



## Lecture 13: Microfinance

Williams College ECON 204:  
Global Poverty and Economic Development  
Professor: Pamela Jakiela

# The Poor Are Microentrepreneurs, and Microentrepreneurs Are Poor

Most workers in low-income and middle-income countries (LMICs) are self-employed

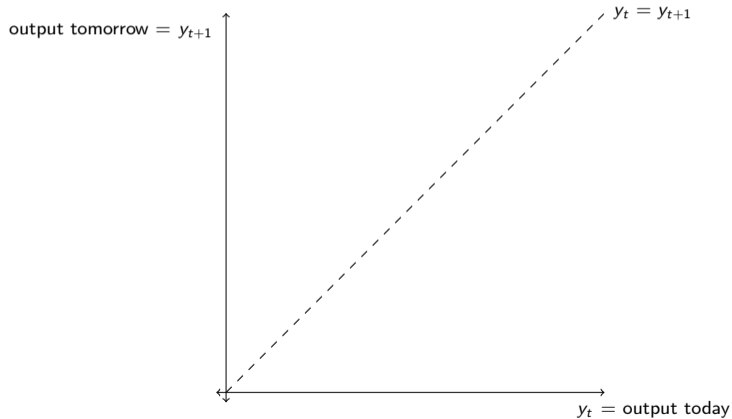
- 80.0 percent of employment in low-income countries (World Bank 2019)
- 51.4 percent of employment in middle-income countries (World Bank 2019)
- 90 percent of self-employed workers in LMICs have no employees (Jayachandran 2021)

Firms are smaller in LMICs than in high-income countries

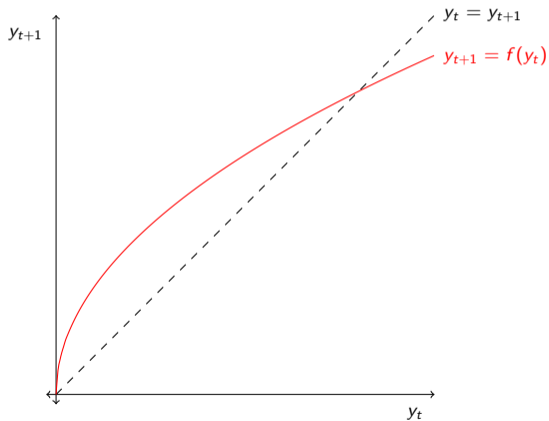
- Modal manufacturing firm in India, Indonesia, Mexico has no employees
- Differences in the firm size distribution help to explain cross-country productivity gaps

Most self-employed workers in LMICs are in informal microenterprises that are not growing

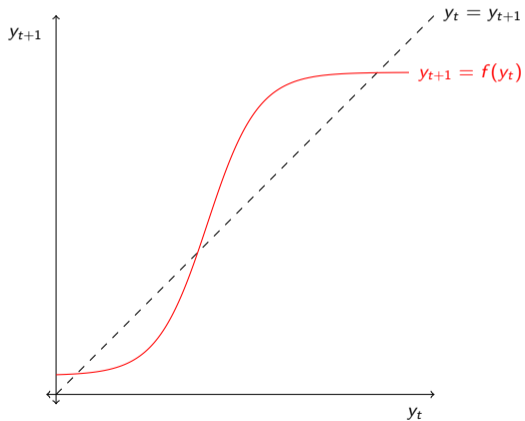
# Investment Today Determines Output Tomorrow



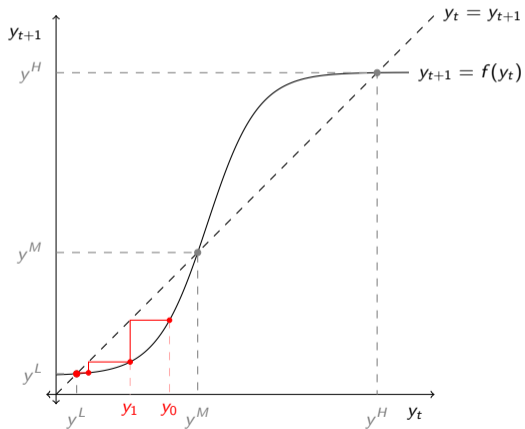
# Investment Today Determines Output Tomorrow



# Poverty Traps



# Poverty Traps



# Poverty Traps

A **poverty trap** is a self-reinforcing, low-output equilibrium that occurs in a context where multiple equilibria (including some that involve higher levels of output) are possible

- Individuals whose initial conditions are below the cutoff converge to the low equilibrium
- Individuals who begin above the cutoff converge to the high-output equilibrium

A one-off loan or transfer that shifts a person above the cutoff permanently eliminates poverty

- Clear justification for policy intervention to eliminate poverty traps
- There is considerable debate about whether poverty traps exist
  - ▶ Poverty traps did not appear to exist in the Nairobi youth entrepreneurship study

# The Return to Capital in Microenterprises Is (May Be?) High

One-off grants of capital to small and micro enterprises can increase profits substantially

