

Recent Developments in the Economics of Microfinance

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Introduction - Microfinance

- Supply of loans, savings, and other basic financial services to the poor.
- Over the last decade, the microfinance sector has shown to be very dynamic not only in its growth, but also in the ways in which lending methodologies have changed and evolved.
- The global growth of the sector from an estimated \$25 billion in 2005 to more than \$60 billion in 2010 has outpaced overall economic growth
- Serves more than 120 million people belonging to the poorer sections of society worldwide, of which most whom are women.

Introduction

- Muhammad Yunus of Bangladesh is viewed as the leader of the microfinance movement for singlehandedly creating the most famous and successful microfinance institution (MFI) of the modern era, the Grameen Bank of Bangladesh.
- In 2006, Dr. Yunus and the Grameen Bank jointly won the Nobel Peace Prize for their contribution to reducing world poverty.

Background

- Because of transactions costs (screening, monitoring and enforcement) credit markets are imperfect, and these costs are more severe in developing countries.
- Barriers to entry to external lenders, government or commercial or non-profit
- Local lenders have an advantage in terms of information and transactions costs, but enjoy market power
- Standard solution (in the absence of non-monetary punishments) is to use collateral.

Background

Two problems

- A large fraction of the population in developing countries is poor & do not own any assets - poverty trap
- Even those who own assets, do not necessarily have formal titles, and also foreclosing on collateral is costly because of inefficient judicial system

Background

Key idea of MFIs : convert “social capital” that exists in social networks in close-knit societies into “invisible” collateral

- Members of a community know more about one another than an outside institution such as a bank.
- While a bank cannot apply financial or non-financial sanctions against poor people who default on a loan, their neighbors may be able to impose powerful non-financial sanctions at low cost.
- An institution that gives poor people the proper incentives to use information on their neighbors & to apply non-financial sanctions to delinquent borrowers can out-perform a conventional bank.

History

- Antecedents of the MF movement
- Credit cooperative movement in Germany and other parts of Europe in the 19th century
- Formed the basis of the Indian cooperative movement right after independence
- Main difference with MF: involved savings from local communities, and collective ownership

Grameen Bank

- The Grameen Bank of Bangladesh Lends to about two million people, most of whom are rural, landless women, operates in 36,000 villages, or about half of all villages in the country.
- Stands out compared to conventional lending approaches in terms of (a) Reaching Target Groups and (b) Loan Repayment
- A role model for other micro-credit programs.

Microfinance

Grameen Bank

- Small loans for self-employment projects (e.g., poultry, paddy husking, handloom weaving, grocery or tea shops, dairy farming)
- No collateral is charged, interest rates though high are less than those charged by moneylenders
- Borrowers organize themselves into self-selected groups of five people from the same village
- Originally, borrowers were explicitly jointly liable for each other's loans
- Even though Grameen claims not to use explicit joint liability anymore, it is designed to "lean on solidarity groups: small informal groups consisting of co-opted members coming from the same background and trusting each other."

Background

- Mechanisms used by MFIs to overcome borrowing constraints faced by the poor
- Joint Liability - reviewed in Ghatak-Guinnane (1999)
 - ▶ Varying degree in which group members are jointly liable
 - ▶ Whole group will be denied future credit if any member defaults
 - ▶ Induces mutual insurance
 - ▶ Taps social capital to screen, monitor, and use peer pressure, resources not available to external lenders
 - ▶ This relaxes incentive constraints, and allows borrowers to get loans who otherwise wouldn't
- Other mechanisms: frequent repayment, sequential lending etc

Self-Help Groups (SHGs)

- Indian self-help groups
- Not listed by MIX market data as MFIs, but has some elements in common
- Larger group of 15-30 individuals who are jointly responsible for managing the loan provided by the MFI as well as making and collecting loans to and from each other

Today's Talk - Recent Developments

Three most salient recent developments

- Debate about commercialization (Andhra Crisis)
- Questions about the role of joint liability
 - ▶ Has its use declined?
 - ▶ Evidence that removing it has no effect on repayment?
- Recent randomized control trial shows limited impact
- In this talk, focus on the first two, with some remarks on the third
- Keep the overview mostly non-technical, with some formal analysis at the end (time permitting!)

Topic 1: The Commercialization Debate

Commercialization has been a terrible wrong turn for microfinance, and it indicates a worrying “mission drift” in the motivation of those lending to the poor. Poverty should be eradicated, not seen as a money-making opportunity.

Muhammad Yunus in NYT, January 2011

For-profit lending on the backs of the poor?

