

# Lecture notes on microfinance

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# Today

1. Context
2. Why credit markets fail - revisited
3. Microfinance, view 1: key ideas
4. Microfinance, view 1: successes
5. Unbundling and testing mechanisms
6. Testing the key assumptions
7. Future directions

# Context: old vs new

- Problem: lack of collateral impedes credit access.
- Traditional solutions:
  - Secure property rights
  - Public sector banks.
  - Clamp down on high-interest loans (usury laws)
- Problem: lack of donor funds and failure of solutions.
  - Land reforms slow for political reasons; banks (both fairly and unfairly) viewed as subsidized, inefficient, ineffective.
- New solutions:
  - Microcredit
  - Microfinance
  - Social business
  - Impact investing

# Product innovations

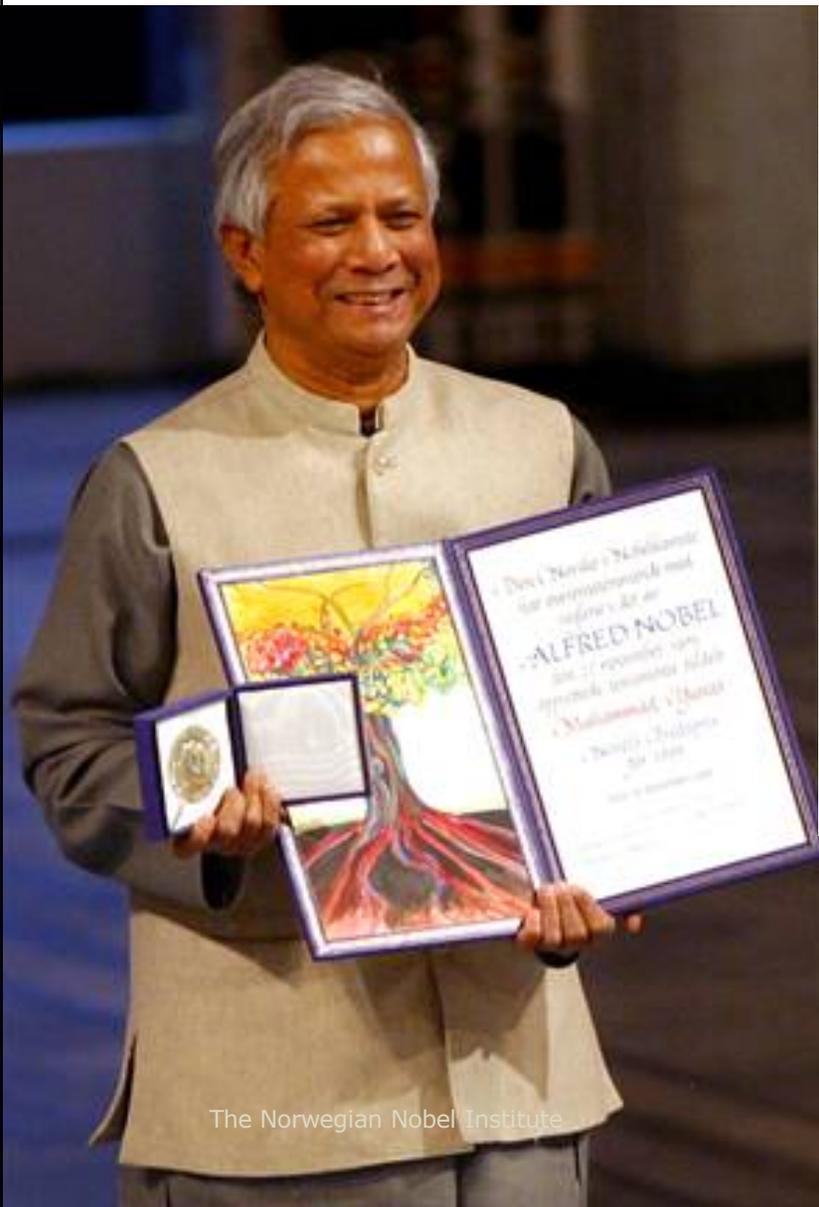
## Old wisdom

- Poor not reliable borrowers
- Poor can't save
- Cheap credit needed

## New wisdom

- High loan repayments are possible with the right mechanisms
- Households can save with the right products
- Customers can pay reasonable prices

# The rise of microfinance



The Norwegian Nobel Institute



Robin Saidman

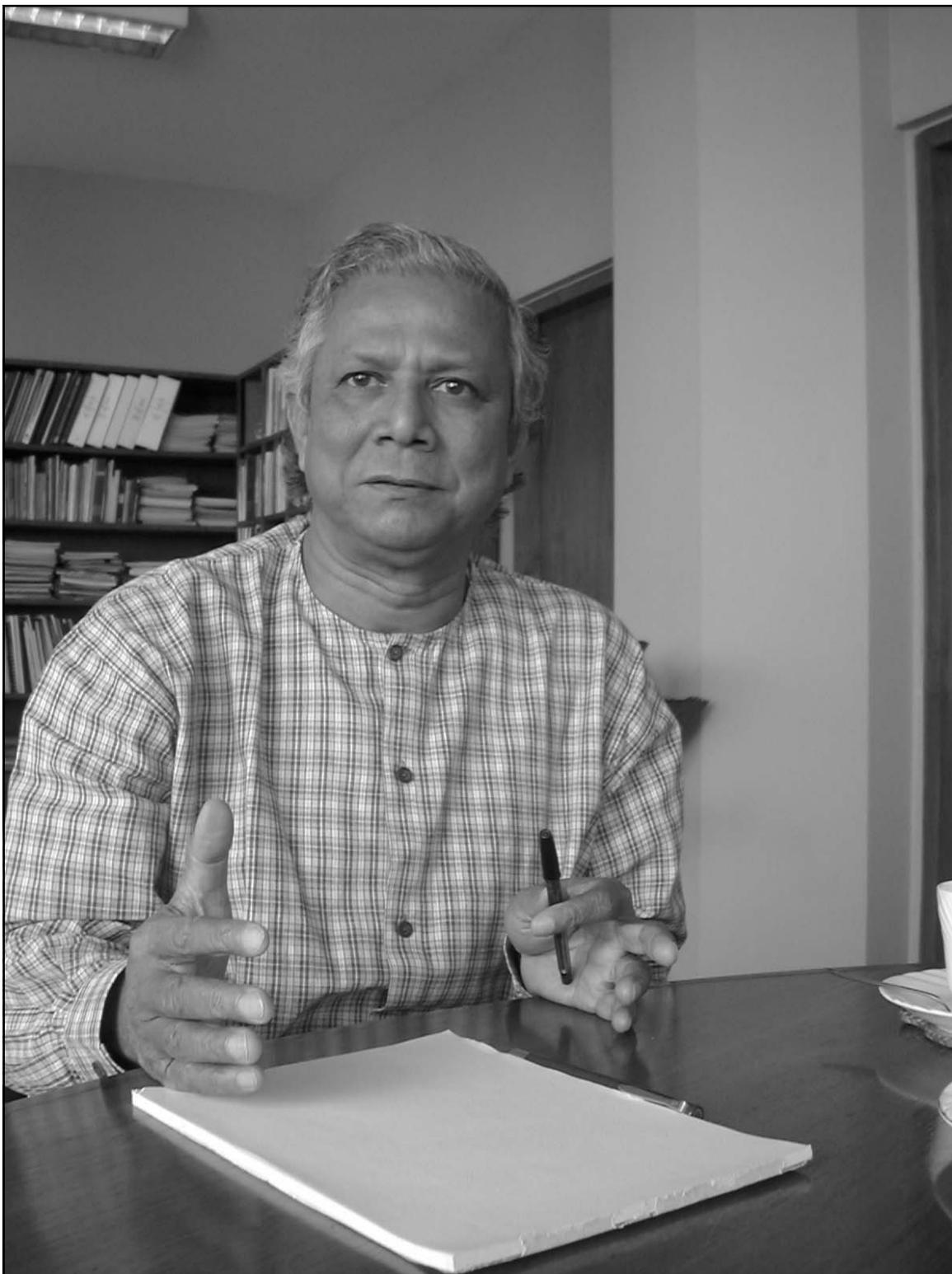


Mali. Photo by Robin Saidman / VitalEdge.Org

# from Harvard Business Review

“Thanks to the work of Grameen Bank and similar lending organizations worldwide, microborrowers have been able to create their own businesses—spurring economic growth in their communities—while generating a **multibillion-dollar finance industry.**”

- Bill Drayton and Valerie Budinich “A New Alliance for Global Change,” *Harvard Business Review*, September 2010, p. 61



2006 Nobel Peace Prize recognizes:

- Potential scale of financial access
- Catalyzing power of well-designed products

# But more recently a backlash

- In 2011, India introduced curbs on “strong-arm” collecting tactics by MFIs and discussing caps on interest rates.
- Allegations that Grameen Bank used aid money to fund its other operations.
- Back to the future?

# Why do credit markets fail?

## Common to all contexts

- Adverse selection
- Moral hazard

## Developing country context

- “Limited liability” due to lack of collateral
- Weak enforcement of contracts
  - Weak courts, laws, enforcement of decisions
  - Establishing/ proving identity hard.
- Limited property rights

# Microfinance story, version 1

- Innovation overcomes information problem by **harnessing local knowledge**.
- **Group lending** with joint liability and dynamic incentives aligns incentives appropriately.
- Eliminates need for informational rents
- **Product breakthrough** drives business model

# Microfinance story, version 1

- Group lending (with joint liability)\*
  - Harnesses local information to foil adverse selection, like ROSCAs
- Public repayments, bank comes to villages\*
- Repeat lending (with increasing loan size)
- High interest rates relative to formal-sector banks, low compared to money lenders, but high enough to cover costs and households willing and able to pay.
  - Focus on women\*
  - Regular (weekly, monthly, etc.) repayment schedule
  - Flexible collateral\*
  - Management incentives\*

\* Not everyone uses every innovation...