- In Nigeria, 50,000 dollar grants to semifinalists in the YouWiN! business plan competition had large impacts on business creation, profits, and employment over the next five years
- In Sri Lanka, grants of 100 dollars increased profits by 60 percent a year later

Grants (in cash or in-kind) seem to increase microenterprise profits in a range of LMIC settings

- In general, impacts are strongest for experienced, or highly selected, entrepreneurs
- In most settings, impacts are muted for women entrepreneurs
  - ▶ In-kind grants may be better for women
  - ▶ Household pressures seem to play a role

# Poor Microentrepreneurs Do Not Borrow from Banks

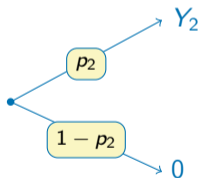
	Rural Areas		Urban Areas	
	Any Loan	Bank Loan	Any Loan	Bank Loan
Cote d'Ivoire	30.5	5.7	40.4	3.9
India (Udaipur)	66.3	6.0	.	.
India (Hyderabad)	.	.	70.5	6.9
Mexico	18.5	17.4	19.1	1.2
Pakistan	93.2	1.5	95.1	6.2
Peru	12.3	0	8.6	0

Data from Banerjee & Duflo (2007)

# Project Choice

Consider two investment opportunities:

- Project 1 yields payoff  $Y_1$  with probability 1
- Project 2 yields payoff  $Y_2$  with probability  $p_2$ , and zero otherwise



# The Importance of Collateral

Suppose you borrow  $L$  in start-up capital to fund one of the two projects

- You must repay  $(1 + R)L$  once you receive the (observable) payoff from your project
- If you default on your loan, you lose collateral valued at  $C > (1 + R)L$
- When do you choose to invest in the safe project?

$$\pi_1 = Y_1 - (1 + R)L \geq p_2(Y_2 - (1 + R)L) - (1 - p_2)C = \pi_2$$

# Limited Liability

Almost by definition, poor borrowers usually lack collateral and have **limited liability**

- In the event of a default, lenders typically have limited recourse

When will a borrower without collateral choose to invest in the low-risk project?

$$\pi_1 = Y_1 - (1 + R)L \geq p_2(Y_2 - (1 + R)L) = \pi_2$$

# Adverse Selection

Same logic applies when borrowers are characterized by an innate, unobservable “type”

- Low-risk type never defaults ( $p_s = 1$ ); high-risk type defaults with probability  $1 - p_r$
- Borrower  $i$ 's expected loan repayment:  $p_i(1 + R)L$
- High-risk borrowers are more willing to pay high interest rates
- **Adverse selection** occurs when a contract is more attractive to worse agents

Why not charge higher interest rates, such that  $(1 - p_r)(1 + R)L$  exceeds cost of funds?

# Credit Rationing and the Market for Lemons

Limited liability leads to moral hazard and adverse selection, which can lead to **credit rationing**

- Borrowers without collateral may be unable to get a bank loan at any interest rate

Loans may only be available from informal moneylenders who charge high interest rates

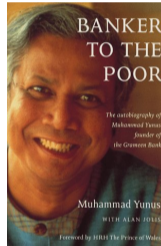
- Moneylenders often have better information (than banks) about individual borrowers
  - ▶ Lowers the cost of screening out high-risk borrowers
- May also have recourse to repayment incentives unavailable to formal lenders

Low-risk borrowers with profitable projects may be unable to access needed credit

- Market failure occurs because of imperfect information
- Low-risk borrowers cannot credibly signal to distinguish themselves from high-risk types

# Microfinance

**Microfinance** is the provision of small, uncollateralized loans to poor borrowers



- Over 200 million poor households had taken out microcredit loans (as of 2013)
- Muhammad Yunus won Nobel Peace Prize in 2006, after UN's Year of Microcredit in 2005

# Microfinance Loan Contracts

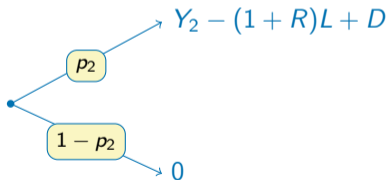
Components of the traditional microfinance package:

- Small, uncollateralized loans
- **Dynamic incentives:** loans start small, get progressively larger
  - ▶ Creates a private incentive for borrowers to choose low-risk investment opportunities, and to repay their loans whenever possible, so that they can access (larger) future loans
- **Joint liability:** borrowers responsible for others' loans, too
  - ▶ Shifts burden of screening creditworthiness (adverse selection), monitoring individual effort (moral hazard) from the microfinance lender onto joint liability borrowing partners
- Focus on female borrowers (who are seen as more credit-constrained)
- High-frequency, small repayments and regular group meetings to strengthen social ties

# Dynamic Incentives

Dynamic incentives create a benefit  $D > 0$  that comes from avoiding default

- Borrowers who default are (almost always) excluded from future loans
- Payoff from investing in the low-risk project:  $Y_1 - (1 + R)L + D$
- Payoff from investing in the high-risk project:



# Dynamic Incentives

Dynamic incentives create a benefit  $D > 0$  that comes from avoiding default

- Borrowers who default are (almost always) excluded from future loans
- Payoff from investing in the low-risk project:  $Y_1 - (1 + R)L + D$
- When does a microfinance borrow invest in the low-risk project?

$$\pi_1 = Y_1 - (1 + R)L + D \geq p_2[Y_2 - (1 + R)L + D] = \pi_2$$

# Joint Liability

		Borrower 2 (B2)	
		success	failure
Borrower 1 (B1)	success	both succeed	B1 succeeds
	failure	B2 succeeds	both fail

# Joint Liability: Two Low-Risk Borrowers

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# Joint Liability: Two Low-Risk Borrowers

		Borrower 2 (B2)	
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Borrower 1 (B1)	success	B1: $Y_1 - (1 + R)L$ B2: $Y_1 - (1 + R)L$	B1 succeeds
	failure	B2 succeeds	both fail

# Joint Liability: A Heterogeneous Borrowing Group

		Borrower 2 (B2)	
		success	failure
Borrower 1 (B1)	success	B1: $Y_1 - (1 + R)L$ B2: $Y_2 - (1 + R)L$	B1 succeeds
	failure	B2 succeeds	both fail

# Joint Liability: A Heterogeneous Borrowing Group

		Borrower 2 (B2)	
		success	failure
Borrower 1 (B1)	success	B1: $Y_1 - (1 + R)L$ B2: $Y_2 - (1 + R)L$	B1: $Y_1 - 2(1 + R)L$ B2: 0
	failure	B2 succeeds	both fail

# Joint Liability: Two High-Risk Borrowers

		Borrower 2 (B2)	
		success	failure
Borrower 1 (B1)	success	B1: $Y_2 - (1 + R)L$ B2: $Y_2 - (1 + R)L$	B1: $Y_2 - 2(1 + R)L$ B2: 0
	failure	B2 succeeds	both fail

# Joint Liability: Two High-Risk Borrowers

		Borrower 2 (B2)	
		success	failure
Borrower 1 (B1)	success	B1: $Y_2 - (1 + R)L$ B2: $Y_2 - (1 + R)L$	B1: $Y_2 - 2(1 + R)L$ B2: 0
	failure	B1: 0 B2: $Y_2 - 2(1 + R)L$	B1: 0 B2: 0

# Joint Liability Reduces (Non-Strategic) Default

		Borrower 2 (B2)	
		success	failure
Borrower 1 (B1)	success	$p_2^2$	$p_2(1 - p_2)$
	failure	$p_2(1 - p_2)$	$(1 - p_2)^2$

## Joint Liability: Summary

A low-risk partner does not impact a borrower's expected payoffs

- They always repay their loan
- A high-risk partner lowers a low-risk borrower's payoff by  $(1 - p_2)(1 + R)L$
- A high-risk partner lowers a high-risk borrower's payoff by  $p_2(1 - p_2)(1 + R)L$
- A low-risk borrower is willing to “pay” more to find a low-risk liability partner
- Strong incentive to monitor borrowing partners, so that they choose low-risk projects

Joint liability also leads to a mechanical reduction in the probability of (non-strategic) default

- Joint liability forces borrowing partners to insure each other

# The Economic Theory of Microfinance: Summary

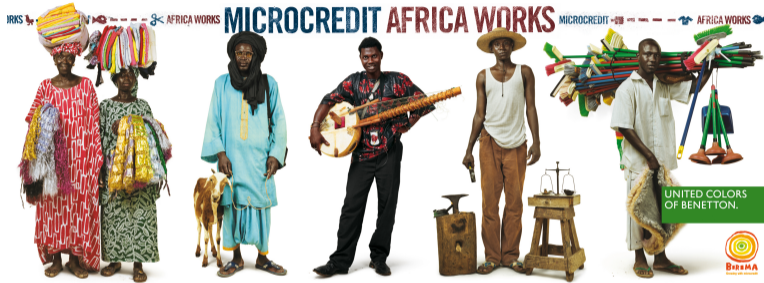
Limited liability prevents banks from lending to poor borrowers without collateral

- Imperfect information leads to moral hazard (choices) and adverse selection (types)

Microfinance can overcome these frictions through joint liability and dynamic incentives

- Joint liability forces borrowing partners to insure each other
- Safe borrowers should seek to partner with other safe borrowers, screening out “lemons”
- Borrowing partners can monitor each other more easily than the lender can
- Dynamic incentives take the place of collateral in encouraging repayment

# Microfinance in Practice



*Microcredit is the way to go to really help developing countries...  
not the IMF or World Bank... Benetton partnered with [Youssou N'Dour]...  
to showcase Senegalese workers who have used micro loans to start small, productive businesses —  
whether textile traders, domestic appliance salesman, mobile toy stores, livestock merchants or others.*