- Yunus quote reflects concern about commercialization and abuse of market power in microfinance. Through shift from non-profit to for-profit, microcredit “[gave] rise to its own breed of loan sharks.”.
- From its mission-oriented, not-for-profit roots, microfinance now attracts large scale private investment through venture capital, large investment vehicles, IPOs (e.g. SKS India, Compartamos Mexico).
- Cull et al. (2009): in their sample from 2002/04 MIX Market data, 4.1m borrowers served by for-profit microfinance banks, 8.9m by non-profit NGOs.

Market power

- In India, the five biggest MFIs account for more than 50% of the market. Globally, market concentration varies widely (Baquero et al., 2012).
- Anecdotal evidence suggests existence of market power ▶ Anecdotal evidence
- General climate of tougher regulation, and concern about regulatory excess.

Theory

- Majority of work on microfinance assumes zero-profit lending: borrowers get all the surplus, and so focuses on repayment rates.
- Naturally, the size and allocation of this surplus depends on lender motivation and information structure. Interest rates and degree of rationing matter for borrower welfare as well.
- In recent work with de Quidt and Fetzner I study this issue

Literature

- Non-contractible output enforcement problem: Bolton & Scharfstein (1990), Besley and Coate (1995), Rai & Sjöström (2004), Bhole and Ogden (2010)
- Groups without JL: Rai & Sjöström (2010), de Quidt, Fetzer and Ghatak (2012b).
- Social capital: Karlan (2007), Cassar and Wydick (2010), Feigenberg, Field and Pande (2011), Bloch, Genicot and Ray (2008), Greif (1993)
- Competition: McIntosh and Wydick (2005), McIntosh, de Janvry and Sadoulet (2005), Genicot & Ray (2006), Baquero et al., (2012)
- Reviews of the industry: Cull et al. (2009), Cull et al. (2007)

Market Power and Borrower Welfare in Microfinance

- We analyze the effects of commercialization on borrower welfare.
- We set up a simple model with IL and JL contracts and compare three market structures.
 - ▶ Benchmark model: benevolent non-profit/full information competitive market.
 - ▶ Monopolist for-profit.
 - ▶ Competition with information frictions.
- We empirically estimate the model parameters and perform some simulations.

Summary - Monopoly

- Joint liability induces high social capital borrowers to guarantee one another's interest payments, increasing total surplus (Besley and Coate, 1995).
- A monopolist can exploit this to charge higher interest rates. Two key constraints:
 - ▶ Borrowers must be given rents for dynamic repayment incentives to be effective.
 - ▶ Typically must be given *more* rents under joint liability to incentivize occasional large guarantee payments, so are *better off* under JL than under IL.

Summary - Monopoly

- Monopolists harm borrowers through higher interest rates, and *under-use* of joint liability.
- Monopolist for-profit firms less likely to use joint liability. Cull et al. (2009): around 2/3 of for-profits use IL, around 3/4 of non-profits use JL.
- Interest caps transfer rents back to borrowers, and increase the use of joint liability.

Summary - Competition

- In competition, lenders earn zero profits but repayment incentives are undermined when borrower histories are not shared.
- Credit rationing in equilibrium to preserve repayment incentives, a la Shapiro & Stiglitz (1984).
- Therefore welfare effects of competition are ambiguous.
- Joint liability is still under-used - stronger repayment incentives require more rationing, vulnerable to entry by IL competitors.
- Less scope for interest rate regulation (zero profits), but may increase the use of joint liability (at the cost of increased credit rationing).

Summary - Simulation

We simulate the model using empirical estimates of the parameters.

Results:

- We expected that inefficient contract choice and exploitation of social capital by monopolists would have large effects on borrower welfare.
- Turns out this effect is relatively modest - forcing the lender to switch from IL to JL increases borrower welfare by 12%-20%.
- In contrast, switching to a non-profit lender increases borrower welfare by 54%-73%, mostly through lower interest rates.
- Despite credit rationing, competition achieves similar borrower welfare to non-profit lending.
- Non-profit lenders predicted to always use JL. Competitive lenders or monopolist only use JL for social capital worth at least 15% of the loan size.
- Qualitative results are robust to alternative parameter values.

Topic 2: Joint Liability in Decline?

Despite some negative press, joint liability is still widely used.

- Early estimates based on the MIX market data suggests around 51% of borrowers are under JL contracts (Cull, Demirguc-Kunt, Morduch 2009), 2002/04 data, 315 institutions.
- Our recent estimates show that of the 715 lenders on MIXMarket in 2009 (for which we have adequate data), 54% of loans are JL. (South Asia: 65%, South America: 2%)
- Excludes 1.2m Self-Help Groups in India that receive JL credit.