## Mali

Photograph by Robin Saidman, VitalEdge.org



**Limpopo, South Africa**

Photograph by Robin Saidman / VitalEdge.org



## Afghanistan

Photograph by Robin Saidman / VitalEdge.org

# Recall adverse selection and moral hazard

- Raising interest rates reduces average loan repayment rates due to adverse selection and moral hazard.
- Implication: May not be able to find profit-making interest rate
- Promise: new contracts can reverse information asymmetry, reducing default and allowing interest rates to rise without undermining portfolio quality.

# Money and information: Mis-match

- The problem is the **mis-match of money and information**.
  
- Bankers, on one hand, have ample access to money to lend to worthy entrepreneurs, but bankers often lack good information about the people who approach them to apply for loans.
  - Are the applicants trustworthy?
  - Are they apt to invest wisely?
  - Will they deliver on promises?

# The challenges of bankers

- The lack of information makes bankers risk averse.
- Careful bankers, at least those interested in being repaid on time, devote considerable resources to **screening** clients.
- To sharpen incentives, they demand that **collateral** be pledged—a deed to a house, perhaps, or a valuable piece of equipment.
- This means they tend to lend only to **wealthier** clients.

# The advantages of moneylenders

- Moneylenders, on the other hand, have good information on who is who and who did what in the neighborhood.
  - Moneylenders tend to live and work among the people to whom they lend.
  - They build up histories over time.
  - They are able to enforce contracts through social, and sometimes physical, means, even when contracts have not been written down and when a court would refuse to hear a case.
- The lack of collateral is not a problem; it may even provide a profitable business opportunity.
- And their clients, who often have nowhere else to turn, accept high charges willingly if not happily.

# Microfinance story, version 1

- The **solidarity group** approach began with asking business owners to join with other business owners to form a group that facilitates borrowing.
- The group members take loans **independently** and invest the funds independently, but they are jointly responsible for all repayments.
- **Peer pressure** substitutes for the role that collateral plays in wealthier communities.
- Incentives are provided by the desire to keep a **clean group record** in order to continue getting loans.
  - Harnesses local information of money-lenders with formal structure of an institution, achieves intermediation..

# Microfinance story, version 1: example

- In the Cojutepeque, El Salvador, model, each week a collector employed by the cooperative visited the leader of each borrowing group.
- The leader was responsible for collecting funds.
- If the collection fell short of the amount owed, **the collector divided the shortfall by the number of group members and subtracted the apportioned amount from each person's record**, reducing the payment credited to them for the week.
- The collector kept 1 percent of all funds collected, providing incentives for diligence.
- If serious collection problems arose, the cooperative commenced legal action, the threat of which was usually enough to solve the problem in short order.

# Microfinance story, version 1: example

- The groups had between 5 and 10 members, usually no more than eight
  - Groups that are too small were seen to be unstable and vulnerable to collusion against the lender.
  - Groups that were too big became difficult to manage.
  - Group members that were similar in wealth and desired loan sizes had the best track records.
- The contract provided a way to harness “assets” that low-income households often had in abundance—local knowledge, friendships, community ties, reputations—and to put those assets to work for the bank.

# Microfinance story, version 1: example

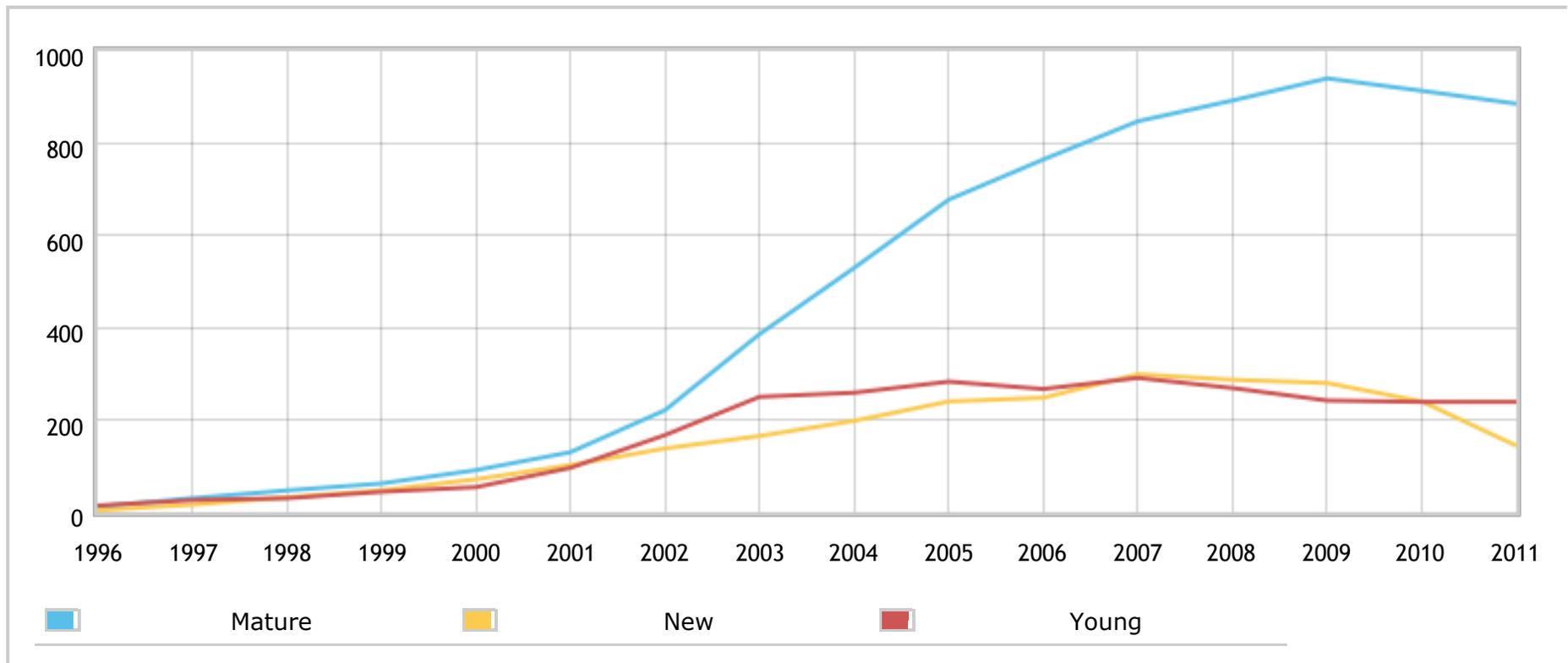
- The clients were mainly women, and they were taking advantage of relatively small loans:
  - 10% took initial loans as small as \$80;
  - 80% took initial loans no larger than \$200.
- Moreover, the customers were nearly always repaying their loans.
  - Over 96% of loan installments were paid on time
  - 99% of loans were repaid in full.

# Microfinance story, version 1: example

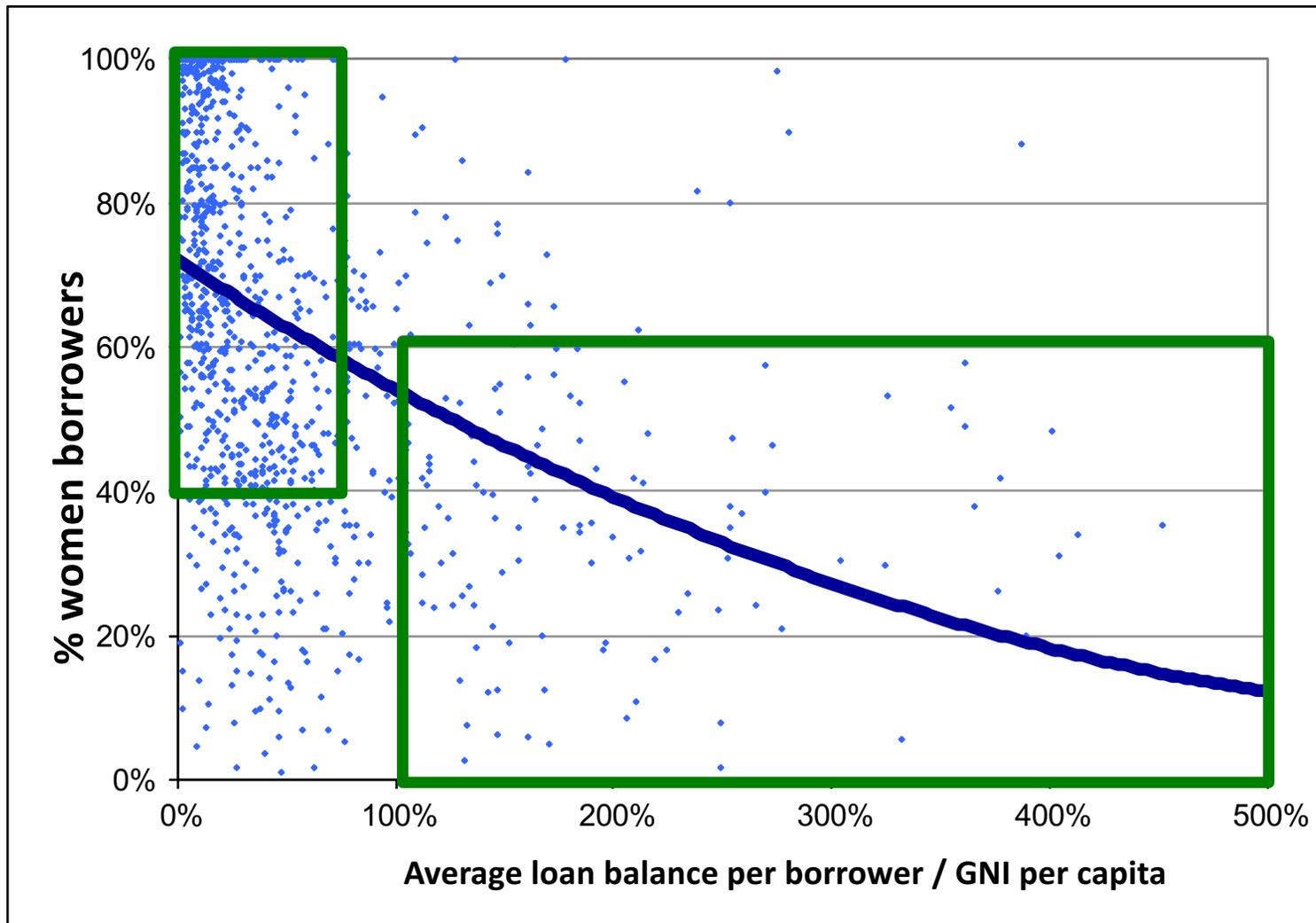
- Replications of El Salvador model in
  - Dominican Republic (after reluctance)
  - Colombia
  - Bolivia
    - Eventually became BancoSol, flagship of the Accion International network
- Replications of Grahmeen around the world.

