

# **Microfinance: Learning What Works, What Does Not, And Why**

Dean S. Karlan  
Yale University,  
Innovations for Poverty Action (IPA)  
and Jameel Poverty Action Lab (J-PAL)

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# Expanding access

## Breakthroughs & challenges

- Need major breakthroughs to reach 500 million
- Social investors dominate private capital
- Face critical knowledge gaps

# Plan

- Key questions:
  - Flexibility and price
  - Market failures
- Process is important
  - Operations and research need not conflict
- Four examples
  - Group versus individual liability
  - Credit with education
  - Credit scoring
  - Savings product design

# Flexibility? Price?

- Why despite our best efforts are so many not reached?
  - Is it flexibility?
  - Is it price?
  - Is it institutional (organization structure, financing, human resource policy, etc.)?
  - Can we rule out lack of impact?

# Is It Flexibility?

- Cash flows do not match cash flow needs in many cases.
  - Farmers
  - Fluctuation in income
- Is it fear?
  - Afraid of not having money to repay (irony: this is a GREAT client! she is so trustworthy that she won't even take out a loan due to her fear of going into default!)
  - Lack entrepreneurial skills to expand business
  - Fears peer punishment
- What product designs can alleviate these concerns?

# Is It Price?

- Strikingly little evidence on price.
- The “old” line: price does not matter
- Recent work challenges this:
  - Dehejia, Montgomery & Morduch from Bangladesh
  - Karlan and Zinman from South Africa
- Clearly, elasticity of demand depends on a lot:
  - Competition
  - Business opportunities
  - Financial literacy
  - Framing of offer (this can matter more than price)

# Market Failures

- Three basic questions:
  1. Are there market failures, and can we specify more precisely what is happening (adverse selection, moral hazard, etc.)?
    - e.g., interest rate study in South Africa
  2. What innovations can solve these market failures?
    - Joint liability?
    - Credit with education?
  3. What is the welfare improvement from solving these market failures?
    - Little data on this... recent work in South Africa says yes, earlier work from Bangladesh and India say yes, but identification always a severe challenge.

# “Impact”

- “Impact” makes some shudder. Why?
  - Long history of “impact” studies that do not deliver *prescriptions*
- Why?
  - Methodological flaws
  - Lack of win-win approach to (a) solving operational problems while simultaneously (b) measuring impact
  - Example: credit scoring (3<sup>rd</sup> project discussed today)
    - Improve efficiency → reach sustainability at lower interest rates, deepen outreach
    - Measure impact of credit program → improve targeting so as to maximize impact



# Two Types of Impact Studies

- Does A work?
  - Credit versus no credit
- Does A work better than B?
  - Group versus individual liability
  - Credit only versus credit with education

# R & D

- Push to sustainability all but accepted in microfinance.
- This push comes with a cost if it is more affordable/profitable to lend to the not-so-poor.
  - Many “microfinance” are *not* expanding access to credit to those we typically discuss in the microfinance literature (micro-entrepreneurs, lack formal employment, females, poor, lack collateral).
- Who makes the R&D investment?
  - Historically, non-profits chartered new waters in microfinance.
  - Once product/process proven, for-profits adopted.

# R&D

- Key question for donors/investors:
  - How do we *leverage* our investments to maximize social welfare, while maintaining private returns?
    - Despite the “movement”, there remains a *massive* untapped market.
    - R&D can help figure out how to tap that market profitably.
    - ***Make sure the approach, if successful, gets replicated and scaled.***

# Product and Process Innovation

- Key challenge for policymakers, donors and researchers:
  - How do we provide better advice as to what to do?
- Product innovation process should measure impacts *to the institutions* (as well as clients)

# Non-Experimental Innovations

- Typical innovation process:
  - Step 1 (?): Small pilot to resolve operational kinks
  - Step 2: Full launch to entire program. Compare before to after.
- What is wrong with this?
  - What else changed?
    - The economy
    - The staff
    - Other components of the operations
  - Suppose you have 4 branches. Why not change 1, and compare that to the other 3?
    - How does that one branch differ?
    - Local economic shocks
    - Local weather shocks
    - Different staff. Is that branch manager particularly good? Particularly bad?
  - Bottom line, the above does *not* give you reliable prescriptions that tell you what will happen if you expand the intervention.