Joint Liability in Decline?

- Also, the MIX Market notes that "loans based on consideration of the sole borrower, but disbursed through and recollected from group mechanisms, are still considered individual loans."
- A notable example is the Indian MFI Bandhan, which is one of the top MFIs in India, and is listed as having 3.6m outstanding loans in 2011, all classified as "individual".
- Bandhan does not use joint liability but disburses the majority of its loans through borrowing groups.
- Therefore, the decline of JL has been exaggerated - it is still widely used.

What is the Impact of Joint Liability?

- Gine & Karlan (2011) study in the Philippines
- Roughly speaking, JL seems not to matter too much for repayment.
 - ▶ But this is in an environment with almost no default.
 - ▶ To pick up **marginal** effect of JL or any other channel, must have some default in the data
 - ▶ It seems too many instruments are at place to minimize defaults (including direct monitoring by loan officers)
 - ▶ Hard to encourage a MFI to agree to such an experiment!

Other Studies

- Gine, Krishnaswamy & Ponce (2012): JL influences behavior as theory predicts: groups cluster into repay/default dependent on fraction of the group that is repaying.
- Attanasio et al. (2011) study: JL loans outperformed individual loans in consumption and entrepreneurship outcomes.
- Carpena, Cole, Shapiro & Zia (2010): study an MFI that switched from IL to JL had higher repayment.
- Banerjee (2012) surveys the evidence and concludes that we currently lack clear evidence of JL mattering significantly for default rates, but otherwise it does seem to work as theory predicts along several channels.

Group Lending Without Joint Liability

- These phenomena raise the question of the costs and benefits of using joint liability, and the choice between group loans with and without (explicit) joint liability.
- In another recent paper with de Quidt and Fetzer I study this issue
- Starting point is the standard model of limited enforcement or "ex-post moral hazard" framework introduced by Besley and Coate (1995)
- Joint liability increases repayment rates by inducing borrowers to repay on behalf of their unsuccessful partners.

Group Lending Without Joint Liability

- Trade off
 - ▶ If one borrower does well enough to pay for both, and the other borrower does badly, then both loans get repaid
 - ▶ But if one borrower does moderately to pay for herself, not both, and the other borrower does badly, then none of the loans are repaid
- Therefore, sometimes JL is good, sometimes IL is good
- Why does the MFI impose JL explicitly from outside?
- Why cannot borrower informally guarantee each other's loans?

Group Lending Without Joint Liability

- We analyze how by leveraging the borrowers social capital, individual liability lending (henceforth, IL) can mimic or even improve on the repayment performance and borrower welfare of explicit joint liability (EJ).
- When this occurs, we term it "implicit joint liability" (IJ).
- The advantage of EJ is, defaulting has two costs: not getting future loans, and rupturing relationship with group-members
- This relaxes the incentive constraint of borrowers, but can be too heavy a punishment if a borrower has moderate as opposed to high returns

Group Lending Without Joint Liability

- IJ does not have this problem: you help partner only when you can
- But that means, unless social ties are very strong the incentive constraints are tighter
- Our results are consistent with Gine-Karlan: IL and EJ lending can achieve the same repayment probability, provided social ties are sufficiently strong
- But this does not imply that those same borrowers would repay as frequently were they fully separated from one another.
- Indeed, Gine-Karlan additionally find that borrowers with weak social ties are more likely to default after switching to IL lending - this is consistent with these borrowers having moderate social ties, are unable to support implicit joint liability.

Group Lending Without Joint Liability

- Our result on IJ does not depend upon the use of groups, provided borrowers are able to side contract on loan repayments outside of repayment meetings.
- Question: Why do MFIs mandate group meetings?
- We analyze a purely operational argument for the use of group lending under IL, that it may simply reduce the lender's transactions costs.
- We show how the two results may be closely related: despite the costs, if group meetings foster social capital, then IJ might become feasible

Group Lending Without Joint Liability

- Feigenberg, Field, Pande (2012) find that varying meeting frequency for a subset of individually liable borrowing groups seemed to have persistent positive effects on repayment rates.
- They suggest that this is due to improved informal insurance among these groups due to higher social capital.
- We therefore provide a theoretical foundation to Feigenberg et al's argument

Group Lending Without Joint Liability

- We derive conditions under which more frequent meetings, modeled here as an increase in the amount of time borrowers and loan officers must spend in loan repayment meetings, increases borrowers' incentive to invest in social capital
- This in turn enables them to sustain IJ.
- We then derive conditions under which group lending is more likely than individual lending to create social capital, and show when this is indeed welfare increasing.