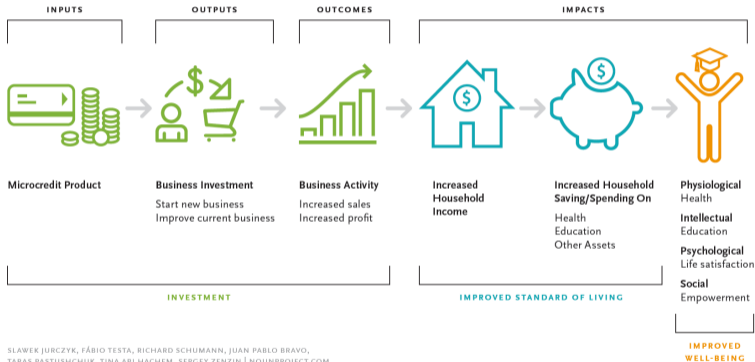
- Some random blogger who doesn't understand selection bias

# The Microfinance Theory of Change

*Many studies show that clients who join and stay in programs have better economic conditions than non-clients, suggesting that programs contribute to these improvements. A few studies have also shown that over a long period of time many clients do actually graduate out of poverty... By reducing vulnerability and increasing earnings and savings, financial services allow poor households to make the transformation from “every-day survival” to “planning for the future.” Households are able to send more children to school for longer periods and to make greater investments in their children's education. Increased earnings from financial services lead to better nutrition and better living conditions, which translates into a lower incidence of illness.*

- kiva.org (“loans that change lives”)

# The Microfinance Theory of Change



## How should we measure the success/impact of microfinance?

- Evidence: many successful MFIs have very low default rates (e.g. 2% at Grameen)
  - ▶ Does demand for loans imply impact?
- As seen above, many NGOs make explicit or implicit causal claims
  - ▶ Does (access to microfinance) increase self-employment? Income?
  - ▶ Does this translate into higher consumption, empowerment, etc.?

# RCTs Estimating the Impact of Microfinance

Country	Researchers	Partner MFI	Gender of borrowers	Targeted to entrepreneurs?	Eligibility	Liability model	Approximate loan size in PPP USD (% of average household annual income)	Repayment frequency	Annual percentage rate (APR)	Repayment performance	Offer randomization level	Time between microcredit offer and endline survey
Bosnia and Herzegovina	Augsburg, De Haas, Harmgart, Meghir	Anonymous	40% female	Yes (borrower planned to invest in a new or existing business)	Marginally creditworthy loan applicants with collateral	Individual	\$1,815 (9%)	Monthly payments over an average of 14 months	22%	46% ever late, 26% written off	Individual	14 months
Ethiopia	Tarozzi, Desal, Johson	Amhara Credit and Savings Institute Oromiya Credit and Savings and Share Company	13% female household head	Yes (borrower had a business plan)	Poor households with a business plan and collateral	"Small groups"	\$500 (18%)	"Regular payments" over 12 months	12%	5% default*	Peasant associations	36 months
India	Banerjee, Dufo, Glennerster, Kinnan	Spandana Sphoorty Financial Limited	Female	No restriction to entrepreneurs	Women from non-migrating households identified as likely borrowers; at least 80% must be homeowners	Groups of 6 to 10	\$600 (22%)	Weekly payments over 12 months	24%	49% ever late	Neighborhoods	15-18 months (first endline) and 39-42 months (second endline)
Mexico	Angelucci, Karlan, Zinman	Compartamos Blanco	Female	Yes (borrower owned or wanted to start a business)	Women	Groups of 10 to 50	\$450 (6%)	Weekly payments over 4 months	110%	10% ever late, 1% default	Neighborhoods or villages	16 months (average exposure)
Mongolia	Attanasio, Augsburg, De Haas, Fitzsimons, Harmgart	XacBank	Female	No (borrower interested in receiving a loan)	Poor women	Individual	\$470 (29%)	Monthly payments over an average of 8 months	27%	5% ever late	Villages	19 months
Mongolia	Attanasio, Augsburg, De Haas, Fitzsimons, Harmgart	XacBank	Female	No (borrower interested in receiving a loan)	Poor women	Groups of 7 to 15	\$700 (43%)	Monthly payments over an average of 6 months	27%	9% ever late	Villages	19 months
Morocco	Crépon, Devoto, Dufo, Parienté	Al Amana	6% female household head	Yes (borrower owned a business other than non-livestock agriculture)	Households with a business other than non-livestock agriculture	Groups of 3 to 4	\$1,080 (21%)	Weekly, biweekly, or monthly payments over an average of 16 months	15%	no data	Villages	24 months
Philippines	Karlan, Zinman	First Macro Bank (FMB)	85% female**	Yes	Marginally creditworthy loan applicants with businesses who are homeowners or long-term renters	Individual	\$220 (3%)	Weekly payments over 3 months	60%	33% ever late, 7.4% default	Individual	13 months

