



Impact of Microcredit

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Overview



- Overview of impact evaluation of micro *credit*
- Experimental credit scoring
 - First Macro Bank evaluation of credit
 - Loan use study
- Conclusion and Points to Remember

Audacious to Humble*



- Magic bullet against poverty
 - ▣ This claim rarely made anymore
- Lifts millions out of poverty
- Raises poor peoples income and consumption
- Helps poor cope with poverty
- Not about income or consumption, but rather about freedom and empowerment

*List courtesy of Rich Rosenberg, CGAP

Motivation



- Microcredit certainly a “big” idea
- One key premise underlies the movement:
 - Credit market failures exist
 - Specifically, “microcredit”, by lowering transaction costs or removing information asymmetries, removes credit constraints for the poor
- *Countless* key impacts argued:
 - As credit constraints relaxed, impacts spread through all facets of business, consumption, health, education, gender empowerment...
- Of course some argue this could be too much debt
 - Consumer disclosure issues
 - Point to the USA.... where debt is now the culprit, not the savior...

The Impact Question



How have the lives changed of the people in a program compared to how their lives would have changed had the program not existed?

Why evaluate?



- Why evaluate?
 - Inspire skeptics
 - Resources are scarce
 - “Market test” insufficient
 - Many items pass (cigarettes, fatty foods, even credit in the USA) but aren’t promoted as tools to improve wellbeing
 - Many subsidies exist, even to the profitable firms
- When to not evaluate?
 - Sample size/setting/logistics don’t permit
 - Impact of the **idea** is known, from theoretically similar settings.
 - So just monitor operations, program design and targeting to make sure comparison valid
 - And operational tests to improve

Two statements often heard



1. Our clients are highly motivated and work tirelessly to fight their way out of poverty.
2. Roqia secured a loan for US \$160, purchased a sewing machine and basic items, and opened a tailoring business in her family's home. With additional loans, she purchased a second sewing machine, and is teaching another woman to be a seamstress. She is most proud that she can provide better, more nutritious food for her brothers and sisters.

Why a randomized trial to measure impact?



- Impact studies of microcredit have been done
 - Typically compare after to before
 - Or improvement on that: compare after to before, compared to changes for non-borrowers
- Basic selection problems:
 - Who *chooses* to borrow?
 - Entrepreneurial spirit? Resourceful individuals?
 - Who do MFI's agree to lend to?
 - Program placement: MFI's target growing areas

Two basic methods



- Randomized credit scoring
 - Marginal applicants randomized
 - Focus of this talk
- Randomized program placement
 - Some communities/villages/slums entered, others not
 - Spandana, India: Banerjee presentation in this panel
 - Al-Amana, Morocco: Duflo presentation in this panel
 - Compartamos, Mexico: study in progress

Basic Methodology



Step 1: Lender computes credit score and randomizes marginal loan applicants:

1 – 30		31 – 45		46 – 59		60 – 100
Auto reject		Randomly		Randomly		Auto approve
		approve 60%		approve 85%		

Step 2: Researchers conduct follow-up survey

- Immediate outflows/expenditures (2 week survey)
- Borrowing, broadly defined
- Business income, expenses, and profits
- Investments, broadly defined
- Psychological and political outlook

Why do banks do this?



1. Speed

- ❑ Credit committees slow, costly, and subject to inconsistencies
- ❑ Computerized credit scoring with audit trail much faster

2. Learning

- ❑ Many banks too conservative. Not lending at all to the risky.
- ❑ Credit scoring in the long run helps to learn correct pricing, terms and loan size decisions

3. Portfolio management

- ❑ Manage risk across portfolio

4. Scale-up

- ❑ More scalable business model
- ❑ Prepares for innovations in mobile banking space

Three studies to date using experimental credit scoring



- In chronological order:
 - South Africa, “consumer” lender
 - Does not typically ask what the money is for
 - Lends to salaried individuals
 - Based on paystubs and credit report
 - Result: ~10 percentage point increase in likelihood still employed
 - Philippines, First Macro Bank, “microenterprise” lender
 - Money intended for business investment
 - One year impacts measured
 - Result: Next slides
 - Philippines, First Macro Bank, First Valley Bank, FICO
 - Ongoing study
 - Immediate use of funds measured (reported here)
 - Longer term impacts: to be measured

First Macro Bank study (1)



- Released mid-2009
- First test:
 - Does credit increase?
 - If not, no credit market failure on volume of credit
 - Could be that quality of credit is better?
 - Answer: Yes, total borrowing increases. Thus control group does not get rejected and simply borrow elsewhere.