Topic 3: Evidence on Impact

- Recent randomized studies in India, Mongolia, Morocco, and the Philippines have found that access to microcredit does stimulate microbusiness start-ups – raising chickens, say, or sewing saris.
- See Banerjee et al. (2010), Attanasio et al. (2011), Crepon et al. (2011), and Karlan and Zinman (2009).
- But across the 12-18 months over which progress was tracked, the loans did not reduce poverty.
- Perhaps needed a longer time horizon for these effects to show up
- Also, these are average effects - there is evidence some individuals benefited a lot
- But that means MFIs are unlikely to be a universal ladder out of poverty for all - only may be some of the more dynamic individuals

Evidence on Impact

- Even if MF does not have a huge impact on income growth or poverty alleviation, does not mean it is not useful.
- People said to live on \$2 a day actually don't.
- They live on \$3 one day, \$1 the next, and \$2.50 the day after.
- There is risk, there is seasonality and need to match an unpredictable income to spending needs with different rhythms generates an intense demand among poor people for financial services that help them set aside money in good times, when they need it less, and draw it down in bad.

Evidence on Impact

- All financial services help meet this demand, however imperfectly: loans, savings accounts, insurance, money transfers.
- That is why the microcredit movement became the microfinance movement and today supports other services along with loans.
- Existing studies have not measured the positive impact on these dimensions
- Growth vs. Development view
 - ▶ Microfinance leads to income growth and poverty alleviation - limited evidence
 - ▶ Microfinance facilitates access to credit, savings, and insurance to the poor - strong evidence

A More Formal Presentation of Some of the Results

- Output is not observable to the lender. Borrowers need to be given rents + dynamic incentives to prevent strategic default.
- Unsuccessful borrowers involuntarily default (no savings).
- Output *is* observable to borrowers within a group: potential for mutual repayment guarantees backed by social sanctions.

Model

- Sticking with much of the literature we restrict contractual forms:
 - ▶ Borrowers are either individually or jointly liable.
 - ▶ No partial repayment.
 - ▶ Punishment for default is permanent termination of lending.
- The lender commits forever to a lending contract specifying a repayment r and JL/IL.
- JL groups are two borrowers, both terminated unless repayment is $2r$.

Social Capital

- Social capital is the discounted lifetime utility “ S ” that a friend or partner can credibly threaten to destroy as a “social sanction”.
- S is pair-specific (bilateral) but could have many friends (parallel). Each friendship is worth S to both (symmetric).
- Friends are valued additively, worth $\sum_{i=1}^n S_i$.
- Can model S as generated from a repeated “social game” with some interesting implications, explored in other work.

Social capital

A simple model of endogenous social capital. Each period, each pair of friends plays a “social game” with payoffs:

	C	D
C	s, s	as, bs
D	bs, as	$0, 0$

We assume

- $a + b < 2$ so (C, C) is Pareto dominant
- $a \leq 0$ so (D, D) is a stage-game Nash equilibrium.

Two types of game:

- $b \leq 1$: “coordination game”. (C, C) is a stage-game NE
- $b > 1$: “opportunism game”. (C, C) may be SPNE in infinitely repeated game.

Social capital

Definition

Social capital is the expected discounted lifetime payoff from the social game. If borrowers expect to play (C, C) in every period, $S = \frac{s}{1-\delta}$.

Social capital is sustainable if (C, C) can be supported as a SPNE of the infinitely repeated game under trigger strategies.

Definition

Social capital is *sustainable* if $b \leq \frac{1}{1-\delta}$

Social capital is always sustainable in the cooperation game but may not be in the opportunism game.

Since (D, D) is NE, switching to (D, D) forever is a credible threat and could be used to enforce cooperation in the repayment game also.

We assume the game is a coordination game. This implies we can treat S as exogenous to the lending arrangement.

Loan Repayment

- Borrowers play a simultaneous-move “repayment game” each period.
- Borrowers agree amongst themselves a repayment rule, specifying repayments in each state, enforced by social sanctions.
- Some examples:
 - ▶ Repay r whenever own output is R , nothing otherwise.
 - ▶ Repay $2r$ in state $(R, 0)$, r in (R, R) , 0 in $(0, R)$ or $(0, 0)$.
 - ▶ Default in all states.
- Any deviation from the agreed rule is punished by destruction of S .
- For simplicity, focus on symmetric, stationary, joint welfare-maximizing equilibria.