# Microfinance story, version 1: successes 1

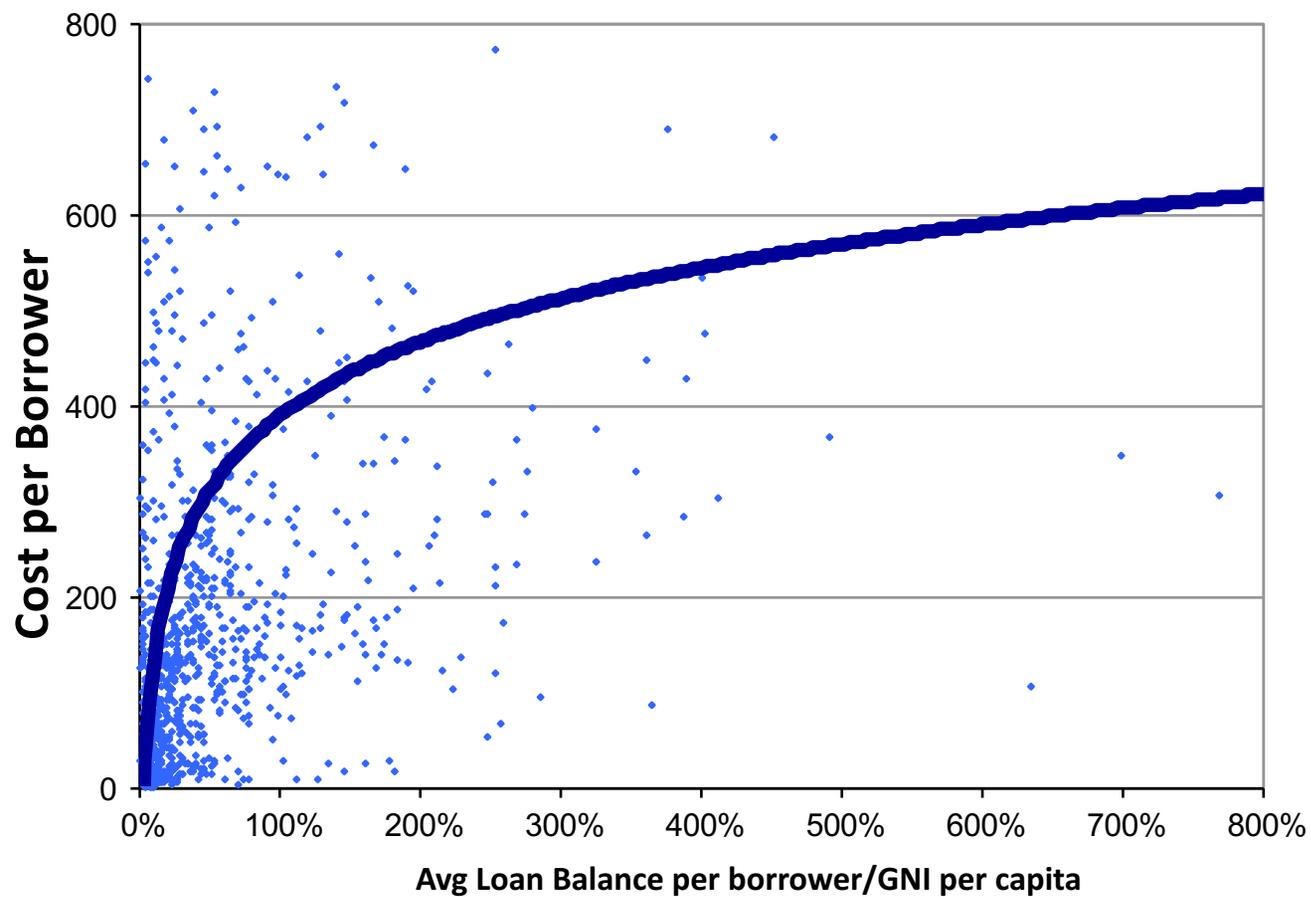
MFIs (count)