First Macro Bank study (2)



- Business expansion?
 - No, if anything, we see consolidation and reduction of # of employees
 - Profits increased for men, but not for women
- Subjective wellbeing increase?
 - No, if anything, stress increases and subjective wellbeing decreased by 0.05 standard deviations
 - (Composite of optimism, calmness, worry, job satisfaction, decision making power and perceived socioeconomic status)
- Risk management ability increases?
 - Formal sector: Yes, purchase of insurance decreases
 - Informal sector: Yes, ability to borrow informally increases

First Macro Bank study (3)



- Overall:
 - Much dissipation
 - Clearly answer is heterogeneous
 - Motivated us to start with an earlier question: what do people actually do with the money?

New Study: In Depth Loan Use Analysis



- Joint with Adam Osman, Yale University
- Working with 3 banks in different geographic areas of the Philippines
 - First Macro Bank (same as prior study)
 - First Valley Bank
 - FICO



Loan Use Study: 6 Steps

- To the Bank on the Application:
 - What did they tell the bank on the application?
- To the Bank at 1st Repayment
 - What did they tell the bank *after* they got the loan?
- To an Independent Surveyor, Direct Elicitation
 - 2 Weeks Later
 - Surveyors not known to have any affiliation with bank
- To an Independent Surveyor, Indirect Elicitation
 - Employs “List Randomization” to allow respondent to reveal answers to questions they don’t want to admit openly
- To an Independent Surveyor, Measuring Actual Expenditures
 - Takes into account fungibility of money: Compares treatment to control
- (Later: To Independent Surveyor after 3 Months)

List Randomization - Concept



- Technique to ask questions that people may not be truthful about
- Two groups:
 - One group is given 4 useless statements
 - Second group is given the same 4 statements as well as the statement of interest
- Respondents do **not** answer each question. Instead, they say the total number of “true” statements.
- We subtract
- The difference is the average proportion of respondents who answered “yes” to the statement of interest
- Two Statements of Interest:
 - I used 2,500 pesos or more of my loan to pay down other debt.
 - I used 5,000 pesos or more of my loan on any single transaction for my household.

List Randomization - Example

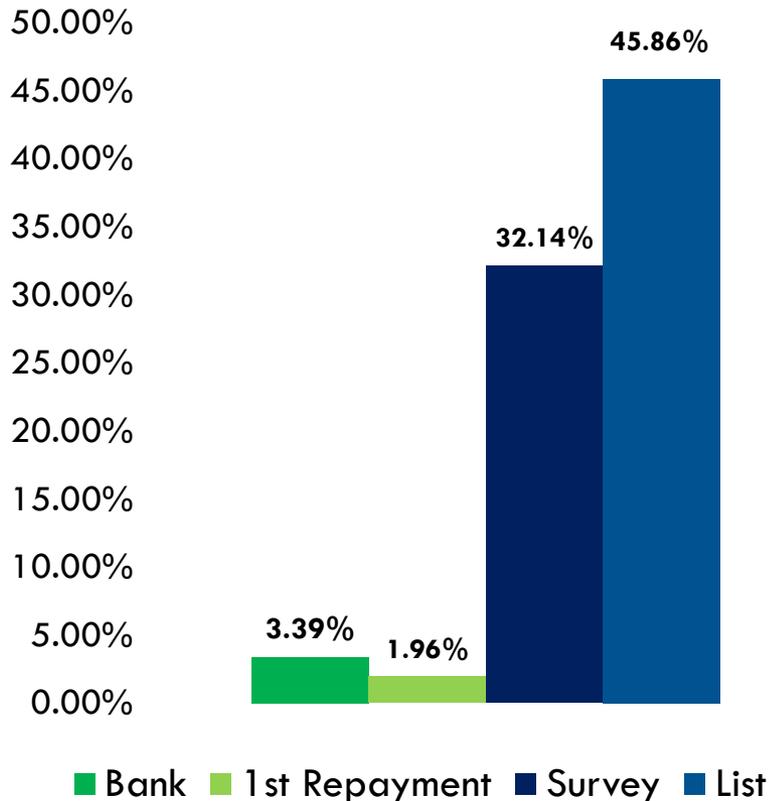


- How many of the following are true for you:
 1. I have visited a hospital in the last six months
 2. I have more than 2 siblings
 3. I have completed more than one year of post-secondary schooling
 4. I am originally from this city
 5. (I used 2,500 pesos or more of my loan to pay down other debt)

