ABDUL LATIF JAMEEL
Poverty Action Lab

TRANSLATING RESEARCH INTO ACTION

Randomized Evaluation: Start-to-finish

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J-PAL

Course Overview

1. What is evaluation?
2. Measuring impacts
3. Why randomize?
4. How to randomize
5. Threats and analysis
6. Sampling and sample size
7. **Randomized Evaluation: Start-to-finish**
8. Cost-effectiveness analysis and scaling up

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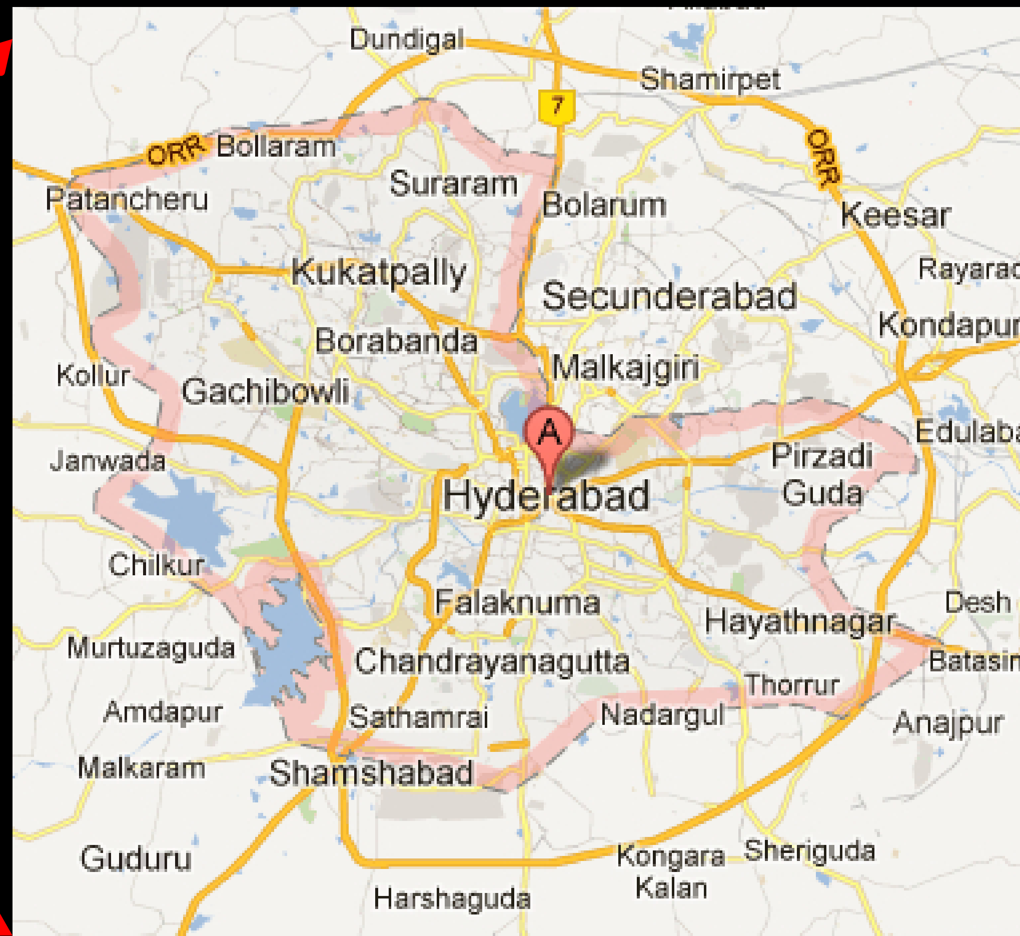
Motivations

- Impact of microcredit one of two priorities for evaluation for JPAL
  - Large and growing area with many claims but no experimental evidence
  - Selection likely to be a major problem
- Needed to find the right opportunity
  - Representative program
  - Strong partner commitment
  - Sufficient sample size
- Took years of active search to find the right partner in Spandana

The partner: Spandana

- Launched in 1998
- By 2002: 16,400 clients
- Group lending, small but rising amounts
- For profit and less education focused, but similar to others
- Moving into a new city
- Very committed head in Padmaja Reddy