# Microfinance story, version 1: successes 2

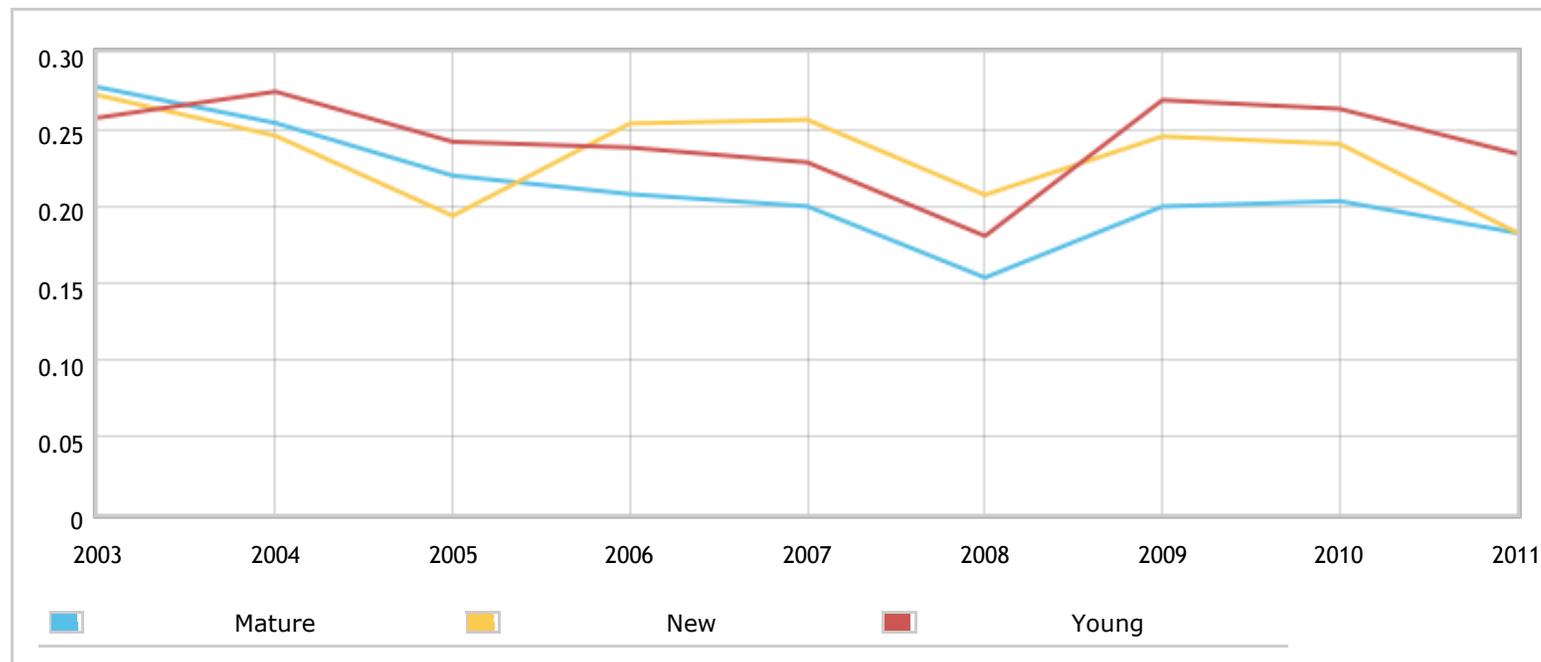


# Microfinance story, version 1: successes 3



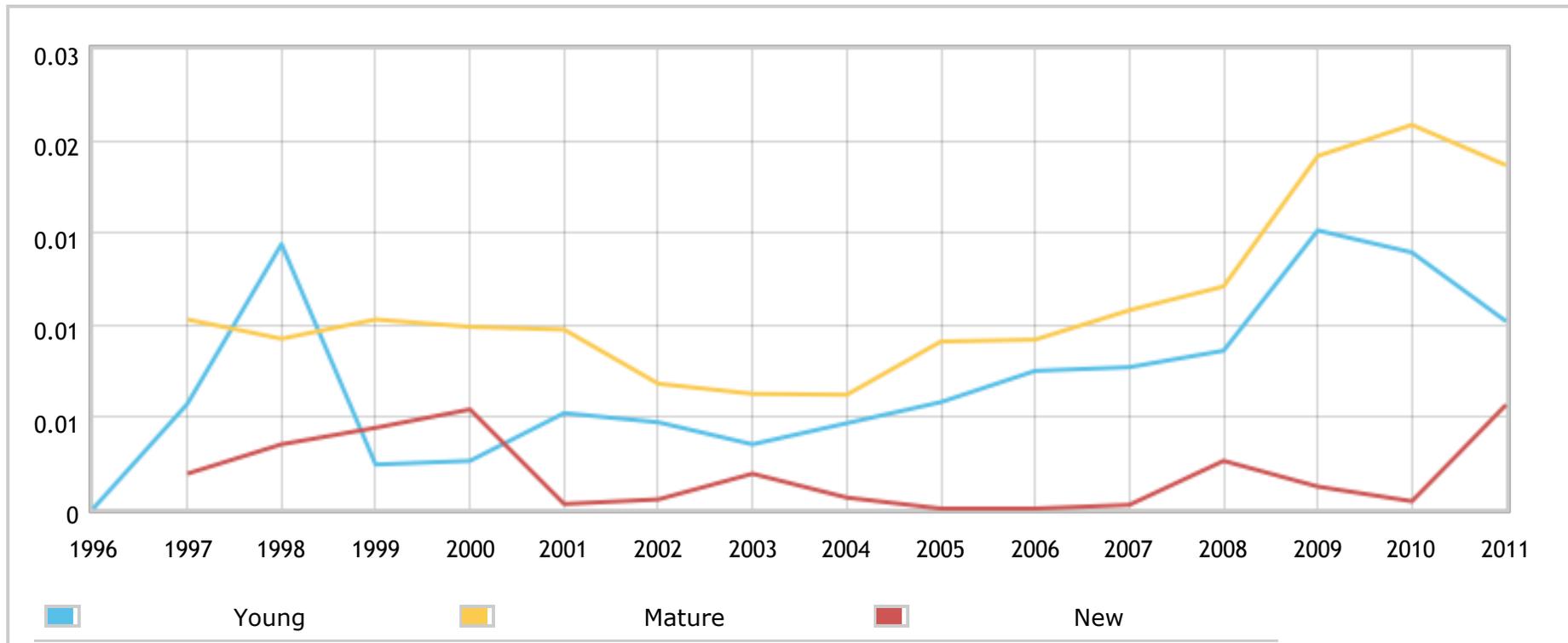
# Microfinance story, version 1: successes 4

Yield on gross portfolio (real) (median)



# Microfinance story, version 1: successes 5

Write-off ratio, year averages



# Unbundling contracts

- Microcredit worked!
- But why did it work?
- Need to unbundle it and test claims if it is really to succeed.

# Unbundling contracts 1: Public repayments, bank comes to village

1. Helps harness social stigma as penalty for defaulted loans (Rahman, 1998).
2. Transactions costs for bank reduced (but often greater for clients)
3. Helps staff directly elicit information about errant borrowers and create pressure as needed
4. Can facilitate education and training.
5. Enhances “comfort” of clients.
6. Enhances internal control for the bank and reduces opportunities for fraud.

# Public repayments, bank comes to village (some evidence)

**Kenya:** In a Grameen Bank replication, originally the lender had instructed borrowers to deposit their installments directly into a bank account, but the incidence of default soared. Repayment rates come under control only after bank officials started meeting in villages with borrowers each month, collecting installments face-to-face.

# Unbundling contracts 2: Repeat (“progressive”) lending

<b>Loan number</b>	<b>Borrower A</b>	<b>Borrower B</b>	<b>Borrower C</b>	<b>Full Sample Average</b>
1	2000	2000	3500	2124 (\$57)
2	2500	2500	4000	2897
3	3000	3000	3000	3656
4	3500	4000	4000	4182
5	4000	4000	5000	4736
6	4000	5000	4000	4983 (\$135)

Grameen Bank (World Bank-BIDS 1991/92 survey)

# Progressive lending and competition

- “Progressive” lending is most effective when microlenders have monopolies.
- Competition, as in Bangladesh and Bolivia, can undermine incentives in implicit contracts.
- Also relates to public repayment in that lender needs to be able to identify you and not lend again.
- Gine, Goldberg, Yang find in Malawi that using biometric identification leads to higher repayment rates among high-risk borrowers, no effect on low-risk borrowers. Reinforces importance of progressive lending and identity.

# Unbundling contracts 3: Women are often more reliable

- Bangladesh. Mahabub Hossain (1988): 81% of women had no repayment problems versus 74% of men.
- Khandker et al., (1995): 15.3 % of male borrowers were “struggling” in 1991 versus 1.4% of female (missing some payments before the final due date)
- Malawi. David Hulme (1991): on-time repayments for women: 92% versus 83 % for men.
- Malaysia. D. Gibbons and S. Kasim (1991) repayment comparison: 95% for women versus 72% for men.

# Unbundling contracts 4: Regular repayment schedules

Odd for a “business” loan. More common in consumer lending.

1. Gives bank early warning about trouble.
2. Helps to build relationship with bank.
3. Allows borrowers to use “other” household income to pay for loans.
4. Puts small bits of money to good use.

Reduces risk for bank, but requires fairly steady household income (more difficult if seasonal).

# Regular repayment schedules (some mixed evidence)

- Nepal:
  - For 9 village banks with “lump-sum” repayments: 19.8% were delinquent at end.
  - For those with weekly repayments: 11% were delinquent.
- Bangladesh. When BRAC experimented with moving from weekly repayments to twice-per-month repayments, delinquencies soon rose and the policy was abandoned.
- India: Field, Pande, et al: RCT of a 2-month grace period for loans compared to typical microcredit loan.
  - Frequent repayments increase social capital, a positive side effect of meetings.
  - But early repayment vs 2-month grace period: increases returns on project, but increases default.

# Unbundling contracts 5: Beyond group lending

An experiment in the Philippines (Giné and Karlan, 2008):

- Randomly assign groups of joint liability clients to either remain under joint liability or to have loans converted to individual liability.
- All else stays the same—interest rate, payments, and term.

# Unbundling contracts 5: Beyond group lending

## Three years later:

- No adverse affect on default rates
- Greater client retention among individual-liability borrowers
  - Switch appears profitable for the bank and appealing to clients
- Clients with weaker social networks are more likely to experience default problems after conversion to individual liability.

However, recent paper by Carpena, Cole, Shapiro, Zia. They find individual liability significantly worsens repayment in India.

# Unbundling contracts 6: Collateral

- A hallmark of “pro-poor” microfinance is not requiring collateral. But “up-market” lenders like Bank Rakyat Indonesia find it possible to require collateral for most loans.

Key is being flexible: concern is with “notional” value, not “salvage” value.

# Rethinking collateral

Indonesia Survey in 2000:

- 88% of non-customers had acceptable collateral.
- But median value of collateralizable assets of BRI borrowers is roughly 2.5 times the median value of assets of a random sample of non-customers drawn from the same areas.

BRI has introduced products that require no collateral for loans < Rp. 2 million (\$225 in 2003), offered at the discretion of the unit manager.

# Unbundling contracts 7: Management and staff incentives

- Unheralded microfinance innovations cut costs while enhancing staff productivity. E.g., ASA.
- Programs must balance giving staff incentives against keeping a sense of fairness. Incentives should be rule-bound and predictable.
- Poorly designed incentives to reach financial targets can create fraud that undermines transparency and can take attention away from social objectives.
  - E.g., complaints of strong-arm tactics.

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## Impoverished Indian families caught in deadly spiral of microfinance debt

Small loan schemes devastate the lives of millions of poor people and reveal the dark side of India's economic boom



**Jason Burke** in Palivelupa  
The Guardian, Monday 31 January 2011 15.19 EST

 [Jump to comments \(44\)](#)



Kommani Lalitha with her daughters make up just one of millions of Indian families struggling to keep up with their loan repayments. Photograph: Noah Seelam/AFP /Getty Images

