Financial services for the poor

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1. New Institutional Economics and the microfinance revolution

NIE Theory (Coase, North, Stiglitz, Akerlof, Spence, Williamson): Design and implement institutional innovations to overcome market failures.

Sources of market failures:

- **Incomplete and asymmetrical information**
  - **Adverse selection** (AS): hidden information (lemons: cannot know quality of a product/partner)
  - **Moral Hazard** (MH): hidden actions (cannot know what other will do: cheat, shirk…)
- **Transaction costs** (TC): imperfect markets (Williamson)

→ Large potential welfare gains, efficiency gains, business opportunities from institutional innovations that can overcome AS, MH, TC

New Institutional Economics (NIE): Logic in 7 steps

1. Definition of institution. Structural and behavioral conditions

Imperfect information. Pursuit of self-interest. Incentive compatibility.

⇓

2. Behavioral problems

Adverse selection (AS) and moral hazard (MH). Transactions costs (TC).
Cooperation/coordination failures (multiple equilibria).

⇓

3. Outcomes

Market failures, inefficient transactions.
Examples: Credit, insurance, efficiency wage, price bands, inefficient contracts.

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4. Institutional innovations to

Reduce AS, MH, and transactions costs (TC).
Economize: Make markets work, make more efficient off-market transactions (contracts).
Reduce risks.
Increase cooperation/coordination.
Redistribute assets for more socially desirable outcomes

⇓

5. Choice of institution

Selection = Institutional Darwinism:

Choice of institution most effective for partners, but:

Second best, locally efficient.

Not necessarily equitable (principal-agent sharing of efficiency gains, mechanism design)

⇓

6. But institutional change may not occur due to:

Path dependency.

Compensation of losers by gainers not credible (time consistency and lack of commitment device).

Compensation of losers by gainers not possible (credit not available).

Uncertain distribution of gains/losses and no credible compensation.

Coordination failure, political deadlocks

Procrastination (hyperbolic discount rate).

7. Examples of institutional change

Property rights: from open access to common property resource to CPR cooperation or private.

Producers organizations to reduce TC (market failures), increase bargaining power, increase representation.

Lobbies: rents for members at a NSG < 0.

Extended family, mutual insurance network: compensate for insurance market failure.

Business firms: reduce TC among participants

Microfinance institutions with group lending/social collateral: compensate for wealth bias on credit market.

Sharecropping contract: decrease risk (insurance market failure), but Marshallian inefficiency due to sharing (see back).

Institutions that link local/traditional (advantages of information, enforcement based on local social capital) with global/modern (advantage of market depth, risk diversification).

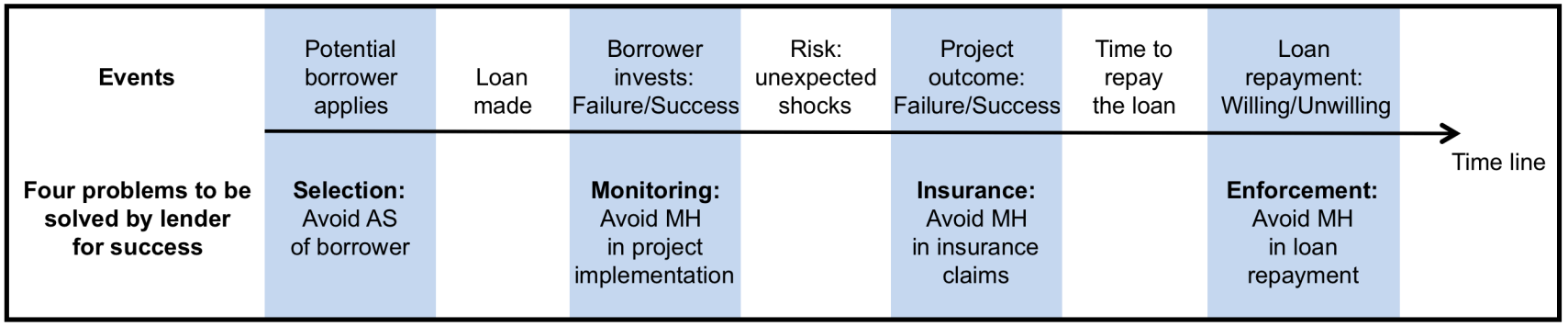
The Micro Finance revolution

Financial services: credit, savings, insurance, financial transactions

	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

Characteristics of selected Microfinance Institutions

2. The generic lender problem: AS and MH



Lender: difficulty to lend due to **imperfect information**:

- **AS in selection of borrowers**: cannot screen good from bad borrowers
- **MH in implementation**: cannot **monitor** behavior of borrower
- **MH in insurance**: cannot provide insurance against bad shocks (recognize legitimate claims)
- **MH in enforcement**: cannot force borrower to repay even if successful

→ **NIE/Micro Finance Revolution(MFR)**: **Design alternative institutional innovations** to overcome these 4 problems, especially for the poor

3. Financial services for the poor

(1) Formal lender (commercial bank)

a. Solves AS/MH problems by requesting **collateral**: pledge of collateralizable assets
b. Hence, credit market is "**wealth constrained**" = market failure with high efficiency, equity (poor excluded), and welfare costs
c. **MFR** = seek institutional innovations to make the financial market work for the poor (group lending) or provide an alternative to the market (ROSCAS)

(2) Local moneylenders, "usurers"

a. Use local information to successfully overcome AS, MH
b. But: high cost of credit (400-500%/year, 1%/day), cannot insure for covariate shocks

→ Much to learn from them, but at lower cost

(3) Interlinked transactions

a. Link credit transaction to another transaction that serves as "collateral" to the loan:
   i. **Merchant** lends to farmer with offer to purchase crop
   ii. **Landlord** lends to farmer with patron-client relationship (offer employment, protection benefits)

→ Effective but confined to specific transactions. Face-to-face relation creates monopoly power and high cost/low wage (Bardhan). No covariate shocks insurance

(4) ROSCAS (Rotating Savings and Credit Association)

a. Rules: all members contribute at each meeting, one member takes the pot
b. Attribution: turn, random draw, bidding
c. Advantages:
    i. Earlier access to liquidity than savings for all except last
    ii. Disciplinary device in saving: defeats procrastination, temptations to spend
    iii. Social function
d. Disadvantages:
    i. Rigid access to liquidity
    ii. Risk of default by early winners
    iii. No long-run savings

(5) MFI with group lending

Design features

1. **Joint liability**, serving as social collateral
2. **Collective sanctions** in case of default
3. **Self-selection** by members (AS)
4. **Optimum** group size and heterogeneity: for insurance (large, hetero) vs. for AS and MH (small, homogenous) → trade-off = interior solution
5. **Dynamic incentives** (monopoly)
6. **Frequent installments** (disciplinary device on own behavior)
7. **Graduation options**: information on performance through credit bureau