# Research Questions: Potential Causal Pathways

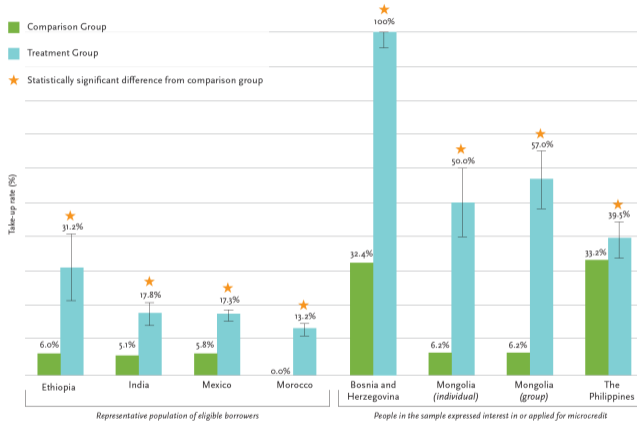


## Outcome variables:

- Borrowing (from program MFI, from all MFIs, total)
- Self-employment, business investment, revenues
- HH income, consumption
- Empowerment, HH bargaining, child outcomes, etc.

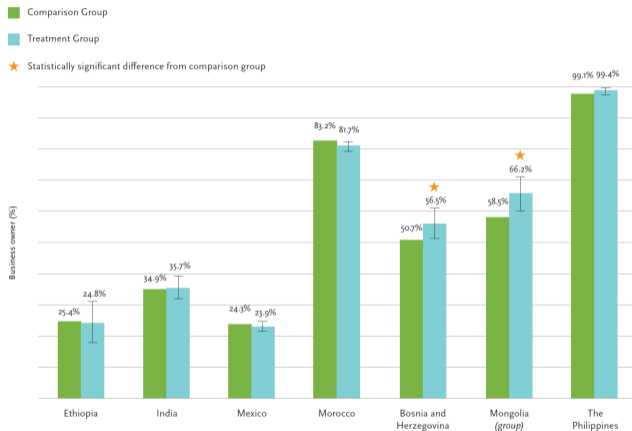
Statistical power to detect presence of downstream impacts depends on magnitude, precision of effects at earlier links in causal chain (low take-up can make it difficult to detect effects)

# The Demand for Microfinance



Note: Statistical significance is noted at the 90 percent confidence level or higher and error bars represent 90 percent confidence intervals; In Ethiopia, India, Mexico, Mongolia, and Morocco, take-up is measured as having any loans from the partner MFI at the time of the endline survey; In India, the results displayed are from the first endline survey (1.5 years), and there is also a statistically significant difference after 3.5 years; In Bosnia and Herzegovina, comparison group take-up is measured as having any outstanding loan from any MFI and treatment group take-up is a direct measurement of those who took up the partner MFI's microcredit offer (76.3 percent of borrowers in the treatment group reported having any loans from any MFI at the time of the endline survey); In the Philippines, take-up is measured as having any loan from any financial institution in the month preceding the endline survey.

# The Impacts of (Access to) Microfinance on Entrepreneurship



Note: Statistical significance is noted at the 90 percent confidence level or higher and error bars represent 90 percent confidence intervals; In Ethiopia, ownership is measured for non-farm businesses; In India, displayed results are from the first endline survey (1.5 years), and there is also no statistically significant difference after 3.5 years; In Bosnia and Herzegovina, differences in business ownership are not significant for multiple hypotheses testing; In Mongolia, displayed results are for household businesses. There was also a positive statistically significant difference for respondent businesses.

# The Impacts of (Access to) Microfinance on Entrepreneurship

Country	Effect	S.E.	95% CI
Bosnia	0.0602**	0.0293	[0.0028,0.1176]
Ethiopia	-0.006	0.043	[-0.0903,0.0783]
India	0.0083	0.0215	[-0.0338,0.0504]
Mexico	-0.004	0.009	[-0.0216,0.0136]
Mongolia	0.077**	0.033	[0.0123,0.1417]
Morocco	-0.015	0.01	[-0.0346,0.0046]

Data from Meager (2019).

# The Impacts of (Access to) Microfinance on Business Profits

Country	Effect	S.E.	95% CI	Rescaled CI
Bosnia	671.9	541.3	[-389.05, 1732.85]	[-0.72,3.20]
Ethiopia	526	403	[-263.88, 1315.88 ]	[-0.66,3.27]
India	354	314	[-261.44, 969.44 ]	[-0.83,3.09]
Mexico	0	39	[-76.44, 76.44]	[-1.96,1.96]
Mongolia	-4789	5302	[-15180.92, 5602.92]	[-2.86,1.06]
Morocco	2005*	1210	[-366.6, 4376.6]	[-0.30,3.62]

Data from Meager (2019). Rescaled CI normalizes upper and lower limits of the confidence interval by the standard error of the estimated coefficient.