Constraints on the lender

- **Limited Liability Constraint (LLC):** The largest required repayment must be feasible given limited liability. For simplicity, we assume parameters such that this is slack ($\delta p \leq \frac{1}{2}$).
- The continuation value for a representative borrower (δV) must exceed the interest payment (r). Otherwise all borrowers, individual or group, default immediately.

It turns out this constraint is identical for any contract with strict dynamic incentives: **Incentive Constraint 1 (IC1):**

$$r \leq \delta p R \equiv r_{IC1}$$

- **Incentive Constraint 2 (IC2):** under JL, borrowers sometimes have to repay $2r$. This must be incentive compatible, given S .

A Remark on IJ

- Need (at least) three output levels for IJ and EJ tradeoff
- Let there be three possible output realizations, $R \in \{R_h, R_m, 0\}$, $R_h \geq R_m > 0$ which occur with positive probabilities p_h, p_m and $1 - p_h - p_m$ respectively.
- IF $R_m \geq 2r$ then a successful borrower can always afford to repay both loans so EJ dominates.
- Focus on case where $R_h \geq 2r > R_m \geq r$, thus it is not feasible for a borrower with output R_m to repay both loans.

A Remark on IJ

- This basic IC has to hold for all types of loans: $\delta V \geq r$.
- Under IJ for a borrower to willingly repay on behalf of her partner, it must be that the threat of social sanction for failing to do so outweighs the cost of the extra repayment, or $r \leq \delta S$.
- Under EJ this will be the case if the threat of termination of her contract, plus social sanction for failing to do so, exceeds the cost of repaying two loans, or $2r \leq \delta(V^{EJ} + S)$.
- EJ IC is tighter than IJ IC for small S

Timing

Period zero:

- 1 Lender observes S and makes a take-it-or-leave-it contract offer
- 2 Borrowers agree a repayment rule.

Then, each period

- 1 Loans disbursed and output realisations observed by the borrowers.
- 2 Repayment game.
- 3 Conditional on repayment, contracts renewed and/or social sanctions carried out.

Individual Liability

Suppose the borrower repays whenever successful:

$$\begin{aligned}V^{LL} &= p(R - r^{LL}) + \delta p V^{LL} \\ &= \frac{p(R - r^{LL})}{1 - \delta p}.\end{aligned}$$

- IC1: $r^{LL} \leq \delta V$
- Implies $r^{LL} \leq \delta p R \equiv r_{IC1}$

Individual Liability

- Zero profit condition: $r^{IL} = \frac{\rho}{p}$.
- IL is usable if it earns non-negative profits, i.e. $pr_{IC1} \geq \rho$.
- We assume this condition holds strictly:

Assumption

$$\delta p^2 R > \rho$$

Joint Liability

- Borrowers must repay $2r$ whenever at least one succeeds.
- Repayment probability is $1 - (1 - p)^2 = p(2 - p)$. Define:

$$q \equiv p(2 - p)$$

- Both loans are repaid and contracts renewed with probability q so:

$$V^{JL} = \frac{pR - qr^{JL}}{1 - \delta q}$$

Joint Liability

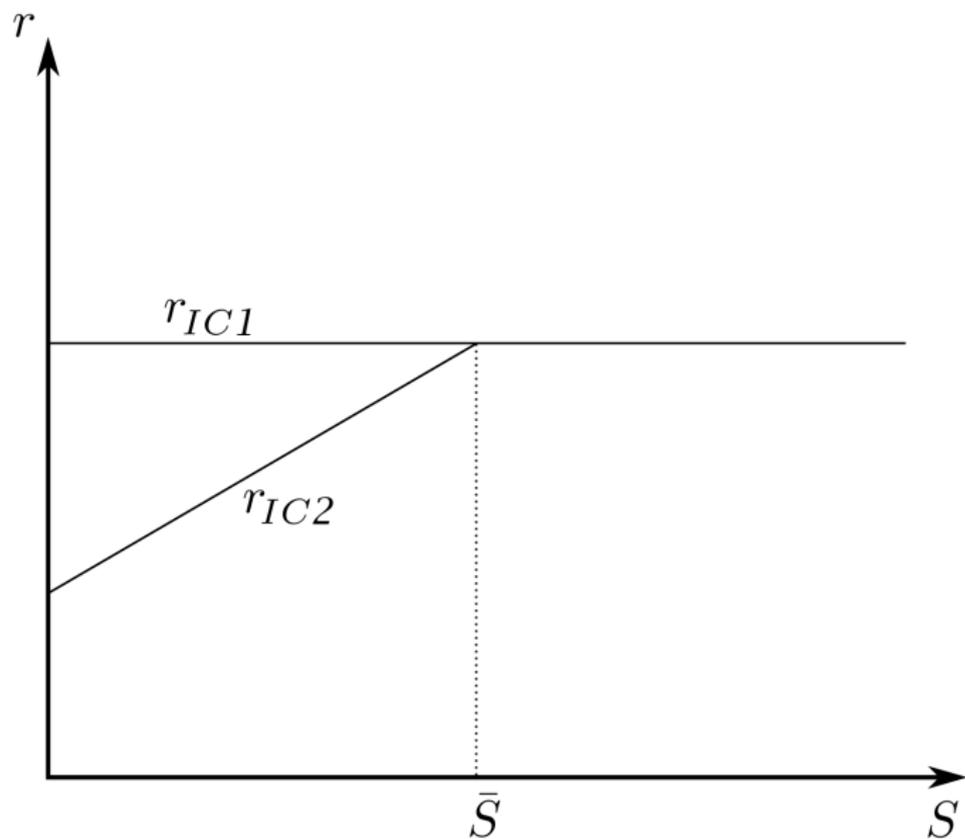
- IC1: $r \leq r_{IC1} = \delta pR$
- IC2: $2r^{JL} \leq \delta(V^{JL} + S)$.