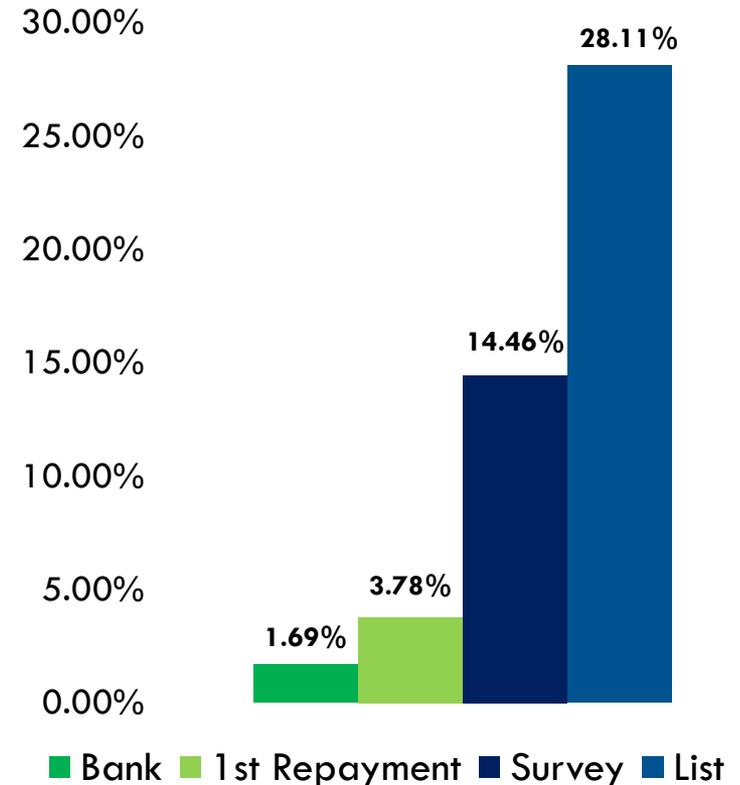


Loan Use - Responses

Spent More Than 2500 PHP to Pay Down Other Debt



Spent More Than 5000 PHP on a Single HH Transaction

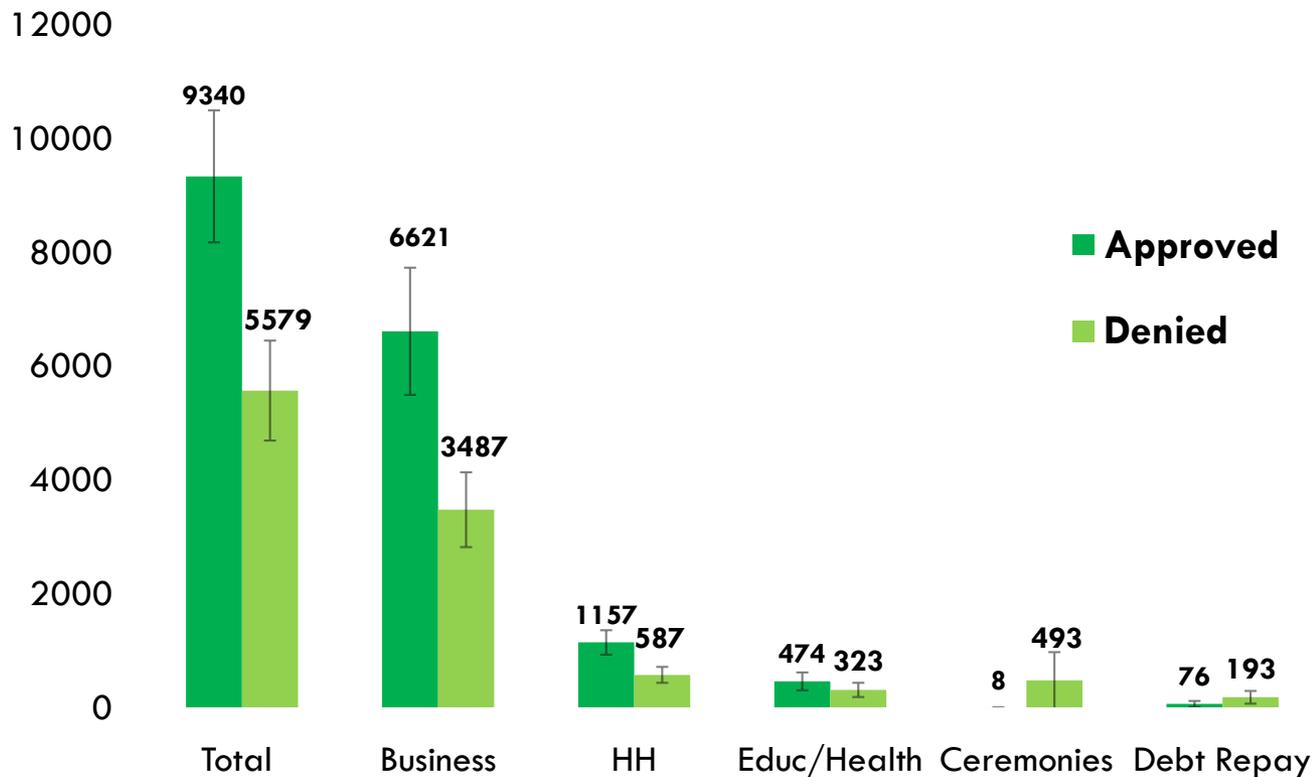


Loan use – Via Expenditure Survey

Asked: “Tell us about all expenditures greater than US\$20”