# The Impacts of (Access to) Microfinance on Business Profits

Outcome	Bosnia and Herzegovina	Ethiopia	India	Mexico	Mongolia	Morocco	Philippines
Business ownership	↑	—	—	—	↑	—	—
Business revenue	—	—	—	↑	—	↑	—
Business inventory/assets	↑	<i>no data</i>	↑	<i>no data</i>	↑	↑	—
Business investment/costs	—	—	↑	↑	<i>no data</i>	↑	↓
Business profit	—	—	—	—	—	↑	—
Household income	—	—	—	—	—	—	—
Household spending/consumption	—	↓	—	↓	↑	—	—
Social well-being	—	—	—	↑	—	—	↓

Note: Green (red) arrows represent statistically significant positive (negative) differences in outcomes between the treatment and comparison groups at the 90 percent confidence level or higher, dashes represent no statistically significant difference; Ethiopia: While none of the individual business outcomes showed a positive impact, a combined business outcomes index did; a decline in household spending/consumption is measured as an increase in food insecurity; India: The increase in assets occurred only after 3.5 years, while the increase in inventories occurred only after 1.5 years; Mexico: Household spending is measured as the value of assets purchased in the past two years; social well-being is measured as a combination of women's empowerment outcomes and trust in people; Mongolia (group): Business assets measured as an index of listed assets increased, while assets measured as monetary stock did not; Morocco: There was an increase in combined business sales and home consumption, an increase in business costs, and no change in investment; The Philippines: There was a decrease in the number of businesses and number of paid employees; household spending/consumption was measured as changes in food costs and quality; a combined social well-being index showed a negative effect.

# The Impacts of (Access to) Microfinance on HH Consumption

Country	Effect	S.E.	95% CI	Rescaled CI
Bosnia	-647.9**	327.6	[-1290.0, -5.8]	[-3.94,-0.02]
India	10.24	37.22	[-62.71,83.19]	[-1.68,2.24]
Mongolia	0.109*	0.061	[-0.01,0.23]	[-0.17,3.75]
Morocco	-46	47	[-138.1,46.1]	[-2.94,0.98]

Data from Meager (2019). Rescaled CI normalizes upper and lower limits of the confidence interval by the standard error of the estimated coefficient. Impacts on consumption are not reported in the Ethiopia and Mexico studies.

# Reducing Repayment Frequency: A Randomized Trial

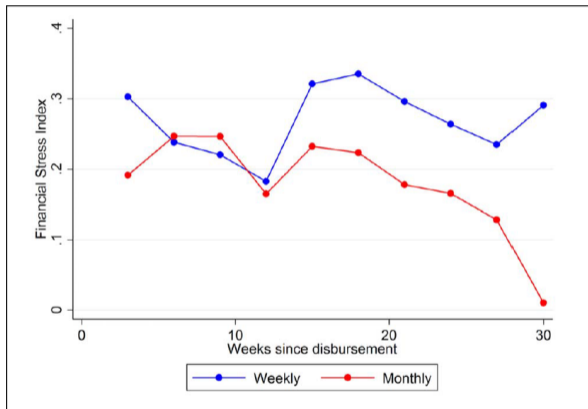
Implementing partner: Village Financial Services, a large MFI based in Kolkata, India

- Uncollateralized loans given to individual women in borrowing groups of five people
- Loan size ranged from \$90 to \$260; modal loan about \$220

Groups randomly assigned to make either weekly (standard) or monthly (treatment) repayments

- Monthly repayment gives a longer delay before first payment due
- Impacts on outcomes, including stress, theoretically ambiguous

# The Impacts of Reducing Repayment Frequency



Source: Field et al. (2012)

# The Impacts of Reducing Repayment Frequency

	Financial Stress Index	Financial Stress Index	Total income (RPS)	Business income (RPS)	Wage income (RPS)	Investment in business inventory (RPS)	Default at 20 weeks past due date	Total household expenditures (RPS)	Share of expenditure on tobacco, alcohol, and foods prepared outside of home
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Panel A (no controls)</i>									
Monthly	-0.093**	-0.0016	561.3**	614.9**	-53.59	523.7**	-0.0114	99.94**	0.00971
	(0.0442)	(0.0437)	(278.9)	(286.2)	(38.04)	(227.6)	(0.0115)	(47.62)	(0.0104)
Monthly X post-12 week		-0.119*							
		(0.0616)							
<i>Panel B (controls)</i>									
Monthly	-0.134***	0.0592	503.0**	558.9**	-55.93	395.1	-0.0115	61.61	0.0146
	(0.0457)	(0.0573)	-278.9	-230.2	-39.88	-249.6	(0.0115)	-53.29	(0.0109)
Monthly X post-12 week		-0.242***							
		(0.0673)							
Observations	4,928	4,928	4,999	4,999	4,999	1,599	200	4,999	4894
Clients	200	200	200	200	200	200	200	200	200
Clusters	68	68	68	68	68	68	68	68	68
Intra-cluster corr.	0.309	1.309	0.239	0.266	0.0271	0.151	0.174	0.0414	0.0828
Mean for weekly	0.256	0.257	634.1	469.3	164.9	477.1	0.01	414.1	0.0793
<p>Intent-to-treat effects of monthly repayment schedules on outcomes. Table shows OLS results for the independent variable "monthly"; Huber-White SEs and control group means are also shown. Regression in column 2 includes two additional independent variables: post-12 week dummy which is an indicator variable which equals one if survey occurred more than 12 weeks after disbursement (not reported) and the interaction of monthly and post-12 week dummy (reported). Variation in sample sizes is due to survey non-response. The Financial Stress Index, as described in Figure 1, is an unweighted average of "Worried about money," "Not confident about repaying," "Argue about finances," and "Top 25 percentile of minutes spent." Estimates where controls are used include variables listed in Panel A of Table S1.</p> <p>*<math>p &lt; 0.10</math>.  **<math>p &lt; 0.05</math>.  ***<math>p &lt; 0.01</math>.</p>									