The setting: Hyderabad, India



About Hyderabad

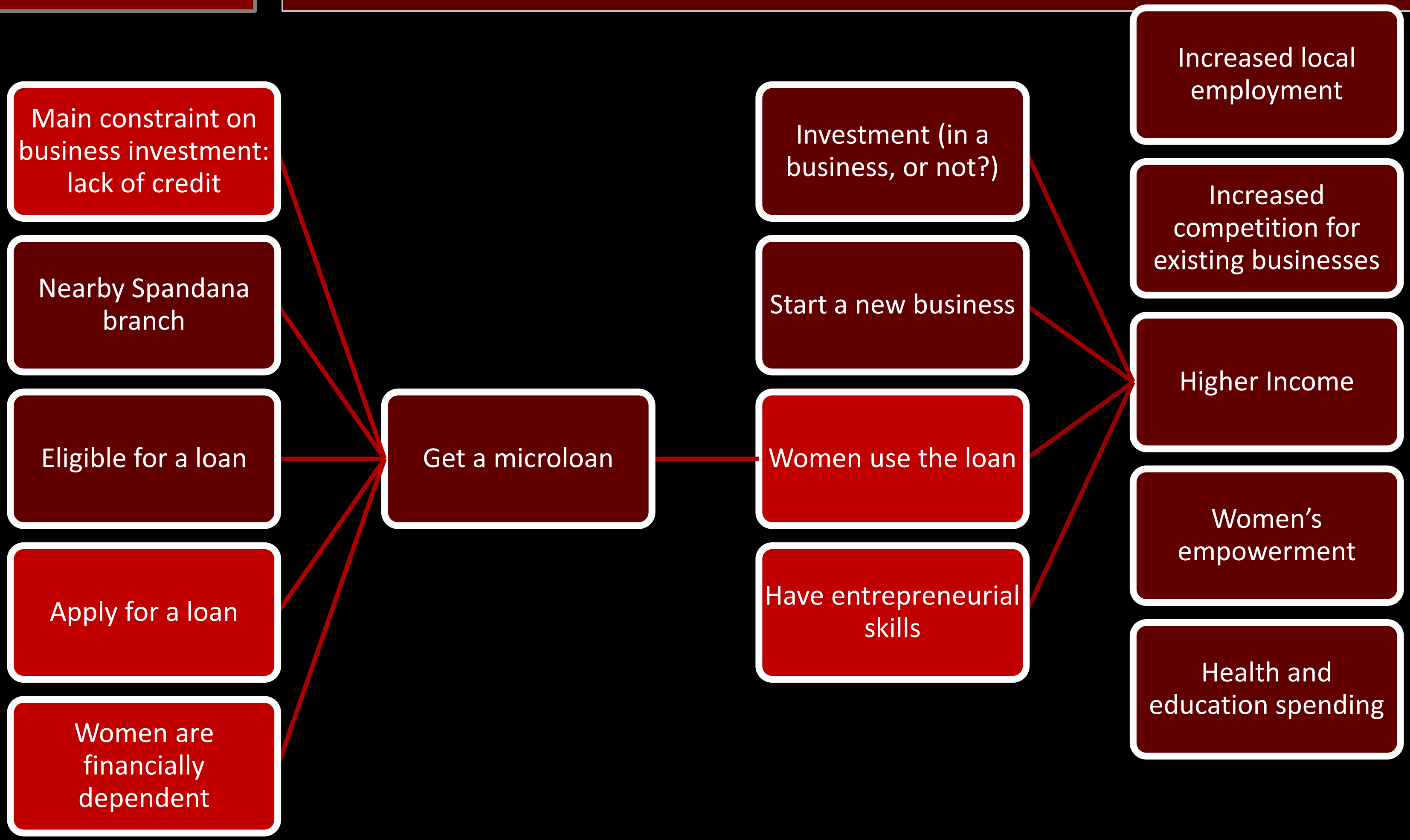
The city

- 1/3 of Hyderabad's population lives in slums
- In 2004, no MFIs were working in these neighborhoods
- Yet 69% of households had an informal loan

