# Advanced Development Economics: Credit and Microfinance

Måns Söderbom

22 October 2009

# 1 Introduction

Today we follow up on the issue, introduced last time, of the role of **credit** in economic development. There are two references:

Beck, Thorsten, Asli Demirguc-Kunt, and Patrick Honohan (2009). "Access to Financial Services: Measurement, Impact, and Policies," World Bank Research Observer 24(1), 119-145.

Cull, Robert, Asli Demirguc-Kunt & Jonathan Morduch (2009). "Microfinance meets the market," Journal of Economic Perspectives 23(1), 167-192

Both papers are easy to read and, once you've read them, you will have learned a lot. So please read them both. I will begin by going through the most important parts of the Beck et al. paper, discussing the role of access to finance for development in general. One important conclusion here is that formal financial institutions have not reached the poorest of the poor. Microfinance is an alternative vehicle by which the poor can get access to credit, and so in the second half I focus on that (drawing on the Cull et al. paper).

# 2 Financial Services: Access and Impact

The paper by Beck et al. (2009) is a survey paper reviewing the arguments as to why good access to credit may be important for economic development, and the known empirical facts related to credit access and its effects.

## 2.1 Background

- The overall role of financial markets and institutions in development is to ensure that scarce resources get channelled to activities with they are put to good use - e.g. generating high **private or social returns**. If this works, then a good financial system is likely to spur economic development and growth.

- This paper focuses on the effects of financial development on the lives of the poor.

- Without **inclusive** financial systems, poor individuals and small enterprises need to rely on their personal wealth or internal resources to invest in their education, become entrepreneurs, or take advantage of promising growth opportunities. You may have a great investment project in mind, but unless you have, or can find, the money to initiate it, the project will not materialize.

- The bulk of the evidence reviewed in the paper suggests financial development and improving access to finance is likely to not only accelerate economic growth, but also reduce income inequality and poverty.

- Financial market imperfections - posed by information asymmetries and transactions costs - are likely to be especially binding on the talented poor and the micro and small enterprises.

- The paper documents:

  - what is known about the extent of financial access for the poor

  - what is known about the impact of financial access on economic development (growth, equity, poverty reduction)

## 2.2 Access to finance

- Household access to, and use of, financial services vary a lot across countries. In many developing countries, **less than half** of households have an account with a traditional formal bank; in many African countries, **less than 20%** have such an account.

- Consequences of a large number of households being excluded from the formal financial market: distinguish between different types of households; in particular those **voluntarily self-excluded**, and those **involuntarily excluded**.

- **Voluntary non-use** signals **lack of demand**; financial reforms will not impact these individuals, at least not directly (of course it could be that financial reforms have indirect effects operating through higher demand).

- In the group of **involuntarily excluded** it is useful to distinguish between reasons why they do not have access:
  - Those not bankable - households have too low, or too risky, incomes.
  - Those discriminated against
  - Those excluded because of poor contractual and informational frameworks
  - Those excluded because prices or products are affected by market failures (e.g. poor competition in the banking sector results in high interest rates)
- If we know something about why people are excluded, it becomes clearer if and how policies should address this issue. It will be hard to design policies

that help those in the first category (not bankable), but for the other three one could think of specific policy improvements.

- Research identifies the following barriers as potentially important:
  - Geography (physical access). If clients need to visit a branch or use an ATM to obtain financial services, then if there are no such facilities close to where you live access will be a problem. This may be less of a constraint as financial services are becoming available via the internet; still, certainly amongst the rural poor getting online is not costless.
  - Fulfilling the formal requirements - e.g. producing the necessary documents (identification, proof of residence etc.), collateral etc.

## 2.3 Impact of access to finance

### 2.3.1 Effects on firms

- Finance promotes growth through the provision of credit to the most promising firms.

- As discussed last time, survey data suggest that lack of credit is perceived a big problem for entrepreneurs in many developing countries.