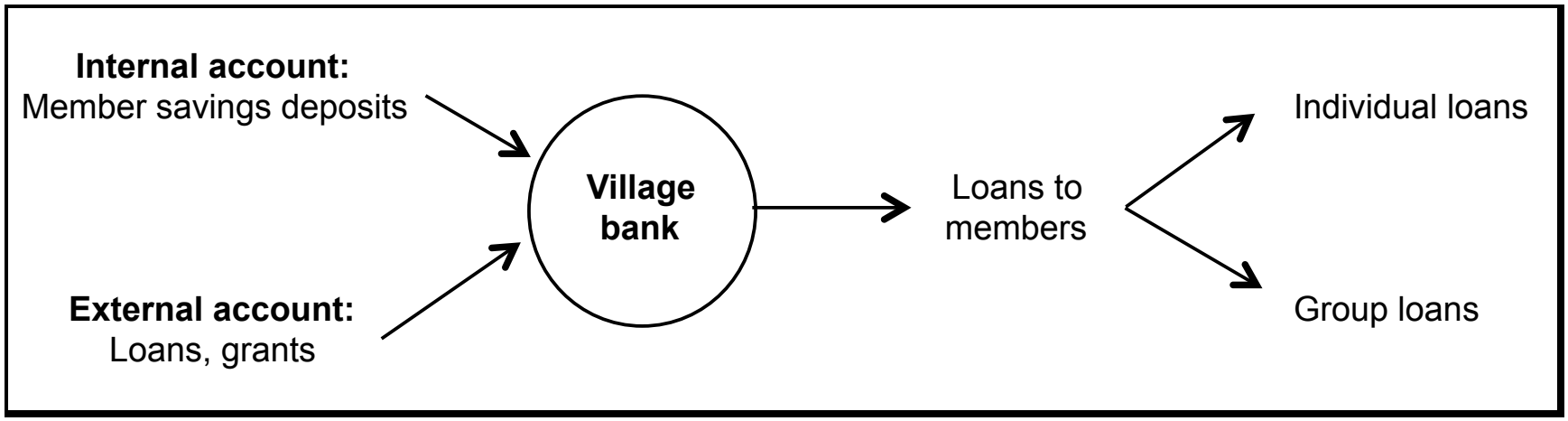
Behavioral responses

1. **Assortative matching** in selection (AS)
2. **Peer monitoring** (MH monitoring)
3. **Mutual insurance** (MH insurance for non-covariate shocks)
4. **Social capital** (reputation, face-saving, ostracization) and inter-linkages among members (MH enforcement)

Advantages: Replace financial collateral (assets) by social collateral

Risks: no insurance for covariate shocks; group default if too many members cannot repay; mission drift; not sustainable with rising heterogeneity.

(6) Village Banks



Advantages:

Can mobilize savings safely and profitably (e.g., remittances)

Can give loans to members controlling for AS and MH, and some insurance

Disadvantages

Risk of loss of savings if poorly regulated

AS and MH increase with size of membership

Highly conservative management: more savers than borrowers

(7) Individual loans by MFI

Use local credit agents

Use dynamic incentives

Use forms of collateral that commercial banks could not use (guarantee by other)

Advantages: Flexibility compared to group lending, use e-lending

Disadvantages: Costly, over-borrowing (need credit bureau), use after experience with group lending, still no collateral

(8) Credit bureaus

Information pooling about clients by lenders (MFI, banks)

