
Franchising Microfinance

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Outline of the Talk

- Motivation
- Model
- Main Results
- Testable Hypotheses
- Conclusion

Motivation

- Asymmetric information and access to finance for new ventures
- Poor rely on monopoly moneylenders, rather than banks
 - superior local information
 - lower transaction cost
 - better contract enforcement technology
- MFIs – limited success in terms of outreach and commercial viability

Main Results

- The availability of other local lenders may be ineffective in breaking the moneylender's monopoly.
- Franchising could affect the moneylender's monopoly
 - Borrower continues to borrow first from moneylender at the non-monopoly rate.
 - Moneylender charges a higher interest rate than others.

Literature Review

- **Alternative Contractual Arrangements**
 - Ghatak (1999)
 - Ghosh and Ray (2001)
- **Linking Informal and Formal Institutions**
 - Jain (1998)
 - Jain and Mansuri (2003)
- **Loan Competition**
 - Parlour and Rajan (2002)
 - McIntosh and Wydick (2005)
 - Varghese (2005)

Model: Players and Project

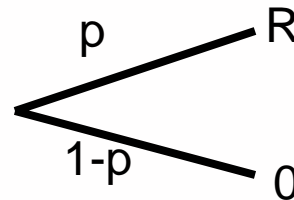
- Risk-neutral players

- Potential Local Capitalists (LC); Moneylender (ML)
- Borrower with a project

- Project

- Invest \$1

- Gross Payoffs:



- Positive NPV: $\frac{pR}{1+r^f} > 1$, where r^f = risk-free rate

Lenders

	Moneylender	Local Capitalists
Cost of Lending	0	$0 < c^1 < c^2 < \dots$
Enforcement Tech	Perfect	Absent
Funds	Yes	No

- Local Capitalists Own Assets (e.g., house, jewelry, animals)
 - They may borrow funds from banks against their assets and become moneylenders.
- Rely on self-enforcing contracts

Order of Moves

- 2 stages in every period where lenders are available
- Stage 1
 - Lenders decide whether to lend to a specific borrower, and what interest (r) to charge
 - Borrower decides on lender
- Stage 2
 - Payoffs are realized
 - Borrower decides whether to default or not
 - Lender imposes enforcement when possible
- Same game repeats itself every period, unless no more lenders available

Assumptions

- Limited liability
- Borrower continues to borrow from the same lender as long as possible
- No lender lends again to someone who defaults against it (“reputation”)

Participation Constraints

- Borrower: $1 + r < R$
- Moneylender: $1 + r^0(0) = \frac{1 + r^f}{p} \equiv 1 + r^d$
- Local Capitalist: $1 + r^0(c) = (1 + r^d)(1 + c)$

If Only One Default Opportunity:

- Moneylender,

$$1 + r_1^M = R \longrightarrow \text{Usurious Rate}$$

- Local capitalist

Borrower's payoff without voluntary default: $V_n = \frac{R - (1 + r_n)}{r^d} + \frac{(1 - p)}{(1 - p) + r^f} V_{n-1}$

Since $n=1$ and $V_0=0$, we get, $V_1 = \frac{R - (1 + r_1)}{r^d}$

Borrower does not have an incentive to default voluntarily if:

$$V_1 \geq 1 + r_1$$

Combining with LC's participation constraint, the condition is:

$$(1 + r^0(c)) \leq \frac{R}{1 + r^d}$$

If Multiple Default Opportunities Against LCs:

- Borrower would choose to not default voluntarily if:

$$V_2 - V_1 \geq 1 + r_2$$

- Combining with a LC's participation constraint, we get:

$$1 + r^0(c) \leq \frac{1}{1 + r^f} \frac{R}{1 + r^d}$$

Lending by LCs, even if feasible, will not occur if

$$\frac{1}{1 + r^f} \frac{R}{1 + r^d} < 1 + r^0(c) < \frac{R}{1 + r^d}$$

Franchising: A Solution?

- Franchise:

- Local Capitalists become franchisees
- No franchisee can offer to lend to a borrower who has defaulted against a fellow franchisee
- Franchisees are allowed to compete on interest rate charged

- Implication:

- There is effectively only one opportunity for borrowing from a local capitalist

If Only One Default Opportunity:

- Moneylender

$$1 + r_1^M = R \longrightarrow \text{Usurious Rate}$$

- Franchisee:

- Bertrand Competition

- Loan by lowest-cost LC (c^1)

- Interest rate charged: $1 + r_1^1 = 1 + r^0(c_2)$

- Lender's PV (Expected Profit) = $c^2 - c^1 > 0$

- Borrower's PV (Expected Profit) = $V_1 = \frac{R - (1 + r^0(c^2))}{r^d} > 0$

If Multiple Default Opportunities:

- Condition under which
 - Moneylender prefers to lend first rather than last
 - LC prefers to lend first rather than last

- Condition under which borrower prefers to borrow
 - first from the moneylender, and then the LC
 - Vice versa

Profitable to Lend First?

- Moneylender: $X(r_2^M, 0) \geq Y(r_1^M, 0) = \theta X(r_1, 0)$

$$\text{or, } 1+r_2^M \geq \theta R + (1-\theta)(1+r^0(0))$$

- Local Capitalist:

$$1+r_2^1 \geq \theta(1+r^0(c^2)) + (1-\theta)(1+r^0(c^1))$$

- Borrower prefers moneylender first if: $V_2^{M,1} \geq V_2^{1,M}$

$$\text{i.e., if } 1+r_2^M \leq (1+r_2^1) + \theta[R - (1+r^0(c^2))]$$

Three Main Results

- Borrower will borrow from moneylender first.

- Moneylender's interest rate is higher.

$$1 + r_2^M > 1 + r_2^1$$

- Borrower's welfare is highest when both moneylenders and local capitalists are present (and they compete).

$$V_2^{1,M} \geq V_1^1 > 0 = V_1^M$$

Empirical Implications

- Competition from MFIs implies,
 - If borrowers go to MFIs first,
 - MFIs make losses
 - Moneylender interest rates are high
 - If MFIs are not too successful in outreach,
 - MFIs make profits
 - Moneylenders interest rates will be lower than what they were in the absence of MFIs

Conclusion

- Introduction of competition alone may be ineffective in fighting moneylender's monopoly.
- Franchising can improve welfare.
- Extensions
 - Competition among franchisors and incentive to join franchise
 - Government policies, such as subsidies

Notations

- $X(r_2, c) = \text{PV}(\text{Expected Profit})$ of a lender if lends first

$$= \frac{(1 + r_2) - (1 + r^0(c))}{r^d}$$

- $Y(r_1, c) = \text{PV}(\text{Expected Profit})$ of a lender if she waits to lend last

$$= \frac{pY(r_1, c) + (1-p)X(r_1, c)}{1+r^f}$$

Solving, $Y(r_1, c) = \theta X(r_1, c)$ where, $\theta = \frac{1-p}{r^f + (1-p)}$

- $V_2^{1,M} = \text{Borrower's PV}(\text{Expected Profit})$ when borrowing first from LC and then from ML

Government Policy - Subsidies

- The effect on total social welfare of perpetual subsidies to franchisee local capitalists is
 - ZERO if the subsidy does not cover the lowest-cost local capitalist's cost of lending, and
 - NEGATIVE if the subsidy exceeds the lowest-cost local capitalist's cost of lending.