



# Development Economics (30L208) Lecture 9

## Credit to the poor: Problems and solutions.

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# Reading material for this week

## Mandatory

- [Chapter 7]: Banerjee A. V and E. Duflo. 2011. Poor Economics.
- Armendariz, B; Morduch, J; (2004) Microfinance - where do we stand? In: Goodhart, C, (ed.) **Financial Development and Economic Growth**. Palgrave

## Optional

- Banerjee, Abhijit, et. al. "Microcredit Is Not the Enemy," *Financial Times*. December 13, 2010.
- S. D. "Big Trouble for Microfinance," *The Economist*, December 2, 2010.
- Yunus, Muhammad. "Sacrificing Microcredit for Megaprofits." *The New York Times*, January 14, 2011.
- Yunus, Muhammad (2008) *Banker to the Poor. Micro-lending and the Battle against World Poverty*, PublicAffairs,

## Tutorial

- **Presentation:** Banerjee, Duflo, Glennerster and Kinnan. 2015. "The Miracle of Microfinance? Evidence from a Randomized Evaluation." AEJ: Applied Economics, 7(1): 22-53.

# Keywords of the day



*“Poor people are like bonsai trees. You take the seed of the tallest tree in the forest, put it in a flower pot, and it will grow only as a short tree. It will not grow any further. You know that there is nothing wrong with the seed and you wonder why it is so short...”*



Muhammad Yunus, Nobel Peace Prize 2006  
(Lindau Meetings, 2008)

# Finance for the poor: problems



## Sellers in Morocco (Marrakesh and Fez)

To sell, these vendors need to buy the fruit and vegetables first.

How do you think they buy them?

# Credit from wholesaler

## A day of a typical fruit seller:

- **Morning:** The vendor buys the stock from a wholesaler, usually on credit.
- **During the day:** Sells the stock (or part of it)
- **Night:** Repays the credit to the wholesale.

## What is the cost of the daily credit they get? In India, for example:

- Morning: gets vegetables at the cost of 1000 rupees (USD \$ 51)
- Night: reimburse 1047 rupees
- Interest rate: **4.7 % PER DAY!**

# How big is 4.7% of interest rate?

Suppose you borrowed 100 rupees (USD\$ 5) today

How much would you need to repay them tomorrow with 4.7% per day of interest rate?

$$100 \times (1+0.047) = 104.7$$

And if you kept this amount **one day more**?

$$104.7 \times (1+0.047) = 109.6$$

And in **one month**? How much would you owe?

$$100 \times (1+0.047)^{30} = 396.6$$

And in **one year**?

$$100 \times (1+0.047)^{365} = 1,842,459,409 \text{ rupees}$$

**USD\$ 93.5 millions!**



# Huge arbitrage possibilities!

Suppose:

- **Beginning of the month:** You lend a 1000 rupee loan to this vendor at **10% monthly interest rate**.
- **During the month:** The vendor buys the vegetables in cash, rather than on daily credit.
- **End of the month:** Pays the 100 rupee of interest rate and principal of the loan (1000 rupee).
- Saved 4000 rupees in interest that he/she doesn't pay and with the money saved → Invest in the business → escape poverty.

Has anybody thought about this?

# Government-sponsored credit programs

- The lack of formal financial institutions in village economies has been long-acknowledged as a barrier to development
- **1960s-1980s**: Government-sponsored credit programs by many developing countries, usually with **subsidized interest rates**, targeted at the rural poor.
- In India starting in 1977, **for every branch that a bank opened in a city**, the bank had to open **four additional branches in rural locations** that did not have a bank.
- Banks were directed **to lend 40 % of their portfolios to the priority sector**: small firms, agriculture, cooperatives, etc.

## What do you think was the effect of this program on poverty?

- Where more bank branches were opened as a result of this policy, **poverty decreased** faster (Burgess and Pande, 2005)



# State-run Banks: The solution?

Does it mean that state-run banks is the solution for poverty finance?  
NO. Why?

Lending programs had all sorts of problems. Very poorly designed.

❑ Lax management

❑ Corruption:

- Credit was allocated according to **political** motives rather than need
- Loans were made to farmers just before elections in districts where the contest was expected to be tight.
- Money had a tendency to end up in the hands of the **local elites**.

❖ It cost much more than 1 rupee to increase the incomes of the poor by 1 rupee through opening bank branches.

❖ Moreover, **in the long term**, the regions that got more branches **became poorer!!!** (Fulford, 2013)

# Why not private banks?

- ✓ OK. Maybe is not good idea to give the power to give subsidized loans to politicians. 😊

Politicians find it too attractive to use the loans as giveaways, and there is no better giveaway than a loan one does not need to repay.

