



**MONEYLENDERS AND
MICROFINANCE: THE EFFECTS OF
MICROFINANCE ON INFORMAL CREDIT
MARKETS IN BANGLADESH**

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POLICY CONTEXT

- Rationale for policy interventions in credit markets: exploitative money lenders (e.g. “Debt Settlement Boards” in Bengal during 1940s and 1950s, Cooperative and Integrated Rural Development projects, e.g. “Comilla model”, agriculture and rural development banks etc.)
- Microfinance viewed as substitutes for moneylenders



MFI: REDUCING RELIANCE ON MONEYLENDERS

- From 7th Nelson Mandela Annual Lecture of Professor Yunus
- “When my list was done it had the names of 42 victims. The total amount they had borrowed was US \$ 27. What a lesson this was to an economics professor who was teaching about billion dollar economic plans. I could not think of anything better than offering this US \$ 27 from my own pocket to get the victims **out of the clutches of the moneylenders.**”
- This has been echoed in the mission statements of most MFIs



MOTIVATION

- Large literature on the impacts of microfinance on household welfare
- Almost no evidence on its impact on moneylenders (only paper: Mallick (2012))
- This is not because moneylenders do not exist anymore
- Wall Street Journal article on India (based on Reserve Bank of India (RBI) report)

RBI report provided some summary statistics showing that activities of money lenders have increased in areas with greater MFI penetration



RESEARCH QUESTIONS

- Have MFIs been able to drive money-lenders out of the rural credit market?
- Look at the impacts of MFI on moneylender interest rate, on household borrowing from informal sources. Evaluate the MFIs in terms of one of their own most commonly stated objective.
- Because of our focus on general equilibrium effects, we use data from Bangladesh:
 - Geographic coverage has been extensive, and wide variations in coverage rates across areas
 - 30 years of MFI lending



PREDICTIONS: EFFECTS OF MFI ON INFORMAL CREDIT

- “Conventional Wisdom”: An increase in MFI credit => decrease in demand for informal loan => decrease in borrowing from moneylenders => decrease in interest rate
- “Alternative View”: An increase in demand for credit from moneylenders due to
 - Rigid loan repayment schedule
 - Smaller size of loan relative to “indivisible investment projects”
 - Increased loan demand => increased moneylender interest rate
- “Third View”: Coming soon



LITERATURE

- Only one paper: Mallick (2012) uses data from 79-106 villages to examine impact of MFI on moneylender interest rate: finds interest rate to be higher where MFI participation rates are higher
- No analysis of household borrowing from informal sources



DATA

- InM Prime survey (2006-2007): 65,000 ultra poor households in 804 villages in North-Western part of the country (Gaibandha, Lalmonirhat, and Nilphamari)
- BIDS/BRAC panel survey (2000-2008): 1599 households from 62 villages



IMPACT ON INTEREST RATE

○ Estimation challenge

- Correlations between unobserved village heterogeneity (productivity/poverty) and MFI placement at the village level
- Two approaches to deal with omitted variables bias:
 - Placement/productivity controls => direction of change in estimated OLS coefficients
 - IV strategy: IV satisfying exclusion restrictions very difficult to find
 - Rely on heteroscedasticity based identification where IVs act as probabilistic shifters. Use different estimators to check robustness of results (Klein-Vella, Lewbel)



OLS: ML INTEREST RATE

Dependent Variable: ML interest rate	(1)	(2)	(3)	(4)
MF coverage	0.13* (1.88)	0.22*** (3.39)	0.27*** (4.87)	0.26*** (5.09)
Village Controls	No	Yes	Yes	Yes
Fixed Effects	No	No	District	Upazilla
Obs. = 804 villages				

(InM PRIME Baseline Data)



KV-CF: ML INTEREST RATE

Dependent Variable: Moneylender Interest Rate Microfinance Coverage rho (placement/selection)	KV-CF 0.502*** (2.63) -0.096*** (-3.12)
Z_v variables	Female agricultural wage % in village owning < 0.1 acre land Number of households in village
Z_u variables	% using developed technology Distance to market Number of households
Number of successful replications	319



ARE THE MFI MEMBERS MORE LIKELY TO BORROW FROM MONEYLENDERS? IMPACT ON EXTENSIVE MARGIN

- OLS estimate is likely to be biased upward:
 - High ability => high MFI participation => higher borrowing from moneylenders too => positive correlation
- Two strategies:
 - Use productivity/placement controls
 - IV strategy: Limited dependent variable => can not use KV or Lewbel estimator
 - Take advantage of panel: use a Difference-in-difference estimator with household fixed effect