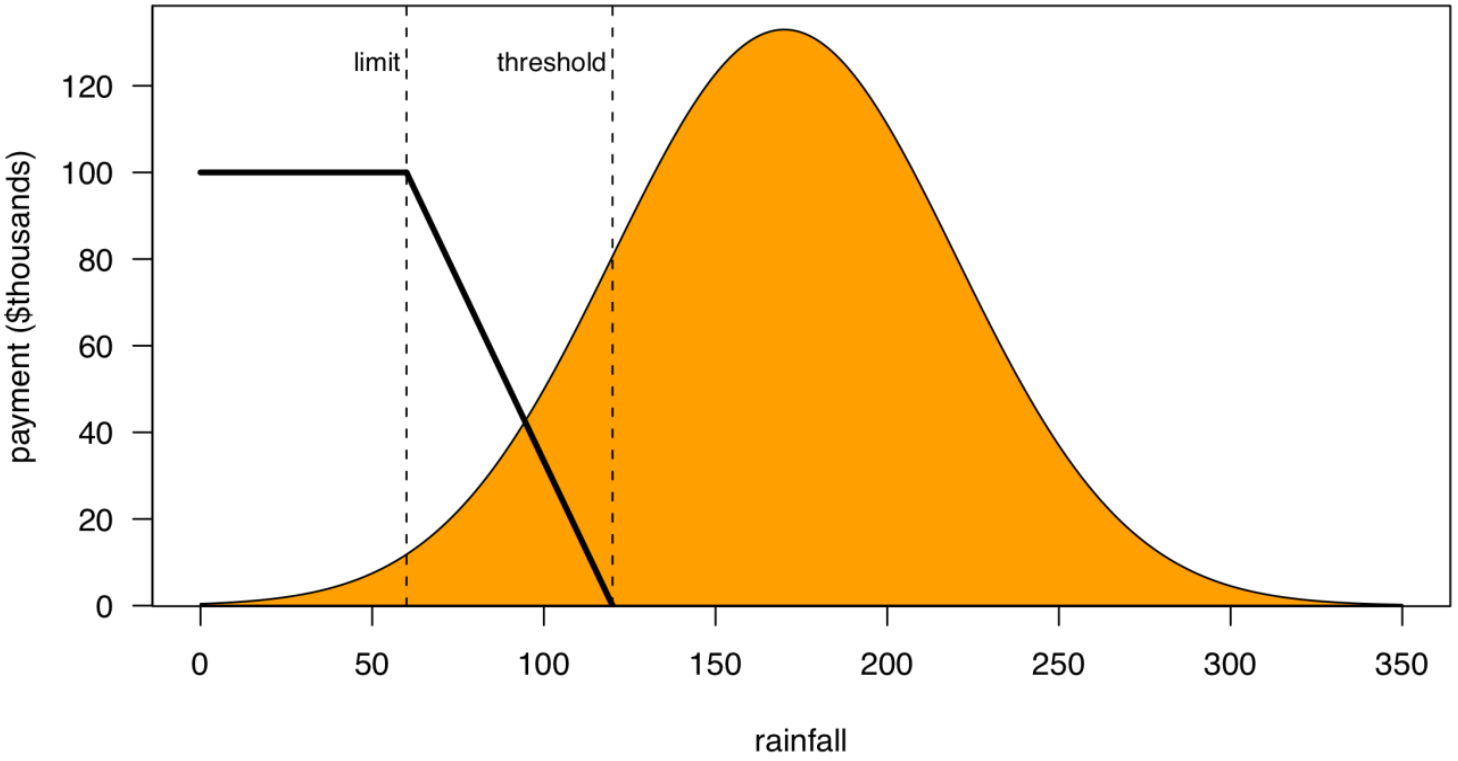
Advantages

- Make reputation public and portable
- Makes over-indebtedness more difficult
- Helps MFI select better clients (AS) and induces repayment by clients (MH)

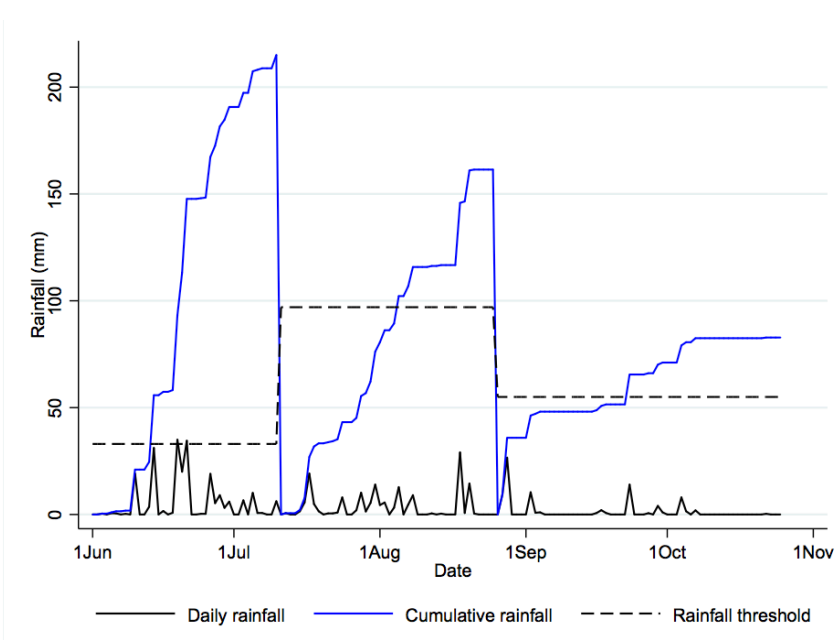
Disadvantages

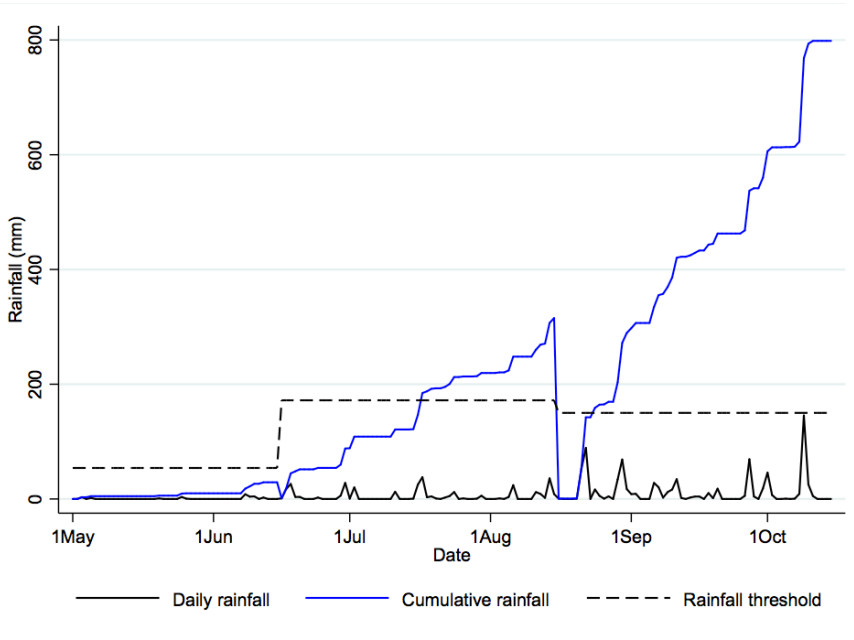
- MFI prefer to keep for themselves their better clients
- Reduces cross-client subsidization
- Favors better clients, more difficult for women
- Inaccuracies and no capacity to seek recourse for poor