- But why don't private bankers want to lend to small entrepreneurs, given the huge interest rates they pay? wouldn't it make sense to try to lend to them?
- Is something that informal money-lenders can do that banks cannot? **What could that be?**

# Why are lending rates so high for the poor?

In general: asymmetric information → inefficiently high  $r$   
In particular: Poverty = Limit liability → even higher  $r$

## 1. Adverse Selection

- **Costly** to distinguish (**screen**) between inherently “risky” and “safe” borrowers
- Ideally: Perfect screening (**price discrimination**) → Charge high rates to “risky” and low rates to “safe”
- Reality: costly (**imperfect screening**) → Charge the same (high) rates to all potential borrowers
- At high rates, banks are most likely to “adversely” select risky borrowers. **Why?**
  - Riskier borrowers are willing to borrow at higher interest rates (in any case, they will default) → will apply!
  - Safe borrowers don’t want to default → High rates makes more likely the default → they don’t even apply for a loan!
  - This outcome is inefficient. **Why?**
  - Projects undertaken by both risky and safe borrowers should be financed.



# The Economics of Lending to the Poor

## 2. (Ex ante) Moral Hazard

- **Costly** to **monitor** borrowers after having extended loans
- Incomplete contracts: Impossible to write a credible contract that enforces prudent behavior
- **Limited liability** of poor borrowers: no collateral to offer → Borrowers are tempted to undertake riskier projects than the bank would like (high risk, high return)
- **High fix cost of monitoring.** The poorer → smaller loans → Higher Average fix cost per loan → Higher monitoring
- The bank anticipates this → charge relatively high interest rates to compensate for the additional risk.
- Money-lenders: are very close to the borrowers and use physical threat.

## 3. (Ex post) Moral Hazard

- **Costly** (or impossible) to **observe the returns** of the project once they have been realized.
- Due to **limited liability**, borrowers have incentives to pretend that their returns are “low” or to strategically default on their debt obligations.

# Microcredits: a solution?

## Microcredits

- ✓ What is it? What are the **rules**? How does it work?
- ✓ What are microcredits supposed to solve? **Theory**
- ✓ What do microcredits actually do to the poor? Empirical **Evidence**
- ✓ The **problems** faced by microcredits...
- ✓ What is the **future** of finance for the poor?

But before looking into all this, let's see how the idea started...

# How did all start?

The origins of microcredit:

- [Video: Muhammad Yunus Lindau Nobel Laureate Meetings](#) (Minute 0:50 to Minute 10)

*“My ambition was to see if I can make my self useful, to even one person, even for a day”  
(Muhammad Yunus)*

*“Today we have 7.5 millions borrowers”*

One of the many Grammen stories

- <https://www.youtube.com/watch?v=1UugpcDjjJU>



# Microcredit: What is it?

## Key words

**Very small** loans,  $r < 30\%$  year - **No collateral** - **Extreme poor** - Mostly **women** - **Short-term** - **Group** lending.

## How does it work?

- ✓ Find four other people who similarly seek a loan
- ✓ Form a 5-person group
- ✓ Go to a micro-credit branch bank → Request the loan

## Rules

- ☐ **5-person group** commits to meet the loan officer **once a week** to disburse/pay
  - ☐ The meetings are held **simultaneously with 40 people** (8 five-person groups) and take place **in the village**.
  - ☐ In case a borrower is unable to repay her loan, she will have to quit her membership of the bank
  - ☐ If she quits, the other 4 group members have to quit too!
- The others are not forced explicitly to repay for the potential defaulter, but they have clear incentives to do so if they wish to continue obtaining future loans.

# What is microcredit supposed to solve?

## 1. Overcome adverse selection?

Yes, due to the **joint liability** of the group lending (Ghatak, 2000)

- ✓ Villagers have good **(local) information** about the relative riskiness of their neighbors:
  - **Assortative matching**: the safe borrowers will form groups among themselves; and risky borrowers will have no choice but to form groups with other risky borrowers.
    - Group of the “risky”: default more often, participants in risky groups will have to repay more often for their defaulting peers.
    - Group of the “safe”: repay for their peers less often
  - While all borrowers face exactly the same contracts with exactly the same interest rates, **safe borrowers pay lower effective interest rates**: their expected costs (including the cost of repaying for group members in trouble) will be lower.
  - Safe borrowers enter the market, take loans and **improve efficiency**

→ Joint liability → screening device → ↓ Adverse selection → ↓ average interest rate

# What is microcredit supposed to solve?

## 2. Mitigate (ex ante) moral hazard?

Yes, due to the **joint liability** of the group lending (Stiglitz, 1990)

- the **group members** have incentives to **monitoring each other** and can potentially threaten to impose “social sanctions” when risky projects are chosen.
- each borrower can **denounce** her peer’s “misbehavior” to the community, and *de facto* prevent her from undertaking risky projects, or they can simply shun the neighbor who deviates, imposing costs that are both economic and social.
- Because neighbors can monitor each other much more easily than a bank can (because of geographical proximity and trade links) the effective **delegation of ex ante monitoring** from the micro-lender to the borrowers themselves involves **efficiency gains**.
- The power of shame (rather than physical threat) seems to be sufficient.