- In some countries, there is solid empirical evidence that improved access to credit spurs enterprise growth. For example, experimental evidence from Mexico indicates that improved credit facilitate buying inputs and leads to higher profits. These data were obtained by means of randomization - firms were randomly given grants by the research team; the team followed up after some time to compare outcomes between those given grants and those not.

### 2.3.2 Effects on households

- Recall the main idea is that finance spurs growth. But does improved finance help all individuals - in particular, does it help the poor?

- The evidence seems to suggest that improvement of the financial market is accompanied by a fall in poverty.

- The mechanisms are less clear though. Is this due to better direct provision of credit; or is it an indirect effect, operating through labour and product markets (e.g. better finance primarily helps, say, medium-sized firms, but as a result, these firms hire more employees)?

- Macro (cross-country) based analysis indicates a **strong** impact of financial depth on poverty alleviation, but micro based analysis - in which individual outcomes get linked to individual access - suggests a **weak** effect. What can we learn from these facts?

- On balance, the empirical findings suggest the favorable effect of finance on poverty may **not** be coming mainly through **direct** provision of financial services to the poor. Improved credit may not be the only important goal; better insurance and other services relevant for the non-poor, may impact the poor indirectly.

- This does not necessarily mean improving access to financial services for the poor is unimportant. Why do the poor not have access to formal finance?
  - Social & physical distance to the formal financial system - e.g. lack of education; the institutions choose not to locate in poor areas; etc.
  - Also, as direct consequence of being poor: They can offer no collateral and can't borrow against their future income unless they have steady jobs.
- These are hard problems to overcome. What can we do to improve the financial access of the poor?
- **Microfinance** has been the main answer to this question.

# 3 Microfinance meets the market

## 3.1 Background

- It's long been argued that lack of access to finance presents a serious problem for low-income people in poor countries.

- In the 1970s, financial institutions serving the poor were often run by the government, targeting mostly farmers. It didn't work very well: the state-run banks were typically heavily influenced by politics; they charged very low interest rates (i.e. costly activity) and didn't mind too much if loans weren't repaid. Credit wasn't channelled to the firms or farms where it was most needed.

- In the 1980s, microfinance pioneers started shifting the focus:
  - Targeted nonfarm, mostly female, entrepreneurs in villages & towns (95% of Grameen Bank's customers are women). Such customers are less vulnerable to weather shocks etc. and generate fairly steady income.
  - Repayment rates were very high (even though no collateral is needed, typically).
- Why does MF seem to work so well? What's different about MF organizations compared to traditional formal financial firms?
  - Loan officers go to the poor instead of waiting for the poor to come to them

- Group lending schemes (joint liability) improve repayment incentives through peer pressure

- Increasing loan sizes become available gradually, as borrowers show that they are reliable.

- In the 1980s and 1990s, policymakers took a big leap, arguing that the new microfinance institutions should aim to become "financially sustainable", i.e. **profitable**. Donors encouraged microfinance institutions to raise interest rates. As a result, new, **commercial**, microfinance institutions appeared on the scene.

- So we have essentially two types of microfinance institutions:

- Not-for-profit microfinance institutions - usually nongovernment organizations (NGOs). Any surplus generated by such organizations must be ploughed back into the business to further social missions.
- For-profit microfinance institutions - essentially banks that can distribute (part of) the profits to their owners.

- In 2006, 133 million people with low incomes were customers of microfinance institutions. So poor people have better access to credit. This **may** increase growth; it improves the ability of poor individuals to invest for the future. Also recall the discussion last time: Africa faces the highest risk of all continents in the world, yet the instruments available to people to deal with risk are very underdeveloped. Better access to credit makes people less vulnerable to shocks and emergencies.

**Two general questions:**

- What is the logic of microfinance (MF) - i.e. how does it work and why?
- How can we expect MF to impact on poverty?
  - What is the role played by for-profit MF organizations in this context, and how does it differ from that of not-for-profit MF organizations?