(9) Index-based weather insurance



Index-based drought insurance: Payments under different rainfall scenarios.





Index-based drought insurance for corn in Mexico

Advantages: No need to verify losses, no AS and MH, quick disbursement
Disadvantages: Low quality due to Basis Risk (imprecise payouts relative to damages), low willingness to insure, premium with climate change
Options: Insure group with intra-group distribution of payout based on observed damages, better data (satellite), longer time series to calculate insurance premium

(10) Internet-based microfinance lending

http://www.kiva.org/
https://www.myc4.com
http://www.prosper.com
http://www.unitus.com/
http://www.vittana.org/students
e-lending: use machine learning to develop scoring

(11) Savings: Role of behavioral nudges

Offer options to induce savings

- Safe savings options
- Remunerative savings options (interest rates)
- Convenient savings options: proximity, mobile banking
- Disciplinary devices and nudges
  - Reminders: Deposit collectors, SMS messages
  - Peer pressure: Savings clubs, ROSCAS
  - Help decide: Simplify choices, default options
  - Borrowing to save with frequent installments

Offer options to restrict dis-savings

- Time bound deposits
- Purposeful savings accounts (education, retirement)
- Piggybanks (locked savings)
- Save in large denomination bills

Helping the poor accumulate savings and avoid dis-saving

(12) Financial transactions

Debit cards and access to ATMs.

Use for social assistance programs (Progresa, Bolsa Escola)

Mobile phone-based transactions: M-PESA Kenya

4. Impact evaluations of MFI lending

1. **RDD**: Pitt and Khandker-Grameen Bank, Bangladesh
    a. **Less than 0.5ha** of land to qualify for loan
    b. Find **large effect** on consumption esp. women borrowers, schooling, women labor supply (ITT)
2. **Rollout**: Coleman-CARE village branches, Thailand
    a. Compares beneficiaries of group lending in treated villages to pre-selected beneficiaries for future expansion of program who want to borrow (form group)
    b. Finds **no impact** (ITT)
3. **Natural experiment**: Kaboski and Townsend-Million Baht Village Fund Thailand
    a. Each village received a fixed million baht for lending, so **per capita loan availability is random**.
    b. Data over 6 years show **increase** in borrowing and consumption, in business income, and in local wage benefiting non-borrowers (IV method → LATE)

4. **RCT**: Banerjee-Duflo, Hyderabad slums (ATT)
    a. 52 slums get MFI branch, 52 serve as control
    b. ITT effect. Find increase in borrowing but no welfare effects 18 months later. Positive effect on startups and business inventories of existing firms
5. **RCT**: Banerjee, Karlan, and Zinman-six RCT evaluations (ATT)
    a. Find modest take-up rates by entrepreneurs but neither transformative effects nor debt traps.

5.Conclusion on micro-finance and development

- MFR a set of **institutional innovations** in credit, savings, insurance, and transfers
- Several **spectacular** large scale successes: Grameen, BRAC
- To use loans productively, poor need **good projects**: invest in crowded fields in generally poor investment climates
- Help the **most entrepreneurial** among the poor, not the "poorest of the poor"
- Create opportunities for **women**: 80% Grameen clients
- High rate of **failure** of new businesses, even among non-poor
- Hence, helps selectively but **no panacea.** Good **jobs** may be a more desirable option for most poor**.**