→ Joint liability → ↑ peers monitoring → ↓ (ex ante) moral hazard → ↓ average interest rate



# What is microcredit supposed to solve?

## 3. Mitigate (ex post) moral hazard?

Yes. Due to the **joint liability** of the group lending

- **lower the incidence of strategic default** when project returns can be observed by the borrowers' neighbors
- Under the fear of suffering from social sanctions, borrowers will declare their true return realizations and repay when what they can.

→ Joint liability → ↓ strategic default → ↓ (ex post) moral hazard → ↓ average interest rate

Group lending (joint liability) → ↑ Efficiency

# Evidence: What did microcredits achieve?

With no need of an RCT evaluation, we observe:

- ✓ Lower interest rates
- ✓ Access to finance to extreme poor
- ✓ Economic power in the hands of women
- ✓ Very low default rates: 95 per cent or more of loans are repaid
- ✓ Great successful anecdotal stories

# Impact: What microcredit actually does to the poor?

Evidence from an RCT (Banerjee, et al. (2015) to be presented in the Tutorial)

Half of 104 slums were randomly selected for opening of an MFI branch.

- 18 months later:
  - ↓ Informal borrowing
  - = Overall amount borrowed (substitution only)
  - ↑ Investment and profits on pre-existing business
  - ↑ Expenditure on durable
  - ↓ temptation goods
  - = Number of new business (or new entrepreneurs)
  - = Health, education, women's empowerment did not change
- 36 months later:
  - + More assets, larger profits (only among the most profitable business)
  - The average business still remains small and not very profitable
  - Low take-up rate: 70% of eligible households do not have an MFI loan (more than 50% borrow from money lenders!! Why??)

# What are the limitations/problems of microcredit?

**Focus on “zero default”** may be too restrictive → diminish efficiency

- Suppose one borrower cannot repay → the other four partners are then under pressure.
- Suppose they don't have resources (or desire) to bail out the neighbor

→ Rule says that the 5 persons in the group won't be able to borrow money anymore.

Consequences:

- a) Penalize good clients: If the other 4 in the group are exemplary clients, and it is costly for the bank to find such good clients, it is inefficient to remove them all! Better to remove the customer in trouble and find a replacement member.
- b) Limit entrepreneurship: very small loans, with short maturity, very early repayment: do not allow people to take risks and to innovate.
- c) Too much pressure: October 2010, Andhra Pradesh, 55 farmers committed suicide (not clear if it was due to the pressure of the loan officers though)

# What is the present & future of finance for the poor?

## Innovations to Microcredits

### 1. Progressive lending

- First loan **small**, repayable over one year in weekly installments.
- **Increases the loan size** year after year, as the borrower demonstrates her reliability and trustworthiness.
- Advantages:
  - ✓ enables micro-lenders to “**test**” borrowers with small loans at the start in order to screen out the worst prospects before taking additional risks by expanding loan scale.
  - ✓ increases the **opportunity cost** of non-repayment
- Disadvantages:
  - ✓ when there is a **multiplicity of micro-lenders, threats to not refinance borrowers lose credibility** (because borrowers who default on a loan can always turn to another micro-lender).
  - ✓ **as the loan size increases, defaults become increasingly attractive**, especially if the relationship between the micro-lender and the borrower has a clear final date



# What is the present & future of finance for the poor?

## 2. Weak Collaterals

- ☐ For a collateral to be effective, it has to act as a **deterrent** so that the borrow will behave prudent.
- ☐ Typically, the conditions for the collateral that banks impose are **stricter**: They require that the value of the **collateral can cover the costs of the defaulted loan** through liquidation.
- ☐ Weak collateral is enough deterrent: live-stock, land, working tools. Selling these will most likely not allow the bank to cover the costs, but may deter the borrow to behave imprudently (cause he cares about it!)
- ☐ Disadvantage: these “weak” collaterals don’t target the ultra poor

# Bottom line

- Asymmetric information + Lack of collateral + huge cost of screening and monitoring → Huge interest rates for the poor
- Government subsidized-interest rate credits failed (at least in India)
- Private banks don't want to take the risk
- Microcredits (group lending, no collateral) are a (partial) solution but far from perfect.
- Need for a compromise between rules rigidity and entrepreneurial spirit.
- In next tutorial, we will study the impact of micro-credits in the life of the poor in detail

# Keywords of the day

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*The story is not so simple:*

*The conditions for the bonsai to access the soil need to be relaxed*

*Otherwise, only some few (marginal) bonsais will grow a bit more*

*No new bonsai will take advantage of the soil*