Define the interest rate at which IC2 binds as:

$$r_{IC2}(S) \equiv \frac{\delta[pR + (1 - \delta q)S]}{2 - \delta q}$$

- $r_{IC2}(S) \leq r_{IC1}$ for $S \leq \bar{S} \equiv pR$.
- For $S > \bar{S}$, IC1 binds and IC2 no longer relevant.

Interest rates



Joint Liability

JL usable if it earns non-negative profits: requiring $qr^{JL} - \rho \geq 0$ or

$$q \min\{r_{IC1}, r_{IC2}^{JL}(S)\} \geq \rho$$

This is satisfied for all $S \geq \hat{S}$

$$\hat{S} \equiv \max\left\{0, \frac{(2 - \delta q)\rho - (2 - p)\delta p^2 R}{\delta q(1 - \delta q)}\right\}.$$

Nonprofit lender

- Nonprofit lender assumed to choose the contract that maximises borrower utility, subject to a zero profit condition.

$$\hat{r}^{IL} = \frac{\rho}{p} > \hat{r}^{JL} = \frac{\rho}{q}$$
$$\hat{V}^{IL} = \frac{pR - \rho}{1 - \delta p} < \hat{V}^{JL} = \frac{pR - \rho}{1 - \delta q}$$

Proposition

Borrowers are strictly better off under JL, so JL is always offered by the nonprofit when $S \geq \hat{S}$.

- Constant opportunity cost of capital: the lender serves the whole market.

Monopolist lender

A for-profit monopolist chooses whatever contract and interest rate maximises profits, subject to the LLC, IC1 and IC.

$$\tilde{r}^{JL} = r_{IC1}$$

$$\tilde{V}^{JL} = \frac{p(R - r_{IC1})}{1 - \delta p} = pR$$

$$\tilde{r}^{JL}(S) = \min\{r_{IC1}, r_{IC2}^{JL}(S)\}$$

$$\tilde{V}^{JL} = \frac{pR - q \min\{r_{IC1}, r_{IC2}^{JL}(S)\}}{1 - \delta q} \geq pR$$

Observation

The monopolist “exploits” the borrowers’ social capital: \tilde{r}^{JL} is increasing in S for all $S \leq \bar{S}$.

Monopolist lender

Proposition

Even with a monopolist lender who exploits their social capital, borrowers are weakly better off under JL than under simple IL, strictly so for $S < \bar{S}$.

- “Weakly” follows from the fact that the same IC1 applies to both.
- “Strictly” when IC2 is tight and the lender needs to give more rents to the borrowers to incentivise repayment.
- Under JL, the monopoly interest rate is weakly lower and the repayment/renewal probability strictly higher.
- For $S \geq \bar{S}$, IC1 binds and borrower welfare is equal to pR under both IL and JL.

Monopolist Contract Choice

- Repayment probability is higher but interest rate weakly lower under JL than under IL.
- For simplicity we assume the lender is myopic: maximizes per-period profit from each borrower.
- Profit with arbitrary repayment probability π :

$$\Pi = \pi r - \rho$$

- As with the non-profit, the lender serves the whole market.