# Management incentives (evidence)

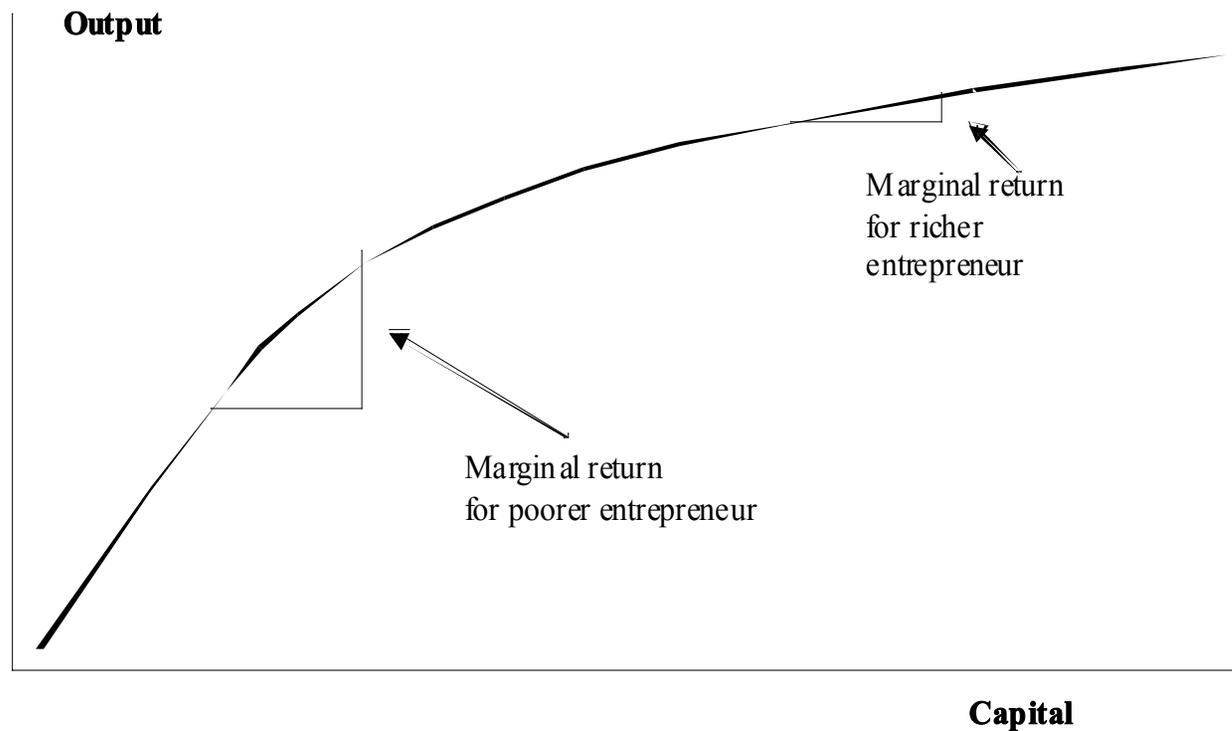
30 Latin American microlenders: bonus pay as a percentage of base salary varies from zero to 101% (MicroRate). Bottom 25% < 13%, median = 35%, top 25% > 66%.

Bank Rakyat Indonesia: Units are profit centers. Staff can rely on getting bonuses based on unit's profit (up to 2.6 x monthly salary). Also BRI-wide bonuses (about 2 months salary). And competitions (against targets, not against other units).

# Untested claims to evidence 1: High returns to microenterprise?

- They have higher returns to investments. Is this true?
- Foundational assumption:
  - That is why they can and are willing to pay more.

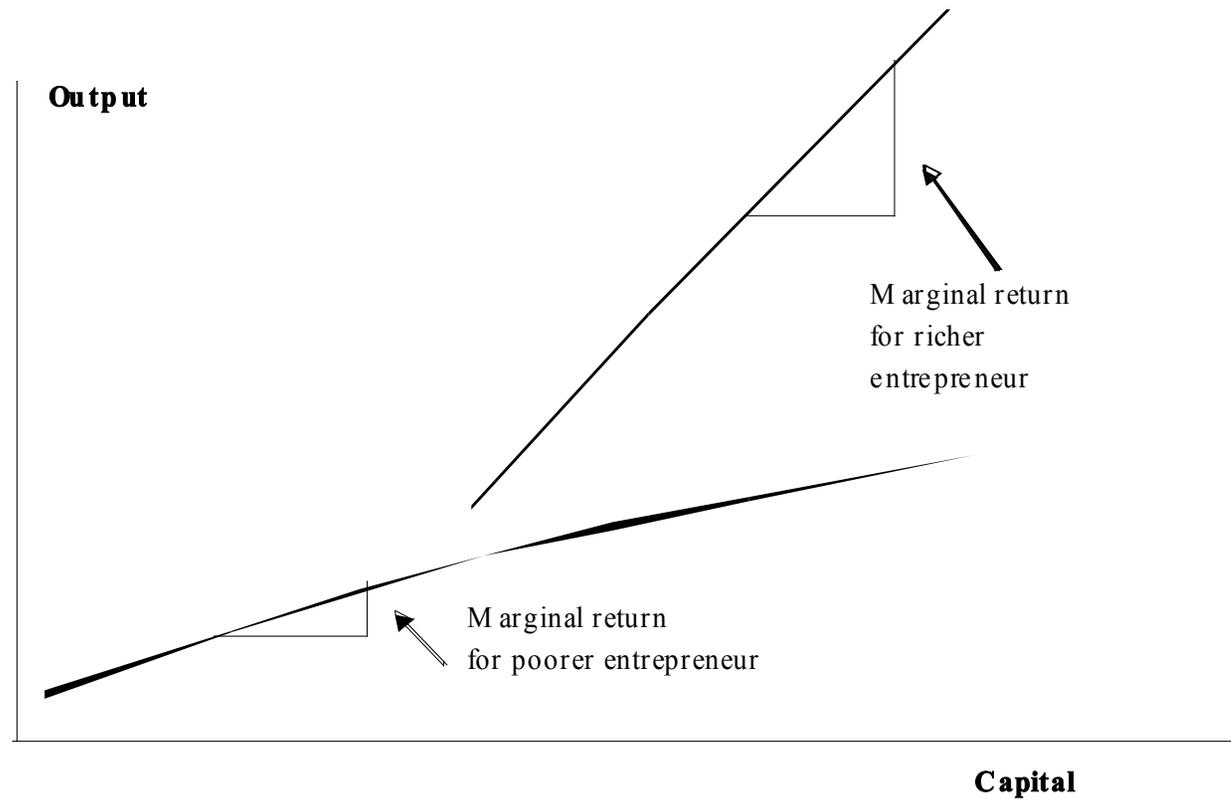
# Recall the untested claim



**Figure 1.1:** Marginal returns to capital with a concave production function. The poorer entrepreneur has a greater return on their next unit of capital and are willing to pay higher interest rates than the richer entrepreneur.

Argument: big impacts – from services for which poor households can pay

# But if other inputs are scarce



**Figure 1.3: Marginal returns to capital for entrepreneurs with differing complementary inputs. Poorer entrepreneurs have lower marginal returns despite having less capital.**

# Or if there are increasing returns

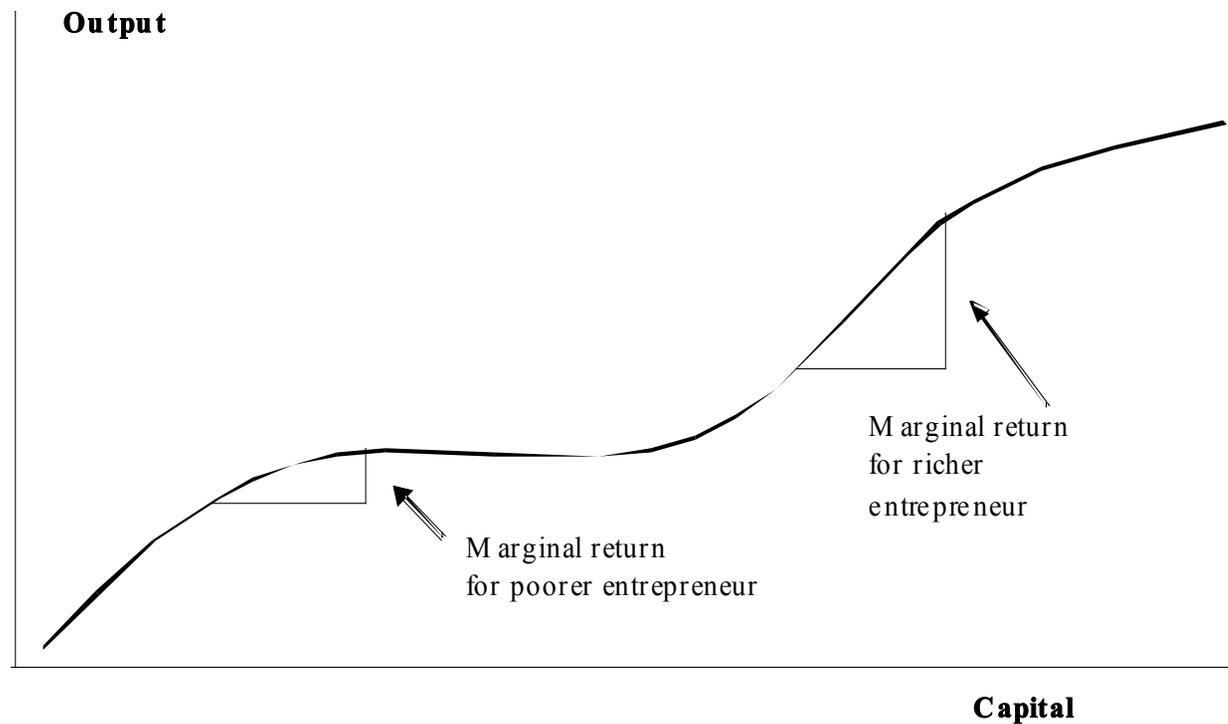


Figure 1.4: **Marginal returns to capital with a production function that allows for scale economies ( while everything else is the same). As in Figure 1.3, poorer entrepreneurs have lower marginal returns despite having less capital.**

# Untested claim 1: is true

del Mel, McKenzie, Woodruff:

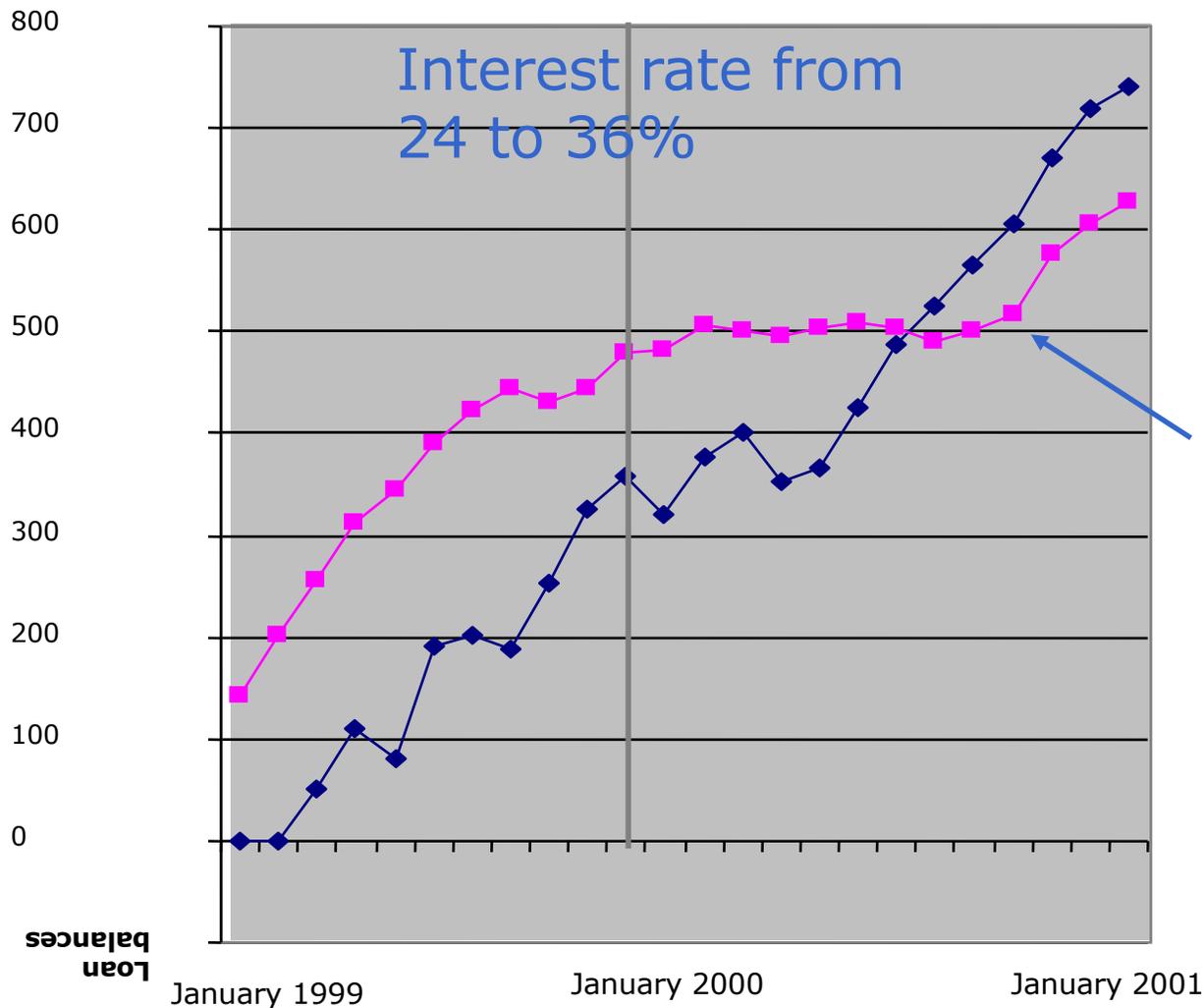
- In Sri Lanka randomly increase some small firm's capital stocks, and not others.
- Find a 5.7% *monthly* return to capital “cash drops” on small business in Sri Lanka.
- Total return is higher because entrepreneurs also work harder.
- Similar results from Mexico.
- Returns are there, but with existing business, and not “infinitely scalable”.

# Untested claims to evidence 2: Low elasticity of loan demand

- The poor need access to credit, not cheap credit.
  - Credit constraints are the key problem. Poor are willing to pay a lot to borrow (e.g. money lenders). I.e., not responsive to interest rate.
  - ... and they have a high rate of return.
  
- ➔ The poor don't respond to the price of the loan.

# Untested claim 2: is false

## ■ SafeSave program in Dhaka.



Geneva

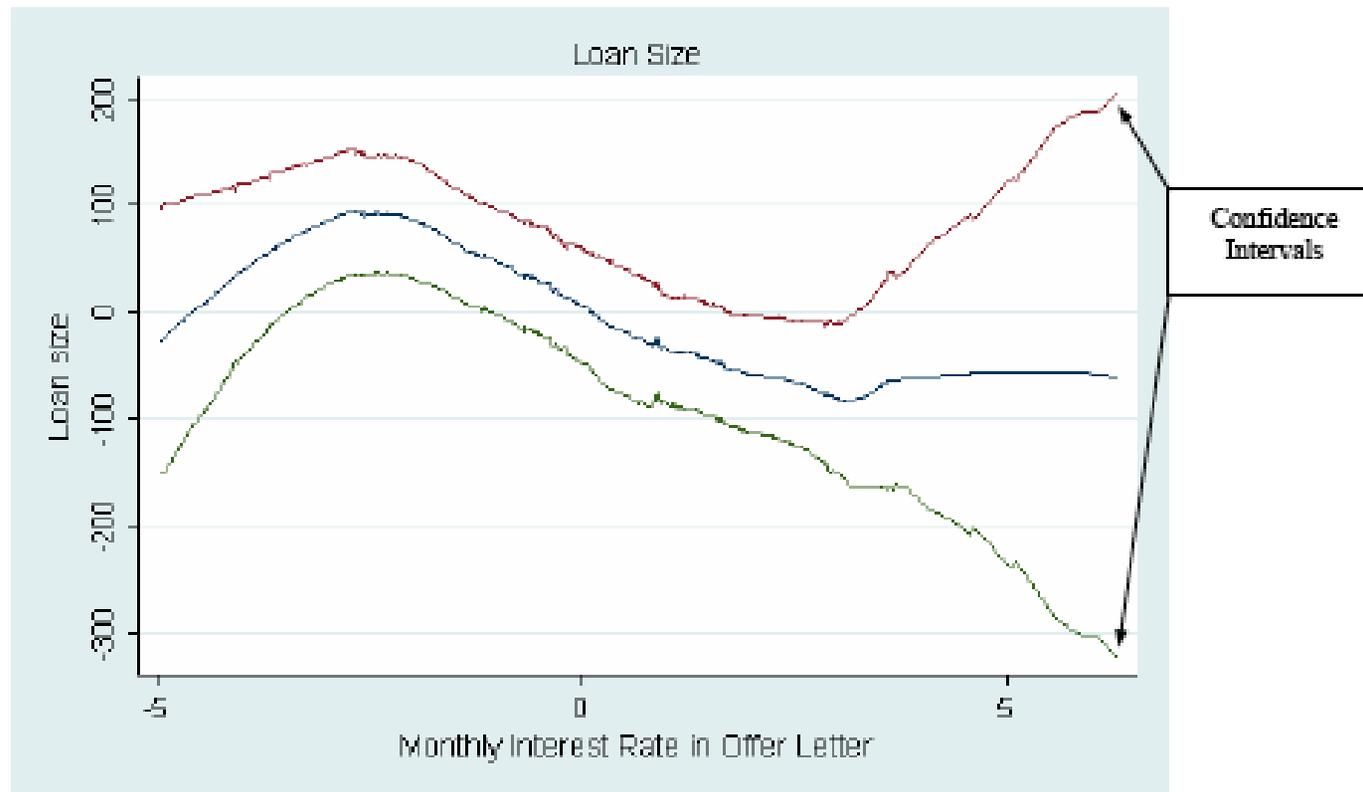
Tikkapara  
and  
Kalyanpur

**Elasticity of -  
0.7 to -1**

# Untested claim 2: is false

- Explore responsiveness of borrowing to interest rates.
- Their design randomizes interest rate offered and the term (4, 6, 12 months).
- Look at a bank making small loans in South Africa.

# Loan size



# Untested claims to evidence 3: MFI's can be self-sustaining

- Enter on subsidies, and raise interest rates until profitable.
- Untested (now tested) claim 2 hints that this might not be true: depends on elasticity.