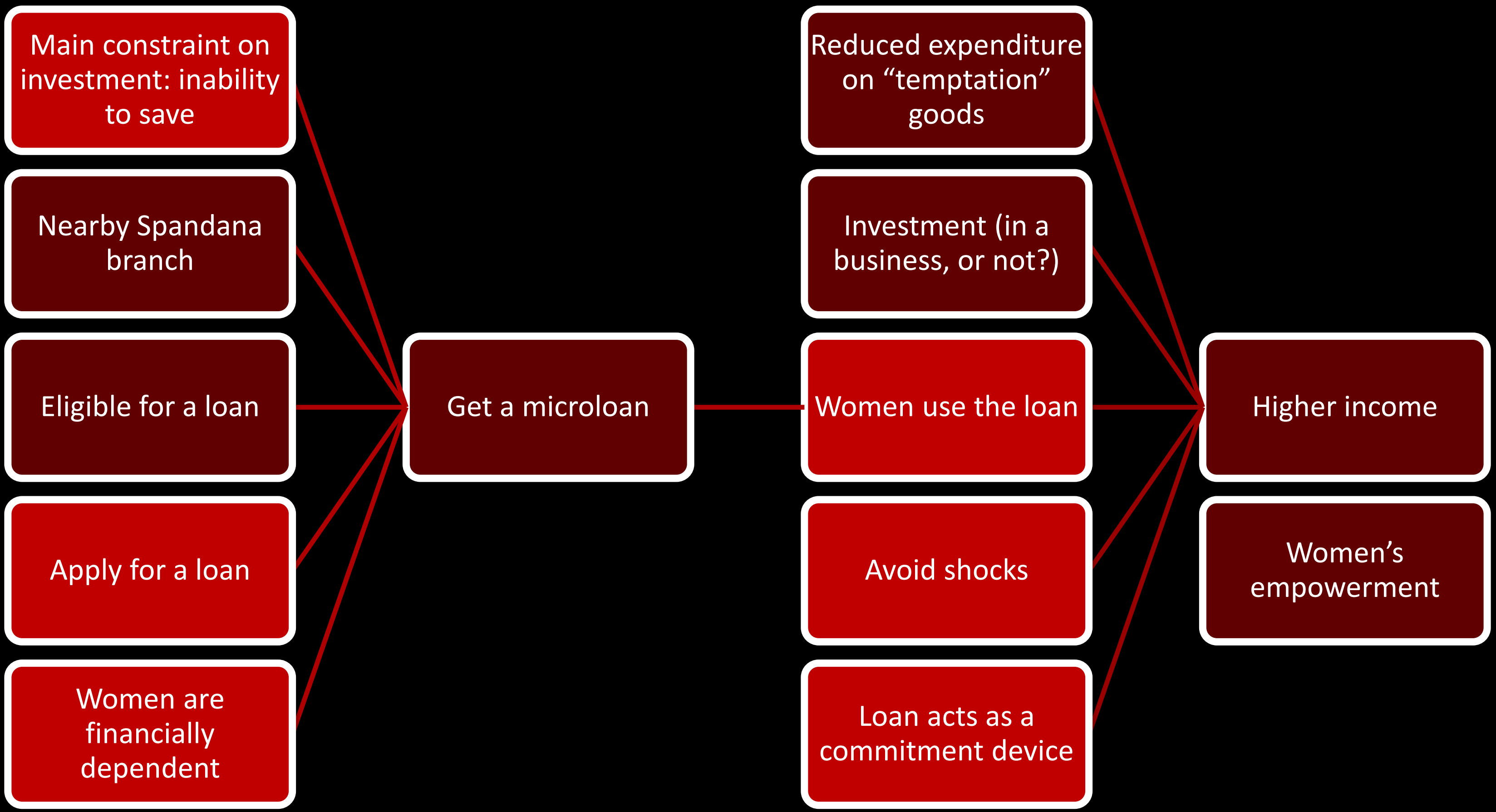
The households

- Avg. expenditure, per person per month: **Rs. 981** ($18)
- Avg. debt : **Rs. 36,567** ($670)
- Literacy rate: **68%**
- Businesses per person: **30%**
- Enrolled or finished studies? **29%**