Monopolist Contract Choice

JL dominates IL if:

$$q\tilde{r}^{JL} \geq p\tilde{r}^I$$

JL is offered if $S \geq \tilde{S}$:

$$\tilde{S} \equiv \max \left\{ 0, \frac{p^2 R(1 + \delta p - 2\delta)}{(2 - p)(1 - \delta q)} \right\}$$

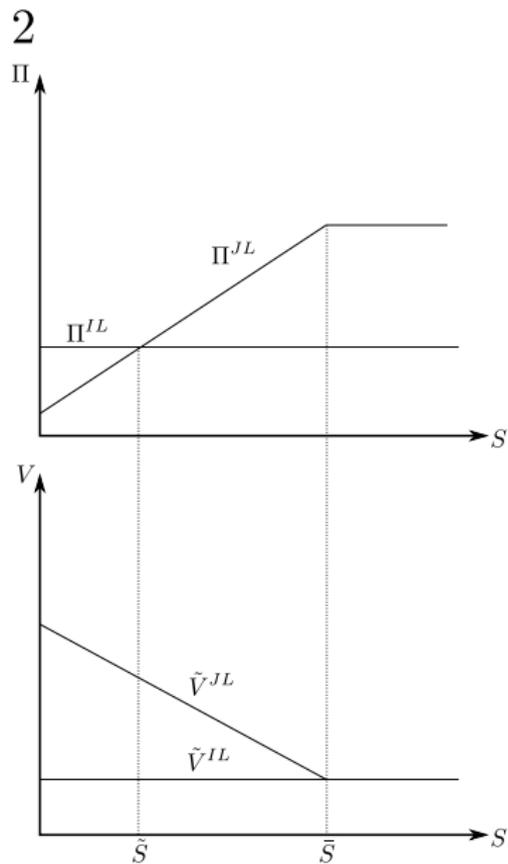
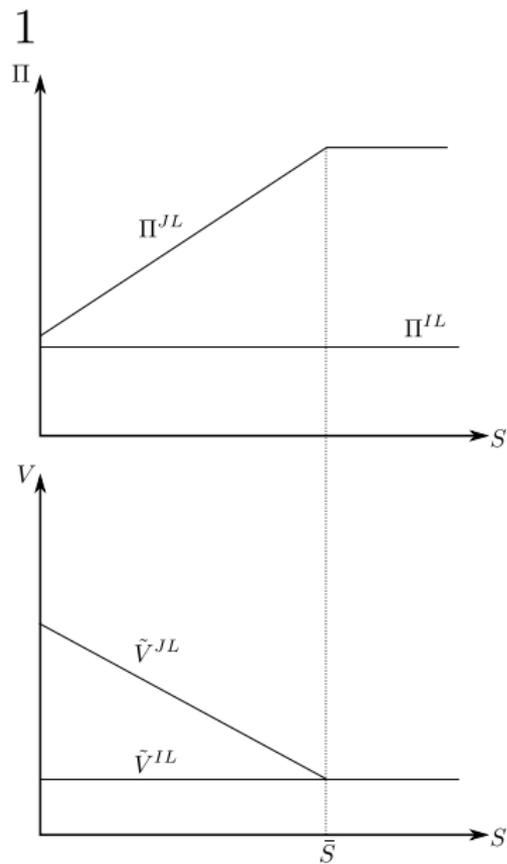
Observation

$\tilde{S} < \bar{S}$, so JL always offered for large S .