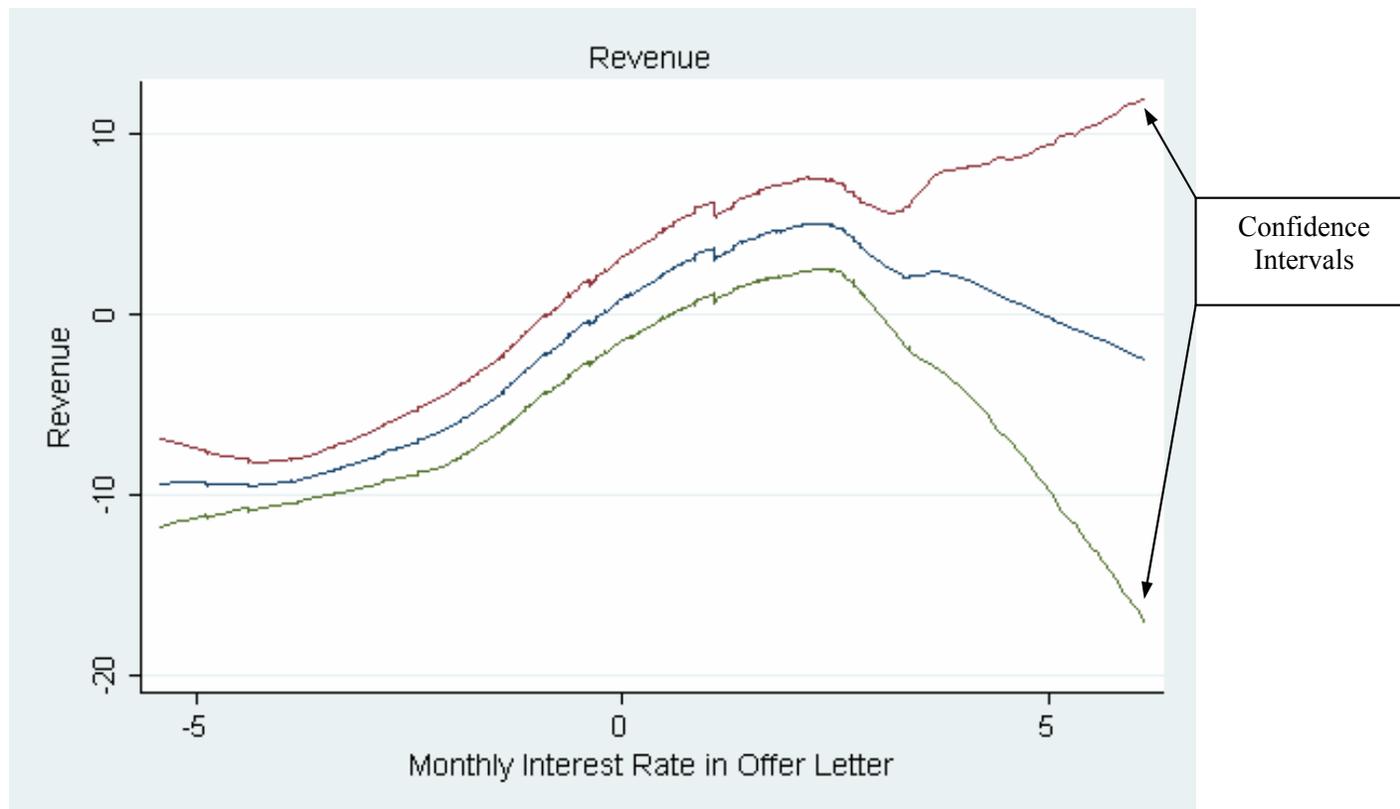
# Untested claim 3: is true

- Enter on subsidies, and raise interest rates until profitable.
- Untested (now tested) claim 2 hints that this might not be true: depends on elasticity.

# Karlan and Zinman

## ■ Again, randomized interest rate in SA.

Figure 5. Regression-Adjusted Demand Curve for Revenue with Respect to Price



# Dehejia, Morduch, Montgomery

## ■ *SafeSave* again.

**Interest Rate Effects on Lending and Profit**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Specification	Profits per branch	Profits per client	Interest income per branch	Interest income per client	Interest income per branch, balanced panel	Interest income per client, balanced panel trimming top 10 percent	Interest income per branch, new accounts
Data source:	Balance sheet data	Balance sheet data	Micro data	Micro data	Micro data	Micro data	Micro data
Treated×Post	6,783.0 [28,020.3]	-250.6*** [73.8]	-312.3 [5,025.8]	-6.9*** [2.5]	4,771.1** [2,135.6]	-1,970.3* [1,079.5]	-5,083.4 [3,528.4]

## ■ Profits go up, but:

- Only on existing new borrowers.
- Lose money on new and existing small borrowers.

# Untested claims to evidence 4: MFI's reduce poverty

- Fundamental claim that it's a *social* enterprise.

# Untested claim 4: is mixed

Karlan and Zinman:

- First RCT of microcredits.
- Randomly assign marginally rejected credit applicants to a “second look”

# How loans are used

Table 4. Loan Uses

	All loans since application	Microlender loans since application	Other formal loans since application	Informal loans since application
Pay other debts	28.3%	31.7%	27.7%	15.2%
Transportation	19.4%	12.7%	9.2%	24.2%
Events	16.9%	15.5%	17.7%	21.2%
School/university	13.7%	15.5%	12.3%	9.1%
Improve/build house	11.5%	6.3%	18.5%	6.1%
Buy/improve food	9.9%	23.2%	6.9%	0.0%
Bills	7.3%	7.0%	8.5%	6.1%
Durable goods	6.7%	4.2%	10.8%	0.0%
Health care	5.1%	5.6%	3.8%	24.2%
Other personal uses	4.5%	3.5%	6.9%	6.1%
Buy clothes	3.5%	4.9%	3.1%	0.0%
Business uses	3.2%	2.8%	4.6%	0.0%
<b>Total</b>	<b>129.9%</b>	<b>133.1%</b>	<b>130.0%</b>	<b>112.1%</b>
Number of observations (i.e. number of loans)	314	142	130	33

# Effects

Table 11: Impacts on health outcomes for three components

	Mean depvar for full	Full sample	Gender		Income		Credit score	
			Female	Male	High	Low	High	Low
<b>Consumption Index</b>								
Dummy=1 if household did not experience hunger in past 30 days	0.861	0.058**	0.016	0.085**	0.044	0.058	0.006	0.094**
		(0.027)	(0.039)	(0.038)	(0.034)	(0.044)	(0.039)	(0.038)
Dummy=1 if quality of food improved over the last 12 months	0.163	0.037	-0.041	0.108**	0.073	0.015	-0.006	0.078
		(0.037)	(0.051)	(0.054)	(0.054)	(0.051)	(0.053)	(0.052)
Number of observations	620-626	620-626	306-311	314-315	310-314	310-312	280-283	340-343
<b>Economic self-sufficiency Index</b>								
Dummy=1 if the borrower is employed	0.804	0.108***	0.107**	0.095**	0.108***	0.086	0.090*	0.103**
		(0.032)	(0.047)	(0.045)	(0.036)	(0.056)	(0.049)	(0.044)
Percentile of household employment earnings since application	45.296	5.008*	3.264	5.666	4.472	3.716	4.543	4.934
		(2.609)	(3.555)	(3.953)	(3.516)	(3.330)	(3.962)	(3.503)
Dummy=1 if the household is above the poverty line	0.606	0.074*	0.093	0.049	0.063	0.061	0.056	0.075
		(0.040)	(0.037)	(0.058)	(0.049)	(0.062)	(0.060)	(0.056)
Number of observations (range)	587-620	587-620	293-307	294-314	298-310	289-310	270-279	317-341
<b>Investment/durables Index</b>								
Dummy=1 if anybody in household is a university student	0.153	-0.011	0.008	-0.044	0.002	-0.035	0.035	-0.060
		(0.037)	(0.052)	(0.050)	(0.058)	(0.046)	(0.059)	(0.048)
Dummy=1 if household bought or improved dwelling since application	0.316	0.040	0.050	0.018	0.087	0.001	0.059	0.037
		(0.039)	(0.055)	(0.057)	(0.055)	(0.056)	(0.056)	(0.055)
Dummy=1 if anybody in the household is self-employed	0.167	0.022	-0.015	0.051	-0.057	0.090*	-0.008	0.046
		(0.033)	(0.043)	(0.049)	(0.045)	(0.040)	(0.048)	(0.047)
Number of observations (range)	391-626	391-626	208-311	183-315	189-314	202-312	175-283	216-343
<b>Control and outlook Index</b>								
Decision-making scale	13.719	0.865	1.158	1.355*	0.348	1.246	1.135	0.271
		(0.695)	(1.057)	(0.808)	(0.836)	(1.486)	(1.053)	(0.939)
Optimism scale	21.969	0.362	0.176	0.566	0.102	0.654	0.030	0.704
		(0.339)	(0.466)	(0.502)	(0.485)	(0.493)	(0.481)	(0.502)
Position on community socio-economic ladder	4.403	0.065	-0.061	0.096	-0.225	0.299	-0.103	0.165
		(0.182)	(0.165)	(0.264)	(0.272)	(0.219)	(0.286)	(0.239)
Number of observations (range)	178-531	178-531	132-285	95-266	116-266	121-282	97-254	81-297
<b>Physical health Index</b>								
Dummy=1 if general health of the borrower is "very good"	0.526	0.047	0.056	0.023	0.046	0.023	-0.005	0.084
		(0.042)	(0.059)	(0.062)	(0.057)	(0.063)	(0.062)	(0.058)
Dummy=1 if no household member was sick in previous 30 days	0.517	-0.026	-0.037	-0.000	-0.018	-0.025	0.085	-0.102*
		(0.042)	(0.059)	(0.061)	(0.058)	(0.061)	(0.061)	(0.058)
Number of observations (range)	610-625	610-625	308-311	302-314	307-313	303-312	277-283	333-342
<b>Mental health Index</b>								
Lack of depression scale	-18.828	0.264	-1.249	2.749	0.161	0.056	0.639	-0.197
		(1.571)	(2.140)	(2.429)	(2.259)	(2.430)	(2.663)	(2.116)
Lack of stress scale	-18.580	-1.414	-1.245	-1.452	-2.178	-0.632	-0.703	-1.926
		(0.882)	(1.186)	(1.313)	(1.383)	(1.187)	(1.399)	(1.222)
Number of observations (range)	244-250	244-250	127-133	117	120-122	124-128	112-117	132-133

Consumption up slightly

Self-sufficiency up significantly.

But not through investment in durables.