**Eight specific questions:**

1. Who are the lenders?

2. How widespread is profitability?

3. Are loans repaid?

4. Who are the customers?

5. Why are interest rates so high?

6. Are profit-maximizing investors attracted to the sector?

7. How important are subsidies?

8. How good are the data?

We will now have a look at some data which shed light on these issues? These data may not enable to answer the two general questions posed above, but they are at least indicative of what the answers might be.

## 3.2 A portrait of the microfinance industry

### 3.2.1 Data

- Data on the microfinance industry is available from several sources. The main source is the Microfinance Information Exchange (the MIX), a not-for-profit organization that aims to promote information exchange in the microfinance industry. Some other sources too (check the paper)

- **Type of data:** Financial information at the group level (but not at the individual level); number of borrowers, female borrowers, and "poorest" borrowers; outreach and impact data; explicit and implicit subsidies of MF organizations; general information on specific microfinance institutions.

- The dataset is relatively large: 346 institutions with nearly 18 million active microfinance borrowers and a combined total of PPP $25.3 billion in assets. The period considered is 2002–2004.

- Disadvantage: participation in the database is voluntary (Grameen Bank, for example, chose not to participate), hence the dataset is not representative of all microfinance institutions

[Discuss the empirical analysis]

# 1. Who are the lenders?

- Just 10% are (for-profit) banks; ¾ are either NGOs or NBFI (likely not-for-profit)
- But the banks are **large** – over half the assets in the sample
- NGOs reach **more than half** of the customers covered by the org:s in the sample
  - Thus, even though donors are keen on commercialization, nonprofit org:s remain important
- Nonprofits serve ¾ of the **women**, and they use **more subsidies** (=donations, subsidies to cost of funds)

*Table 1*

**Distribution of Microfinance Institutions by Institutional Type**

| | *% of institutions* | *% of assets* | *% of borrowers* | *% of female borrowers* | *% of subsidized funds* |
|---|---|---|---|---|---|
| Bank | 10 | 55 | 25 | 6 | 18 |
| Nongovernmental organization (NGO) | 45 | 21 | 51 | 73 | 61 |
| Nonbank financial institution (NBFI) | 30 | 19 | 17 | 16 | 18 |
| Credit union | 10 | 4 | 6 | 4 | 3 |
| Rural bank | 5 | 1 | 1 | 1 | 0 |
| | 100 | 100 | 100 | 100 | 100 |
| **Numbers total** | **346 institutions** | **$25.3 billion** | **18 million** | **12 million** | **$2.6 billion** |

# 2. How widespread is profitability?

• Figure 1: the vertical axis shows a measure of **profitability**: the ratio of revenues to costs. If the number is larger than 1, then financially viable, otherwise need donations or some other external capital injection to keep going.

• **Nonprofit** orgs make profits too! So commercialization not necessary for viability.