Source: Field et al. (2012)

# The Impacts of Repayment Grace Periods

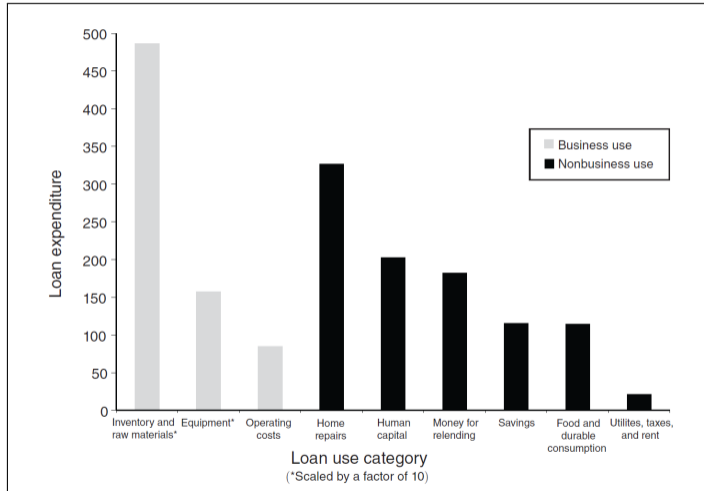
## Does the Classic Microfinance Model Discourage Entrepreneurship Among the Poor? Experimental Evidence from India<sup>†</sup>

By ERICA FIELD, ROHINI PANDE, JOHN PAPP, AND NATALIA RIGOL\*

*Do the repayment requirements of the classic microfinance contract inhibit investment in high-return but illiquid business opportunities among the poor? Using a field experiment, we compare the classic contract which requires that repayment begin immediately after loan disbursement to a contract that includes a two-month grace period. The provision of a grace period increased short-run business investment and long-run profits but also default rates. The results, thus, indicate that debt contracts that require early repayment discourage illiquid risky investment and thereby limit the potential impact of microfinance on microenterprise growth and household poverty. (JEL A21, G32, I32, L25, L26, O15, O16)*

Source: Field et al. (2013)

# How Borrowers Use Their Microloans



Source: Field et al. (2013)

# Repayment Grace Periods Increase Business Investment

	Control group mean (SD) (1)	Coefficient on grace period dummy (SE)	
		OLS (no controls) (2)	OLS (with controls) (3)
<i>Panel A. Total business spending</i>	6,142.4 (162.4)	364.9** (180.1)	383.9** (185.2)
Component-wise business spending			
Inventory and raw materials	4,521.4 (226.3)	337.1 (279.9)	367.6 (272.8)
Business equipment	1,536.5 (172.4)	8.786 (234.1)	-14.4 (227.1)
Operating costs	84.46 (36.91)	19.01 (48.37)	30.75 (49.38)
<i>Panel B. Total nonbusiness spending</i>	1,149.1 (149.1)	-356.1** (172.4)	-371.6** (178.7)
Component-wise nonbusiness spending			
Home repairs	557.2 (116)	-208.8** (105.1)	-222.1** (110.4)
Utilities, taxes, and rent	25.95 (15.66)	-8.214 (19.9)	-9.657 (20.66)
Human capital	237.9 (76.88)	-34.97 (90.26)	-33.06 (91.99)
Money for relending	197.6 (56.74)	-27.42 (70.61)	-30.13 (69.51)
Savings	131.6 (35.97)	-15.02 (47.12)	-10.75 (47.48)
Food and durable consumption	151 (76.21)	-91.79 (94.11)	-94.73 (97.86)
<i>Panel C. New business</i>	0.02 (0.00648)	0.0268** (0.0135)	0.0258* (0.0139)

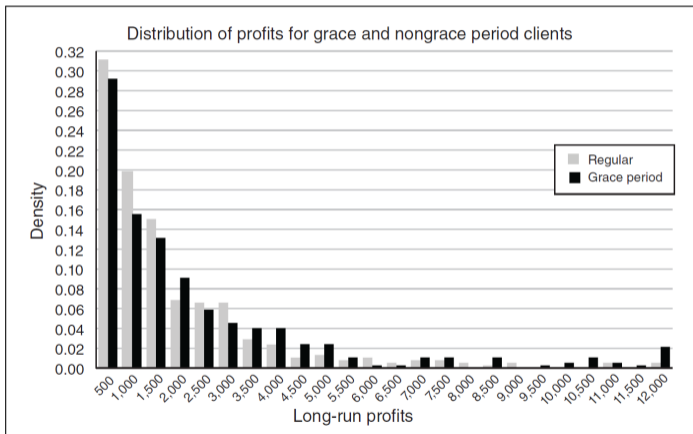
Source: Field et al. (2013)