# Randomized Controlled Trials

- Key benefits:
  - ESTABLISH CAUSALITY!
  - With sufficiently large sample, you know that the *only* difference between treatment and control is random chance.
  - This establishes a *causal* link between the treatment and the outcome.
- Experimental innovation process:
  - Step 1: Small pilot resolves operational kinks.
  - Step 2: Randomized controlled trial
  - Step 3: Analyze results and decide whether to expand.

# Product and Process Innovation

- Advantages of randomized control trials
  - Less risky (avoids costly mistakes)
  - Learn more about your client and your institution
  - Provides public good to other microfinance institutions
  - Can test multiple changes at once
- Disadvantages
  - Typically requires involving outsider to help coordinate the test
  - Requires patience

# Four Examples

- Group versus Individual Liability in the Philippines
  - Joint work with Xavier Giné, World Bank
- Credit with Education in Peru
  - Joint work with Martin Valdivia, GRADE
- Credit Scoring in South Africa and Philippines
  - Joint with Jonathan Zinman
- Savings Product Design
  - Experiments in Peru, India and the Philippines
  - Joint with Sendhil Mullainathan and Jonathan Zinman



# Group versus Individual Liability

- Microfinance is typically seen as a solution to credit market failures faced by the poor
- Group liability, a feature found in many micro loans, is perceived as a key innovation that has contributed to this success
  - e.g.: Grameen, FINCA, Accion

# Motivation

- Yet, in recent years, many micro-lenders have expanded rapidly using individual liability
- In turn, this has motivated other lenders that were using group liability to shift to individual liability

# Group versus Individual Liability

- Screening
  - future study (a little here)
- Monitoring + Enforcement
  - this study removed these peer incentives
- Note: we have not eliminated shame or reputation protection from process

# Group versus Individual Liability

- Green Bank of Caraga in the Philippines
- 170 joint liability Grameen-style centers
  - 80 randomly assigned to convert to individual liability centers, but weekly meetings remained intact ("treatment")
  - 90 randomly assigned to remain as-is, under joint liability

# Main Results

- Outcomes:
  - No change in repayment
  - No change in savings
  - No change in allocation of time by credit officers
  - Higher client retention
  - Higher number of new members joined

# Auxiliary Results

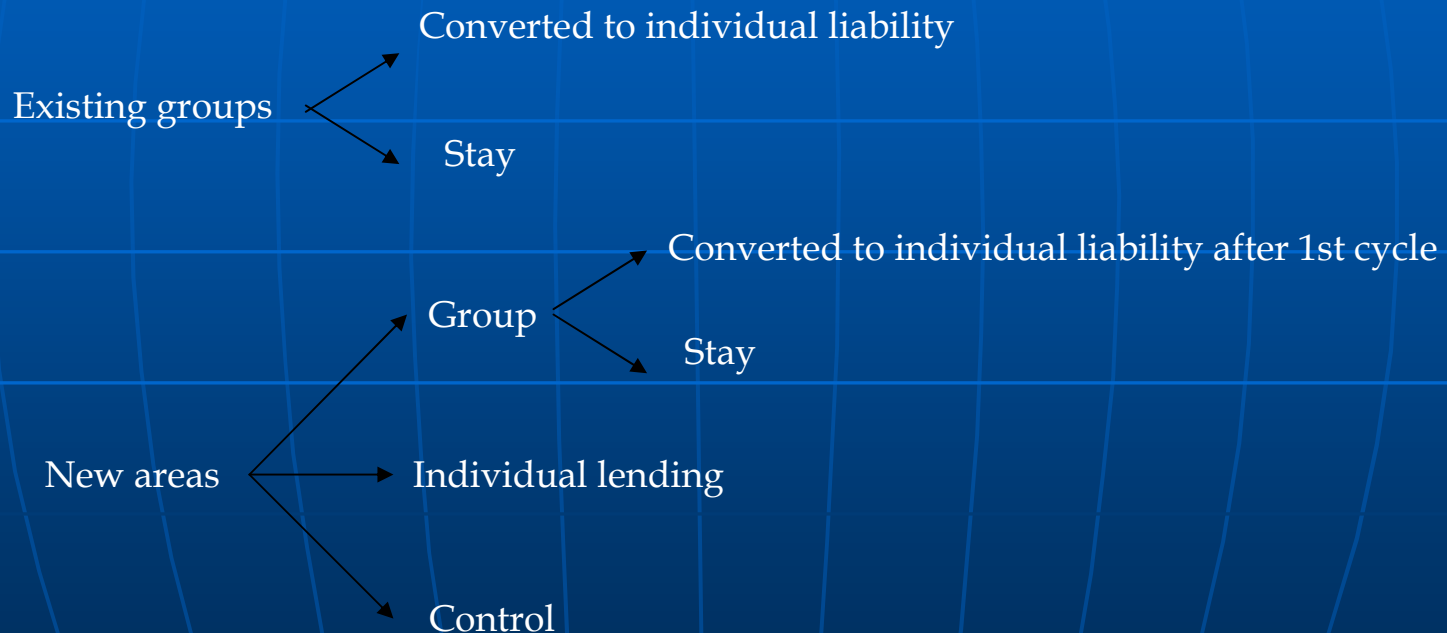
- Evidence of monitoring effects
  - Both baseline and new clients in converted centers remember less about other members' defaults
- Evidence of selection effects
  - New clients in converted centers are less likely to predict defaults of other members correctly.
- Social network
  - Mostly no change. Some small evidence of fewer side-loans (insurance?) in converted centers.
  - Less money spent on parties (but no change in prob of a party)