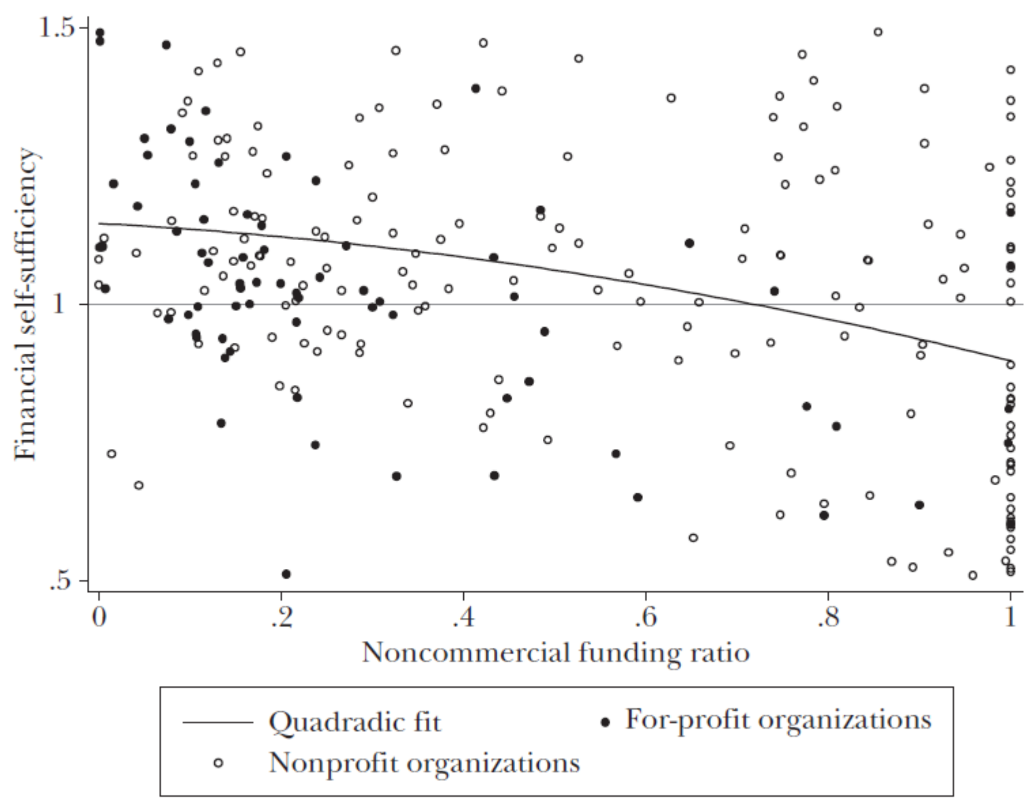
• Horizontal axis: share of donations, cheap loans & equity in total funds. High = a lot of 'soft' funding.

• Correlation btw profitability and non-comm funding is negative but modest.

• Nonprofits are spread broadly – some, but not all, have a lot of soft funding.

*Figure 1*

**Profitability versus Noncommercial Funding**



# 3. Are loans repaid?

- Recall: even though no collateral, microfinance lenders usually get their money back.
- Often said to be due to **group lending**, but there's a lot of **individual lending** too.
- Individual lending 95% profitable; group 85%; village bank 67%.
- As expected, the MF banks rely more on individual lending and NGOs less.

*Table 2*

**Profitability of Microfinance Institutions**

| | *Institutions* | | *Active borrowers* | |
|---|---|---|---|---|
| | *Number in sample* | *Percent profitable* | *Number (millions)* | *Percent served by profitable institutions* |
| **Institution type** | | | | |
| *Bank* | 30 | 73 | 4.1 | 92 |
| *Credit union* | 30 | 53 | 0.5 | 57 |
| *Nonbank financial institution* | 94 | 60 | 2.6 | 75 |
| *Nongovernmental organization* | 148 | 54 | 8.9 | 91 |
| **Lending method** | | | | |
| *Individual* | 105 | 68 | 7.2 | 95 |
| *Solidarity group* | 157 | 55 | 7.4 | 85 |
| *Village bank* | 53 | 43 | 1.6 | 67 |
| **Total** | **315** | **57** | **16.1** | **87** |

# 4. Who are the customers?

- Banks are making much **larger loans** per borrower than NGOs
- Suggests that banks tend to serve customers with **higher incomes** than those served by NGOs.
- Assuming there are **fixed costs** to lending: banks will then be **more profitable** as a result (increasing returns)
- The proportion of **women** served is higher amongst the (nonprofit) NGOs than for the MF banks.
- Details in rows (1) – (4), Table 3.

# 5. Why are interest rates so high?

- Close your eyes and ask yourself: Who do you think charges the highest interest rates – the nonprofit NGOs or the commercial banks?
- Answer: the NGOs. So the highest interest rates are not charged by the banks (the org:s most focused on profits). Why?

