 224 & Pitt-Khandker (1998) JPE