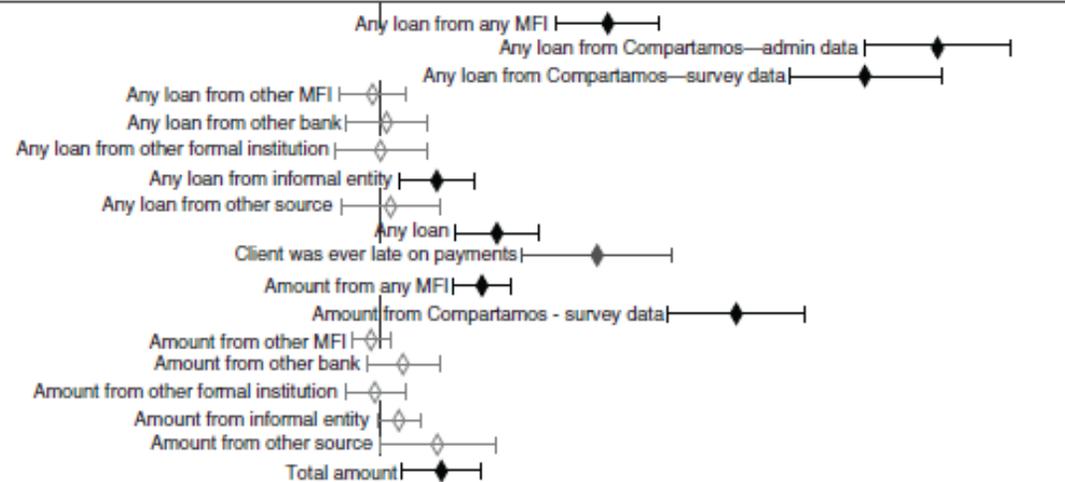
Very little effect on physical and mental health.

# Effects: Mexico

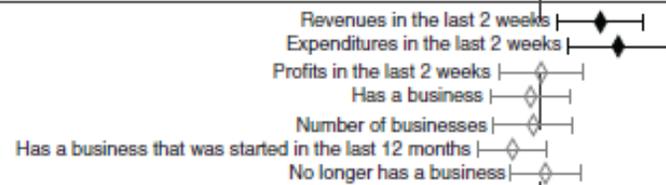
- Angelucci, Karlan, and Zinman worked with Compartamos, the largest Mexican MFI, to randomize the rollout in a new region (Sonora, near the Arizona border).
- They randomized access across 238 clusters (at standard interest rate 130 APR).

# Effects: Mexico impacts

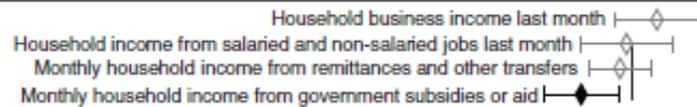
## Credit



## Self-employment

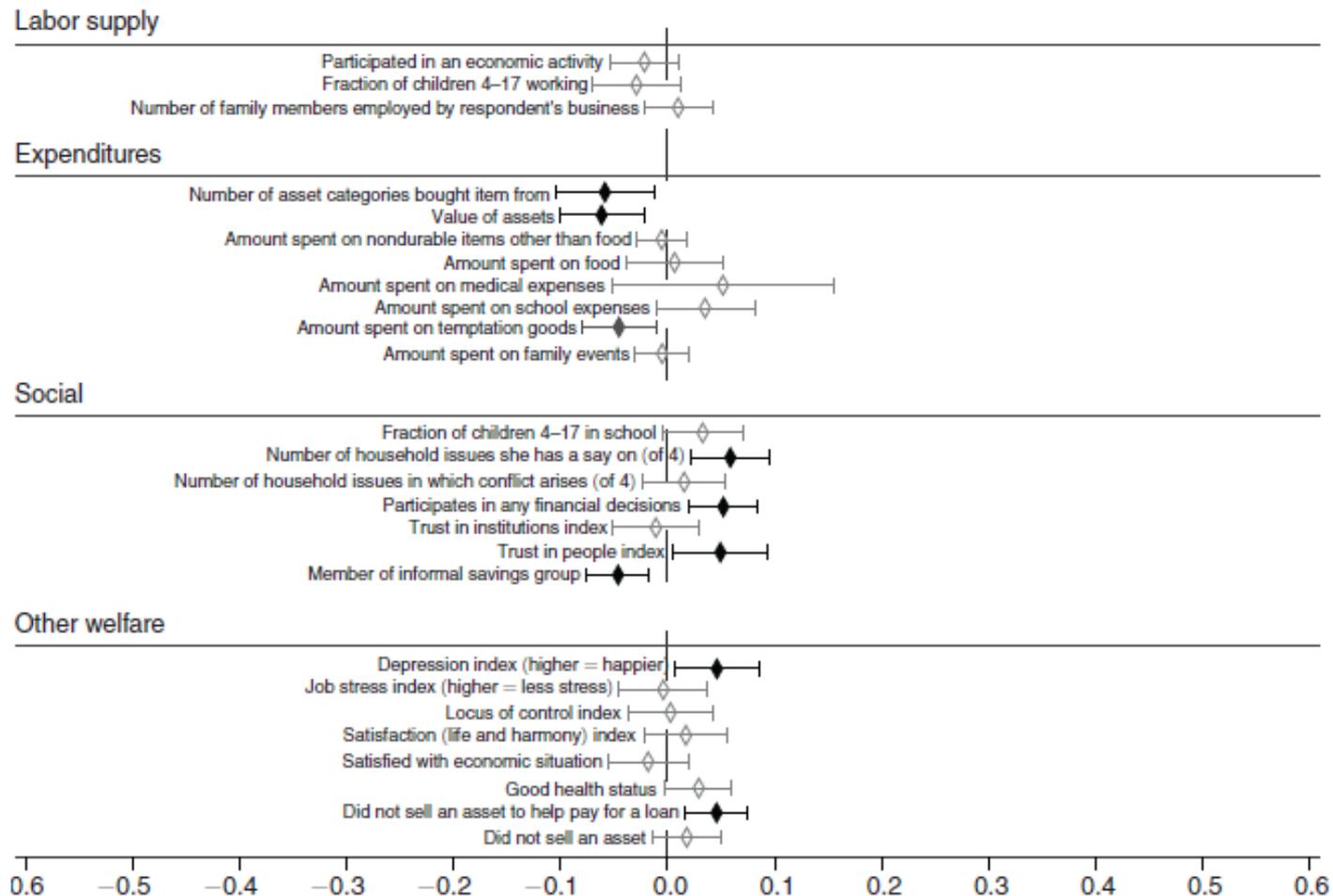


## Income



0.6 -0.5 -0.4 -0.3 -0.2 -0.1 0.0 0.1 0.2 0.3 0.4 0.5 0.6

# Effects: Mexico impacts



# Effects: others

- By now at least 5 other randomized evaluations of MFIs.
- Very similar results. Positive but not transformative.

# Looking forward 1: fine tuning

- Unbundling contracts to find the most parsimonious and effective tool.
- Accepting that loans are taken for many purposes.
- Accepting flexible repayments and drawdowns (top-up, line of credit).
- Offering other financial services.

# Looking forward 1: fine tuning

- › Grameen diaries (2002 – 2005): most clients borrowed mainly for non-business purposes
- › “Top-ups” popular

## Ramna’ s use of top-ups

<b>Loan #</b>	<b>Date</b>	<b>Amount</b>	<b>Use</b>
1	2002	\$83	Food and stocks
1 <sup>st</sup> Top up	April 2003	N/A	Grain for coming monsoon season
2 <sup>nd</sup> Top up	October 2003	\$67	Funeral expenses
3 <sup>rd</sup> Top up	May 2004	N/A	Pay down private loan
4 <sup>th</sup> Top up	December 2004	\$75	Stocks of grain, medical treatment
5 <sup>th</sup> Top up	June 2005	\$65	School fees, restock food

# Looking forward 2: MFI as a (social) business

- MFI's succeed somewhat in reducing poverty.
- As business model (enter on subsidies, raises prices until profitable) mixed but positive evidence.
- But it does offer a model for entrepreneurial initiative on both the supply (MFI) and borrower side.

# Looking forward 3

- Perhaps the poor have collateral (mortgage model).
- Jack, Kremer, de Laat, and Suri et al investigate using the asset being purchased (large water tank) as collateral.
- In a randomized trial of joint liability + down payment vs asset as collateral, take up increased from 2.4% to 42%.
- Bigger effect than requiring deposits (SafeSave model).
- Very low repossession rates.

# Looking forward 4

## Agent-intermediated lending

- Responds to finding that rigid repayment reduces virtuous risk taking.
- Also address problems of group lending.
  - Don't help repayments.
  - Costly: time needed for meetings.
  - Can be costly: borrower contagion.
- Solution: bypass groups. How?
  - Find local agents with same knowledge as group.
  - Incentivize them to be truthful.

# Looking forward 4

## Agent-intermediated lending

- Who? Trader, informal lender, gram panchayat, village busybody...
  - Incentivize them with commission on repayments.
  - Loans only to those with little land.
  - Loans *directly* through borrower.
- Remove frequent repayments with repayment that matches agricultural season.
- Keep dynamic incentives (loan size grows).

# Looking forward 4

## Agent-intermediated lending

- Randomized evaluation in West Bengal compared to standard group lending.
- ALL's lent to safer borrowers (people they had lent to); groups in group-lending were riskier types; higher takeup (95% vs 90%) and continuation (82% vs 74%); and higher repayment rates (99% vs 85%) achieved.
- But... ALL tend to focus on the less-poor.
- Again the tradeoff: ALL's are good for business but sidestep the hardest social mission.

# Looking forward 5

- **Steady subsidies** are needed to support innovation.
- Also subsidy allows **deeper outreach**.
- Many organizations are nevertheless remarkably **efficient**.
- Social missions attract **socially-motivated** staff and investors.
- Profitability allows **leverage, scale**:
  - **Leverage** = attracting outside debt funding to increase scale, building on existing assets.
  - But not a win-win on social mission (“mission drift”, are they becoming legal moneylenders?).