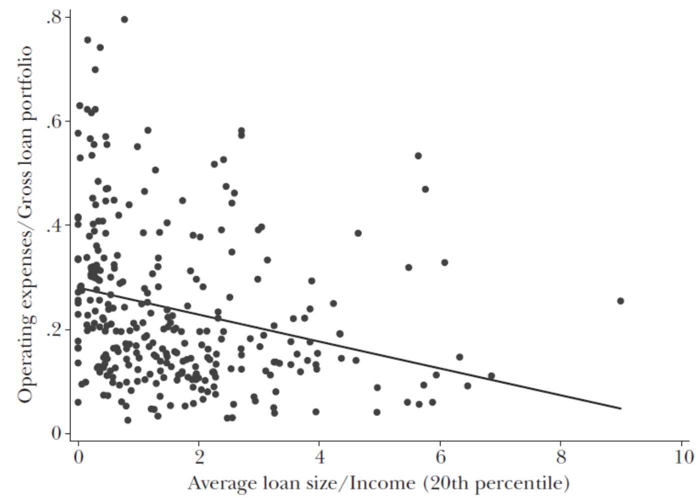
| | *Nongovernmental organizations* | | *Nonbank financial institutions* | | *Banks* | |
|---|---|---|---|---|---|---|
| | *For different percentiles for this variable* | *Median if profitable* | *For different percentiles for this variable* | *Median if profitable* | *For different percentiles for this variable* | *Median if profitable* |
| 7) Real portfolio yield (%) | | | | | | |
| 25th | 15 | 26 | 12 | 20 | 9 | 14 |
| Median | 25 | | 20 | | 13 | |
| 75th | 37 | | 26 | | 19 | |

- NGOs have **high costs**.

- Why? **Serving poor clients is costly** because of fixed transaction costs – i.e. diseconomies of transacting small loans.

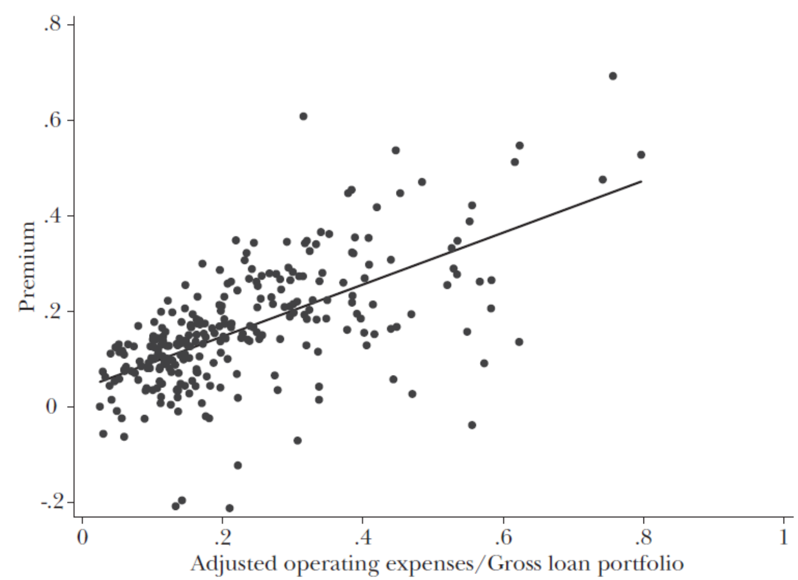
| | *Nongovernmental organizations* | | *Nonbank financial institutions* | | *Banks* | |
|---|---|---|---|---|---|---|
| | *For different percentiles for this variable* | *Median if profitable* | *For different percentiles for this variable* | *Median if profitable* | *For different percentiles for this variable* | *Median if profitable* |
| 5) Operating cost as a percent of loan value | | | | | | |
| 25th | 15 | 21 | 13 | 16 | 7 | 11 |
| Median | 26 | | 17 | | 12 | |
| 75th | 38 | | 24 | | 21 | |

*Figure 3*
**Average Costs per Dollar Lent Fall as Loans Get Larger**




- These graphs confirm that….
- loan size and average costs go hand in hand;
- that interest rates rise with costs.