EXTENSIVE MARGIN: OLS (INM PRIME DATA)

Dependent Variable:	(1)	(2)	(3)	(4)	(5)
Current outstanding informal loan (yes =1)					
Member in any MFI? (yes=1)					
OLS	0.053	0.044	0.038	0.010	0.002
	[0.048, 0.058]	[0.039, 0.049]	[0.033, 0.043]	[0.006, 0.014]	[-0.005, 0.009]
Inverse Probability Weighted		0.045	0.035	0.007	-0.000
		[0.040, 0.050]	[0.030, 0.040]	[0.004, 0.011]	[-0.004, 0.002]
Minimum Bias		0.044	0.057	-0.003	-0.001
		[0.031, 0.049]	[0.049, 0.068]	[-0.009, 0.001]	[-0.007, 0.004]
Household Variables	No	Yes	Yes	Yes	Yes
Village Variables	No	No	Yes	Yes	Yes
Fixed Effects	No	No	No	District	Upazilla
Number of Observations	65,272	65,272	65,272	65,272	65,272

EXTENSIVE MARGINS

- Using InM data (can not distinguish between moneylender and other informal borrowing)
 - OLS
 - Matching and inverse probability weighting
 - Minimum Bias
- No difference across estimators
- When household controls and upazilla fixed effects included: no significant correlations left
- Direction of bias is consistent with positive correlations induced by unobserved ability and attitude toward risk, pro-poor placement



IMPACT ON EXTENSIVE MARGIN (PANEL DATA)

Dependent Variable: New Informal Borrowers in 2008 (yes=1)					
Treatment Variable: New MFI Member in 2008 (yes=1)	(1)	(2)	(3)	(4)	Number of Observations
Full Sample					
Never Member Control	-0.057***	-0.066***	-0.063***	-0.061***	1,223
	(-3.74)	(-4.16)	(-3.98)	(-3.82)	
Dropout Control	-0.051*	-0.047*	-0.045*	-0.042*	521
	(-1.87)	(-1.78)	(-1.76)	(-1.77)	
Never Member & Dropout Control	-0.056***	-0.063***	-0.060***	-0.058***	1,365
	(-3.83)	(-4.19)	(-3.97)	(-3.86)	
Household Controls (2000)	No	Yes	Yes	Yes	
Region Controls	No	No	Division	District	

EXTENSIVE MARGINS (PANEL DATA)

- Defined variables so as to difference out household level fixed effects (ability differenced out)
- What is the control group?
 - Never member
 - Dropout
 - Both groups
- Impacts are negative
- Slightly larger for the subsample of households with less than 1 acre of land



EXTENSIVE AND INTENSIVE MARGINS

	(1)	(2)	(3)	(4)
Comparison Group: Never Member & Dropouts				
New NGO member in 2008	-0.0525***	-0.0588***	-0.0572***	-0.0566***
	(-3.690)	(-3.998)	(-3.870)	(-3.818)
Household Controls	No	Yes	Yes	Yes
Region	No	No	Division	District
Observations	1,365	1,365	1,365	1,365



BOTH EXTENSIVE AND INTENSIVE MARGINS

- Dependent variable: 1 if an increase in informal borrowing between 2000 and 2008 and zero otherwise. Includes extensive margins (new borrowers) and intensive margins (old borrowers borrowing more)
- The estimates imply a negative effect
- Results robust to comparison groups
- Estimates are larger in magnitude for less than 1 acre sub-sample
- Estimates are very similar to that for extensive margin alone => most actions coming at extensive margins



INTENSIVE MARGIN: CHANGE IN LEVEL OF BORROWING (INCOMPLETE)

- Decrease in the size of loan for new members
- Loan size for never member groups increased significantly
- Informal source's share in credit market declined significantly



SUMMARY OF RESULTS

- Moneylender interest rate increased: consistent with “alternative view”
- Borrowing from moneylender decreased: consistent with “MFI view”
- Neither views can explain evidence
- “Third View”: Two mechanisms suggested by theoretical literature
 - cream skimming: low risk/high ability borrowers are picked up by MFIs, leaving high risk/low ability borrowers in the moneylender segment of the market. Interest rate is high to compensate for high risk
 - fixed costs of screening: higher per borrower screening costs => smaller number of borrowers and higher interest rate.



CONCLUSIONS

- MFIs have driven out significant part of moneylenders' business
- Those still dependent on moneylenders are paying higher interest rates. May not be Pareto improvement.
- Ongoing Work: Understand the effects on the Intensive Margin Better
- Additional Data Sets:
Panel Data set from Bangladesh (PKSF panel)
HIES (2010)

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