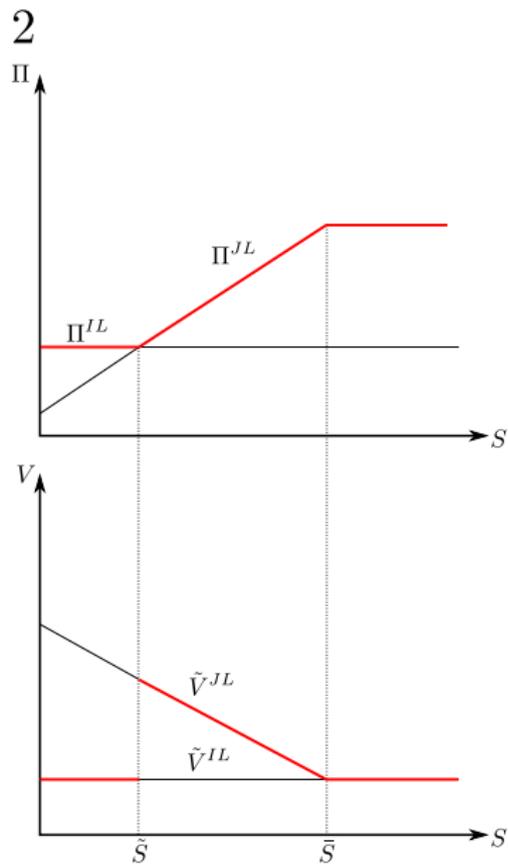
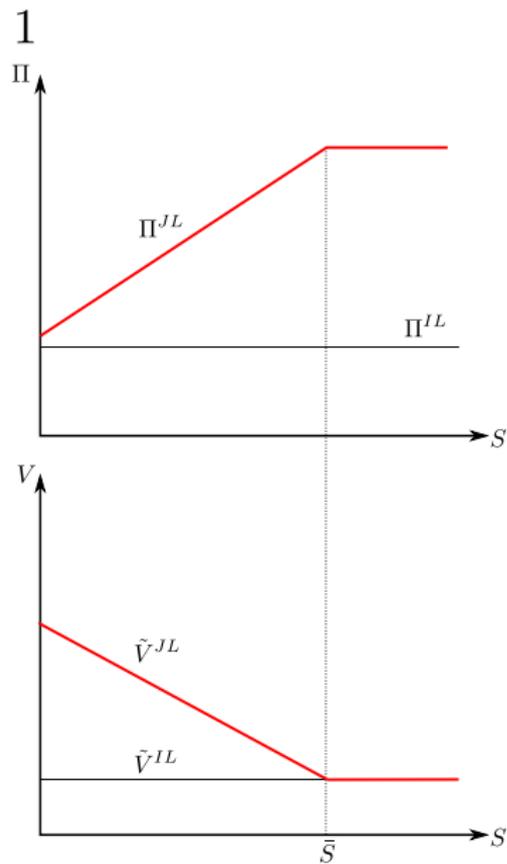
Observation

$\tilde{S} \geq \hat{S}$, strictly if $p > \delta q$. Thus the monopolist is less likely to use JL than the non-profit: source of inefficiency.

Lender profit and borrower utility under IL and JL



Equilibrium profit and borrower utility in red



Borrower Welfare

- Total borrower welfare is $V(S) + S$: value of access to credit, plus value of social capital.

Proposition

$\tilde{V}(S) + S$ is strictly increasing. Higher social capital within the group always makes borrowers better off, despite the higher interest rate.

- Although the lender “taxes” S , he cannot extract all of the surplus generated.
- Clearly, borrowers are better off with the non-profit, due to lower interest rates and greater use of JL.
- We explore the importance of these two channels in the simulations.

Policy implication: Interest rate caps

- First-order effect of interest rate caps (a key component of the Indian Microfinance Bill): lower interest rates under both IL and JL, obviously good for the borrowers.
- Effect on contract choice: the advantage of IL for the lender is the higher interest rates. The cap erodes this advantage and may induce an efficient switch to JL.
- Therefore, interest rate caps have potential as a tool for borrower protection.
- Note that in our model the lender always supplies the whole market, ruling out any supply-side effects.

Conclusion

- Not a magic bullet, but very useful in some dimensions
- However, like all organizations and sectors, needs regulation
- Needs to be complemented with employment generation and public services (health, education)
- Topics for future research
 - ▶ What causes multiple borrowing, a key ingredient in the Andhra Pradesh crisis?
 - ▶ If borrower protection is weak, and lender can use coercive power, is competition still optimal?
 - ▶ More theory and evidence is needed to open the blackbox of the "group": what does it do, and how

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1 Appendix

Market Power & Commercialization

“[Yunus] takes pride in the industry’s achievement in reaching 100 million poor clients, but does not acknowledge that commercialization is precisely how much of that goal was achieved.

Mr. Yunus rightly says that the lure of profits has, in some cases, attracted players with questionable motivations and with practices that must be condemned. But as with the problems of the American subprime mortgage market, the solution is not to abolish the mortgage business but to demand that the market be sound, transparent and well regulated. . . . Microfinance institutions aim to reach the two billion people who lack access to basic financial services. To do that, we need to harness the capital markets, not abandon them.”

Michael Schlein, Chief Executive of Accion in NYT, January 2011

▶ [Back to motivation1](#)

Market Power & Commercialization

“In most countries, the microcredit market is still immature, with low penetration of the potential clientele by MFIs and little competition so far.”

Rosenberg et al., 2009 [CGAP]

“In many countries in the region [Asia], the majority of microcredit is provided by a few leading institutions, and competition among them is mostly on non-price terms”

Fernando, 2006 [ADB]

▶ Back to motivation1