# Lecture X: Credit and Insurance

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# 1. Motivation

- Credit is needed whenever there is a time delay between an upfront investment and a pay-off that will be materialized later
- Credit is also needed when incomes are discontinuous
- Market failures prevent poor people to have access to credit markets:
  - Brilliant ideas by poor people will not qualify for a a loan due to lack of collateral
  - key factor to explain persistence of poverty
- Institutional innovations (Microfinance institutions) have been developed to address this failure

# 2. Microfinance Institutions

- MFI consists of a broad range of institutions that seek ways around credit market failures
- Pionered by Grameen Bank in Bangladesh under the leadership of Muhammad Yunus
- Similar institutions were developed in other parts of the world
- Goal: minimize the risk of lending in the absence of collateral
- Other services include:
  - Savings
  - Insurance
  - Transfer of funds

# Selected MFI

| | Grameen Bank Bangladesh | Banco Sol Bolivia | Compartamos Mexico |
|---|---|---|---|
| Year established | 1983 | 1992 | 1990 |
| Membership | 6,950,000 | 104,000 | 617,000 |
| Average loan balance (US$) | 69 | 1571 | 440 |
| Percent female | 97 | 46 | 98 |
| Legal status | Non-profit | Commercial bank | Commercial bank |
| Services offered | Loans | Savings and loans | Savings and loans |
| Group lending contracts? | Yes | Yes | Yes |
| Collateral required? | No | No | No |
| Portfolio at risk > 30 days (%) | 1.9 | 2.9 | 1.1 |
| Return on equity (%) | 2.0 | 22.8 | 57.4 |

# 3. The Lender problem

- Financial transactions are complex due to the delay between the 2 sides of the transaction:
  - Loan is given now and repaid later
  - Saving deposit now will be withdrawn later
  - Insurance premium will be paid now and will become effective when disaster strikes
- Problems:
  - **Adverse selection**: Hidden information about the characteristics of a person or product that gives room to opportunistic behavior
  - **Moral hazard**: Asymmetrical information allowing opportunism under the form of hidden actions
- Why are the poor excluded from formal financial institutions?

# The generic lender problem

| Events | Potential borrower applies | Loan made | Borrower invests: Failure/Success | Risk: unexpected shocks | Project outcome: Failure/Success | Time to repay the loan | Loan repayment: Willing/Unwilling | |
|---|---|---|---|---|---|---|---|---|
| **Four problems to be solved by lender for success** | **Selection:** Avoid AS of borrower | | **Monitoring:** Avoid MH in project implementation | | **Insurance:** Avoid MH in insurance claims | | **Enforcement:** Avoid MH in loan repayment | Time line |

# Commercial banks

- The solution for formal lenders is to require collateral
- Market failure due to wealth constraints:
  - **Efficiency cost**: Credit allocation is unrelated to the marginal productivity of capital
  - **Equity cost**: The poor with no collaterizable assets are excluded, creating sharp inequality across potential borrowers
- Lack of solution for the case of insurance excludes poor with collateral who cannot take this risk of loosing it

# Moneylenders

- Local money lenders are present in all context where people need to make expected or unexpected lum-sum payments without access to formal markets
- How do they solve the problems faced by a lender?
  - Better access to information
  - Access to local social capital
  - Use of collateral that commercial banks cannot take
- Problem: high cost of credit
- Why credit is so expensive?
  - Need of high liquidity to be able to make emergency loans
  - Small market with short-term and irregular needs
- Moneylender are not an option with covariate shocks

# Informal Microfinance Institutions: ROSCAS

- Can poor people without access to formal loans do better than using loans from moneylenders?
- One option is a ROSCA (Rotating Saving and Credit Association):
  - Spontaneous association without any formal bylaws
  - Promote savings and access to lump sums of cash
  - High level of trust among members
- Advantages:
  - Repeated game
  - Loss of interest
  - Minimal role for selection and enforcement problems as members self-select and know each other well
  - Disciplinary device
  - Empowerment tool for women

- Disadvantages:
  - Rigidity in the timing and amount of access to lump sum of money
  - Residual risk of moral hazard

# Microfinance with group lending

- Social capital instead of collateral: solidarity as a tool
- MFI were initially NGOs motivated for providing access to capital to the poor, but eventually converted in a for-profit business
- Group lending using the following strategy:
  - Self-selection into groups of 5 to 30 members
  - Individual loans with joint-liability
  - Loan amount are small and inferior to the amount each member would like to borrow
  - Frequent installments are required (on weekly or by-weekly basis)

- How does group lending help solve lender problems?
  - Self-selection by group solve the adverse selection problem: strong incentive to select members that perform well due to join-liability
  - Better information among members leads to better monitoring
  - Enforce payment based on social capital
  - Group can mutually insure against idiosyncratic risks
  - Dynamic incentives (larger loans) and collective sanctions (whole group loses access to future loans if one loan is not repaid)
- Disadvantages:
  - Credit is still expensive
  - Collective default is still possible

# Village banks and self-help groups

- Poor need access to financial services that goes beyond loans to include savings, insurance, and financial services
- Saving instruments for lump sum payments (purchase of durable goods), self-insurance (risk coping) and life cycle expenditures
- Challenge: guaranteeing security of deposits in an institutional context that is weekly regulated
- Village-banks:
  - 200-400 members and formal by-laws
  - Savings from members and also external loans/grants
  - Use of local information to provide safe loans to members

- Self-help groups:
    - 10-20 women
    - Small saving contribution until there is enough capital accumulated
    - Funds can be used for lending to members
    - Once a record of savings and repayments have been established, access to formal banks loans is possible

# MFI with individual loans

- MFI have developed technologies that allow them to make individual loans without collateral
- How do they obtain high repayment rates:
  - Dynamic incentives: small loans at the beginning of the relationship with clients
  - Require co-signers as collateral
  - Well-informed credit agents for selecting and monitoring clients

# 4. Evidence

- Some evaluations are available, but results are not conclusive
- Pitt and Khander (1998):
  - Grameen bank and other group-based microcredit programs
  - Outcomes: labor supply, schooling, HH expenditures and assets
  - Cross-sectional survey at village with and without branches
  - Village level fixed effect to control for placement bias
  - Discontinuity rule (less than 0.5 hectares to qualify for loan)
  - Effects: large impacts on HH consumption, increase in schooling and women's labor supply
- Coleman (1999):
  - CARE in Thailand
  - Roll-out of the program to construct the control group
  - In pre-selected villages, HH were asked whether they were interested in receiving credit
  - Efects: None

- Kaboski and Townsend (2012):
  - Pre and post panel of HH and quasi-experimental cross-village variation in credit per-household
  - Variation: 70,000 villages received 24,000 US irrespective of size, making credit availability exogenously heterogeneous across HH in different villages