*Figure 4*
**Interest Rates Rise with Costs**




*Note that, if NGOs were to charge lower interest rates, they would need more soft funding (donations)*

# 6. Are profit-maximizing investors attracted to the sector?

- Median **returns on equity**: 3% for NGOs, 10% for banks. Good but not spectacular (this was before the financial crisis). Don't expect a massive inflow of private investors.
- Hopefully, the returns are high enough to tempt social investors.

| | *Nongovernmental organizations* | | *Nonbank financial institutions* | | *Banks* | |
|---|---|---|---|---|---|---|
| | *For different percentiles for this variable* | *Median if profitable* | *For different percentiles for this variable* | *Median if profitable* | *For different percentiles for this variable* | *Median if profitable* |
| 9) Return on equity (%) | | | | | | |
| 25th | -10.5 | 11.4 | -7.9 | 14.4 | 1.6 | 15.1 |
| Median | 3.4 | | 3.6 | | 10.0 | |
| 75th | 13.8 | | 17.8 | | 22.9 | |

# 7. How important are subsidies?

- Subsidies (=donations and implicit subsidies, e.g. in the form of low interest rates on debt) are very important for the NGOs.
- **39%** of the funding comes from donations
- **16%** from subsidized loans.
- Details in Table 4.

# 8. How robust are the data?

- Bottom line: the data are probably not as robust as one would want - but it's all we've got. The broad patterns in the data are hopefully robust, but individual numbers are maybe not that reliable.

## 3.3 Subsidizing microfinance

- We've seen that NGOs to a greater extent than the MF banks reach the poor. We have seen that the NGOs rely extensively on subsidies.

- Is it worth it? Do the costs of subsidizing microfinance generate important social gains?

- Or could it be that these donations would do more good if invested in other projects - schools, clinics, supporting large rather than small firms etc.?

- Some success stories - e.g. returns to capital very high amongst micro firms in Mexico (i.e. another dollar invested in the firm - made possible by access to micro credit - will earn a large return)

- And some not so encouraging results - very low returns to capital for female micro entrepreneurs in Sri Lanka.

- Still, on balance, it seems access to credit changes peoples' lives for the better - but we don't know how the costs and benefits line up.

- At least there's no evidence that subsidies make organizations inefficient - NGOs don't appear to be less efficient than MF banks.

- But it's true they have higher costs. This is partly because serving poor clients is costly, but maybe not entirely. More research is needed here.

## 3.4 The future of financial access for low-income households

- Important insight: In many ways, MF commercial banks are quite different from nonprofit MF organizations run NGO.

- Commercial microfinance banks: involve individual lending method; larger loans; fewer women customers; lower costs per dollar lent, and greater profitability.

- Nonprofit MF organizations: rely more on group lending; smaller loans, serving more women; employing subsidies more heavily; facing higher costs per dollar lent; and being less profitable.

- The clash between the forprofit MF and nonprofit MF offers a false choice. Commercial investment is necessary to fund the continued expansion of microfinance, but institutions with strong social missions are best placed to reach and serve the poorest customers.

- "The market is a powerful force, but it cannot fill all gaps."

- Core of the problem regarding reaching the poor: high (relative) transaction costs.

- Reducing costs of financial transactions becomes an important goal.

- Technology - e.g. banking through mobile phones.

- If so, possibly forprofit organizations may begin to reach the poor, reducing the need for subsidized lending.

- Until that happens, socially driven MF banks have an important role to play. But are we sure the social and economic impacts are large enough to justify continuing support? Here's an important role for researchers: evaluate the impact of microfinance on the lives of the poor.