# Conclusion

- Evidence of *mechanisms* of screening & monitoring.
- But they do not add up and lead to default!
- Why?
  - Perhaps not enough time
  - Perhaps simply not economically significant

# Next Steps in Philippines

- Design of New Areas (ongoing)





# FINCA Peru

- FINCA Peru: Clients wanted training
- Freedom from Hunger and Atinchik developed materials
- 239 village banks in Lima and Ayacucho
  - 138 randomly assigned to receive credit with education ("treatment")
  - 101 randomly assigned to remain as-is, receiving credit only ("control")
- Study lasted ~two years

# FINCA Peru Outcomes

- Impact on MFI
  - Repayment increased
  - Client retention increased 10%
    - Reciprocity? or improved business outcome?
- Business processes
  - Invested profits back in business
  - Keeps records from business
  - Implemented innovations in their business
- Client outcomes
  - Increase in average sales
  - Increase in worst-month sales
  - No increase in employment
  - Female children more likely to attend school

# Credit Scoring

- Win-win
  - More efficient screening, arguably better decision-making (needs testing)
  - Study impact on marginal borrowers!
- Implementing this in Philippines, South Africa, Brazil, and potentially Peru
- Looking for more places: replication critical

# South Africa Experiment

- Is screening too rigorous?
- What is the impact of lending to those not being reached currently?
  - Lender uses credit scoring + subjective decision-making by branch manager.
  - Unrejected in real-time rejected clients.
  - Surveyed them 6-12 months later.
  - Profitable for lender to lend to them.

# Impact

- Positive impact on employment, wages and hunger
- 7 percentage point reduction in poverty level.

# Behavioral Savings

- Example of replication
- Prior study in Philippines (SEED)
  - Commitment to not withdraw can help increase savings
- New studies: How do we get people to deposit!
  - Peru, India and the Philippines

# Behavioral Savings

- Series of ideas from psychology & economics:
  - Attention (reminders)
  - Mental accounting (puzzles, photos, framing, goals)
  - Gains versus losses
  - Incentives (i-rate, bonuses)
  - Habit formation (timing of deposits/reminders)
- Goal:
  - Tease out crucial mechanisms
  - Generate evidence from multiple settings

# Laundry List

- Price (interest rates)
- Credit bureaus
  - de Janvry, McIntosh & Sadoulet in Guatemala
- Loan terms and frequency
  - Field and Pande in India
- Loan size
- Links to formal insurance
  - Hospitalization, health, life, rainfall, cattle insurance
- Returns to capital
  - McKenzie and Woodruff in Sri Lanka and Mexico



**Thank you!**