# Repayment Grace Periods Increase Profits

	Average weekly profits		log of monthly HH income		Capital	
	OLS (no controls) (1)	OLS (with controls) (2)	OLS (no controls) (3)	OLS (with controls) (4)	OLS (no controls) (5)	OLS (with controls) (6)
<i>Panel A. Full sample</i>						
Grace period	906.6** (373.8)	902.9** (370.2)	0.195** (0.0805)	0.199** (0.0782)	28,770.2** (11,291.0)	35,733.1*** (13,020.6)
Observations	752	752	749	749	766	766
Control mean	1,586.8 (121.8)	1,586.8 (121.8)	20,172.71 (55,972.25)	20,172.71 (55,972.25)	35,730.2 (5,056.0)	35,730.2 (5,056.0)

Source: Field et al. (2013)

# Repayment Grace Periods Increase Profits



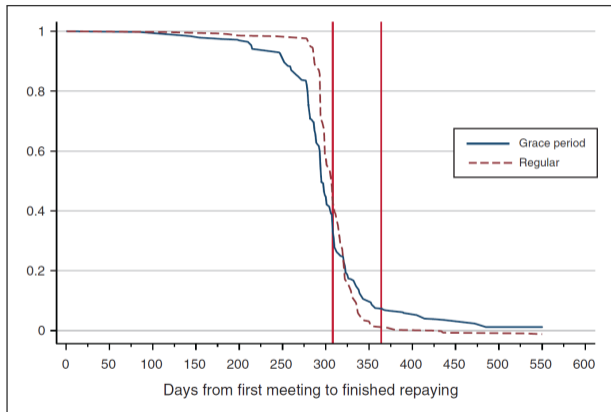
Source: Field et al. (2013)

# Repayment Grace Periods Increase Profits

	Business closure (1)	Average difference in profits between high- and low-profit months (2)	Sold goods or services at a discount to make loan payment (3)	Customers buy on credit (4)	Customers pre-order goods or service (5)	Number of goods and services provided (6)
<i>Panel A. (No controls)</i>						
Grace period	-0.0718** (0.0324)	686.6* (375.7)	-0.0232* (0.0128)	0.0972** (0.0373)	0.0989*** (0.0356)	5.543** (2.467)
<i>Panel B. (With controls)</i>						
Grace period	-0.0669** (0.0334)	713.9* (396.6)	-0.0166 (0.0122)	0.113*** (0.0371)	0.107*** (0.0358)	6.051** (2.566)
Observations	766	751	764	769	769	769
Control mean	0.386 (0.0243)	2,361.6 (242.0)	0.0468 (0.0112)	0.432 (0.0270)	0.395 (0.0236)	5.607 (0.475)

Source: Field et al. (2013)

# Repayment Grace Periods Increase Default Rates



Source: Field et al. (2013)

# Repayment Grace Periods Increase Default Rates

	Full loan not repaid				Repayment history		
	Within 8 weeks of due date (1)	Within 24 weeks of due date (2)	Within 52 weeks of due date (3)	Amount outstanding within 52 weeks of due date (4)	Repaid at least 50 percent of the loan (5)	Made first half of loan repayments on time (6)	Made first payment (7)
<i>Panel A. (No controls)</i>							
Grace period	0.0901** (0.0349)	0.0696** (0.0280)	0.0614** (0.0251)	148.7* (83.61)	-0.0137 (0.0151)	-0.00842 (0.0613)	0.0288 (0.0261)
<i>Panel B. (With controls)</i>							
Grace period	0.0845** (0.0333)	0.0642** (0.0262)	0.0609** (0.0249)	149.0* (83.55)	-0.0156 (0.0159)	-0.0246 (0.0534)	0.0244 (0.0240)
Observations	845	845	845	845	845	845	845
Control mean	0.0424 (0.0142)	0.0212 (0.0101)	0.0165 (0.00899)	69.65 (40.15)	0.988 (0.00774)	0.501 (0.0427)	0.953 (0.0231)

Source: Field et al. (2013)

# The Impacts of Microfinance: Takeaways

Microfinance is not a transformative approach to alleviating poverty **for most people**

- Modest demand for microfinance loans, varies across contexts
- Loans associated with expanded self-employment activities
- Impacts on microenterprise revenues and profits, HH consumption imprecisely estimated
  - ▶ Cannot rule out substantial average impacts
  - ▶ Quite possible that microfinance has large impacts on a very small number of people

Traditional microfinance loan structure encourages repayment, but discourages risk-taking

- Need to begin repayments immediately may limit impacts of loans on business expansion