Mean Aggregate Expenditure Amounts

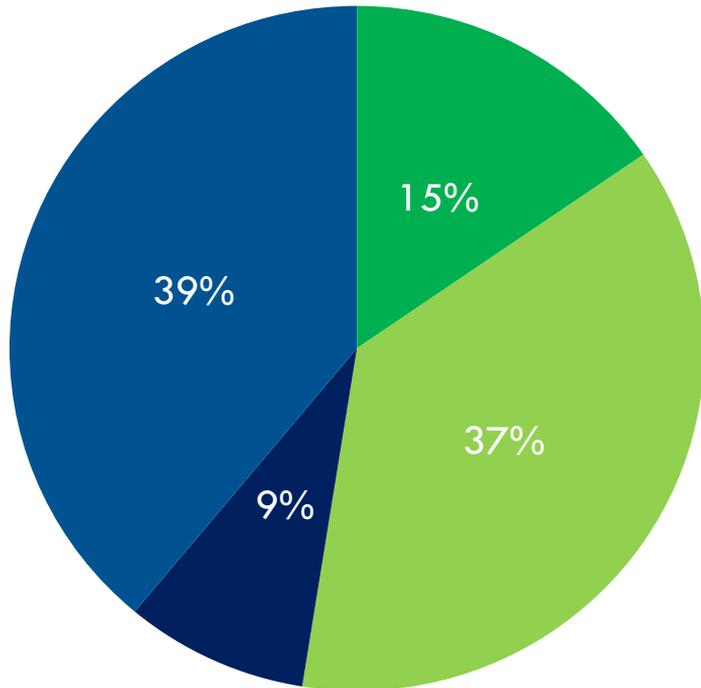


Loan Use – via expenditure survey

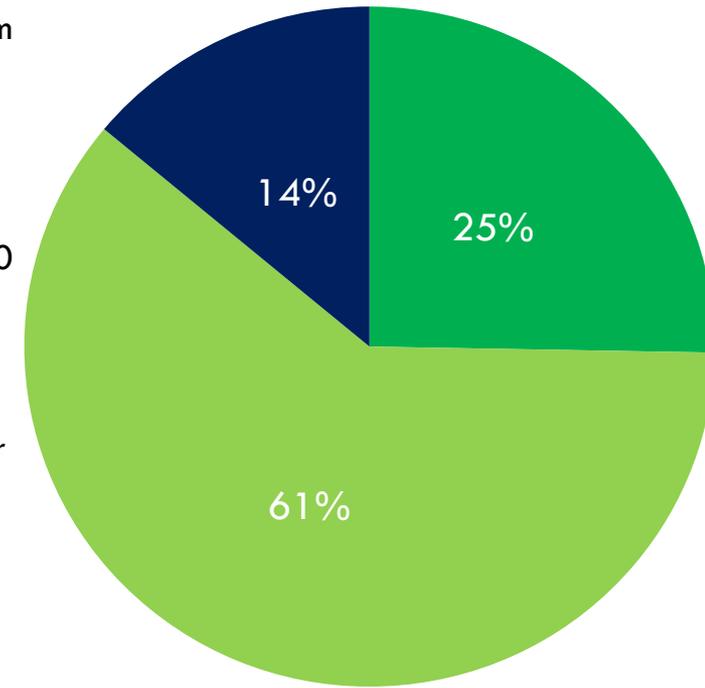
Asked: “Tell us about all expenditures greater than US\$20”



What happened to loan proceeds?



Of the funds accounted for, what happened to the loan proceeds?



- Reduced borrowing from other sources
- Total Business Expenditure over US\$20
- Total HH Expenditure + Education + Health over US\$20
- Other (exp under US\$20, measurement error, other)

Loan Use - Conclusions



■ Current Results:

- Borrowers will tell banks one thing and do another
- Borrowers more truthful to surveyors, but still not entirely truthful
- Household and debt repayment common use of funds, even for “enterprise” lending

Further research:



Replication needed

- What are patterns of impact?
- What models predict these patterns, and will the heterogeneity hold in other settings?
- Alternative competitive setting
- Importance of understanding informal networks to assess impact of formal

Points to remember



- **Credit not a panacea**
 - Impacts exist, just not universal and pervasive
 - Using money for
- **Impact measurement not always possible. Monitoring important.**
 - Does program design and implementation match successful ones
 - Do clients understand terms, are they informed of options, etc?
 - Targeting: who is being reached?
 - Merely tracking changes for clients likely **misleading and wasteful.**
- **Further innovation needed**
 - Credit can be inflexible as currently offered
 - Some want savings, not credit. Some want insurance
 - Understanding psychology of decision-making critical to design of products.
 - Tomorrow's talk by Sendhil Mullainathan



Thank you!

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