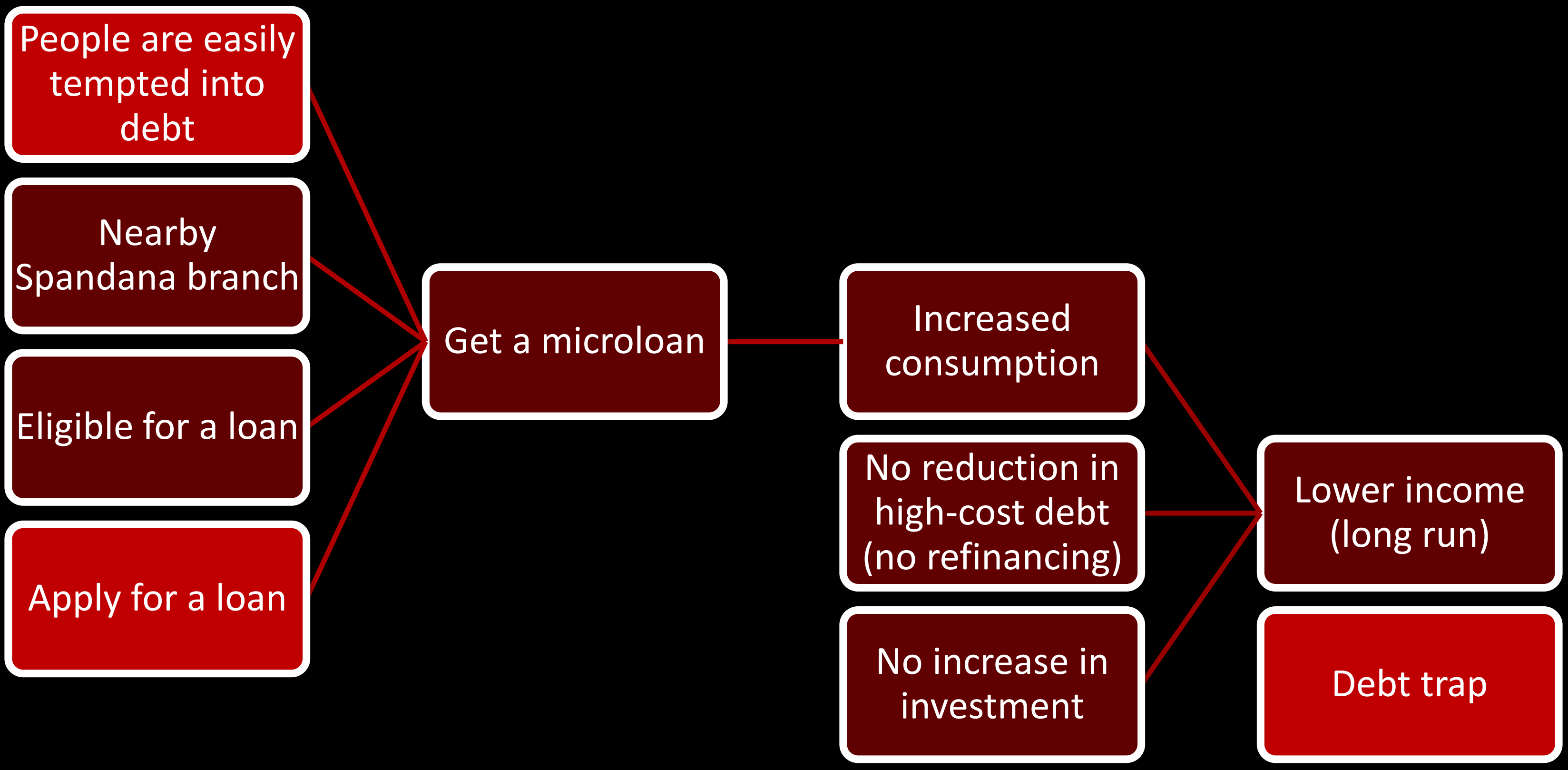
Theory of change: Entrepreneurship



Theory of change: Savings



Theory of change: Consumption



Log Frame

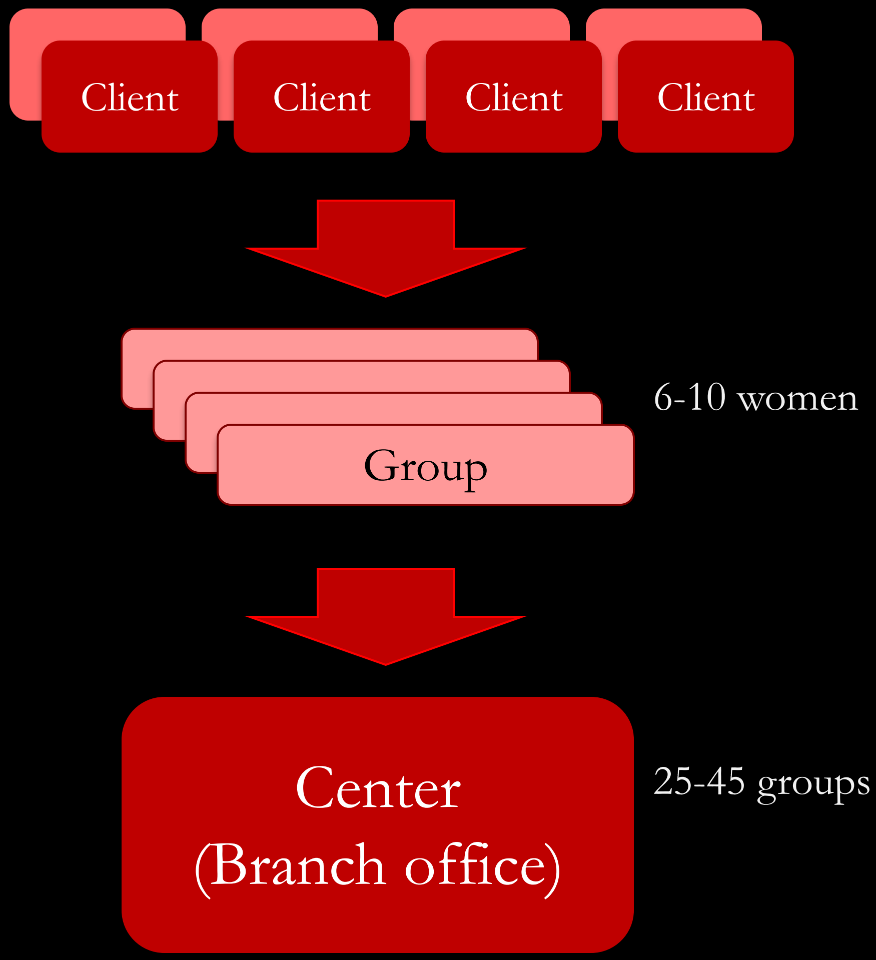
	Objectives Hierarchy	Indicators	Sources of Verification	Assumptions / Threats
Impact (Goal/ Overall objective)	Higher income	Spending	Household survey	Poor access to credit prevents households from investing in business or assets
Outcome (Project Objective)	Households start new businesses; expand existing ones	Purchase of durable goods	Household survey	No problems of self-control, no time-inconsistency
Outputs	Increased MFI borrowing	Number of microloans	Household survey, Administrative data from MFIs	No borrowing from informal sources
Inputs (Activities)	MFI branches are opened	Branches are operating; providing services	Branch visits/ surveys	Sufficient resources, funding, manpower

Research questions

Following conversations with Spandana, we (jointly) came up with…

1. What happens when you offer microcredit?
2. What's the take-up?
3. Does household expenditure change?
4. Are new businesses created? Do existing businesses make more profits?
5. What about education? Health? Female empowerment?

The intervention: The loans



- Clients must be:
  - Female
  - 18-59 years old
  - Residing in the same area for >1 year
  - Valid ID/residential proof
  - >80% of women in a self-formed group must own their own home

Measurement

Indicator	Instrument	Source
Investment	Number of businesses per household; business size; duration; costs and revenue; sales	Household questionnaire: - Household member module - Business module - Loan module - Health event module
Consumption	Monthly expenditures of the household, itemized; "Special" spending (e.g. weddings)	
Women's empowerment	Decision-making by household members	
Health and education	Number of health events; tuition spending; education completed of all household members	

Challenges in measurement

- People mix household and business accounts and do not have a good idea of their profits
  - Walk people through recent revenue and expenditures
- Not accurate recall on loans
  - Is there strategic under reporting?
- Social outcomes
  - Low power and survey time so looked at likely channels, expenditures on health and education and women's control over expenditures

Research design

- What unit of randomization makes sense?
  - client? group? credit officer? center/branch office?
  - wanted impact on community, including spillovers
- Spandana reviewed neighborhoods for suitability
  - selected 120 originally but dropped 16 because mostly migrants
- Tradeoff—including more neighborhoods would give more power, but if low suitability, take up low and power low
- Eventually 104 neighborhoods: 52 treatment, 52 control
- Spandana wanted to get started but reviewing was slow
  - Randomized in groups as they came in.
  - Used matched randomization to increase power

Unit of randomization: The tradeoff

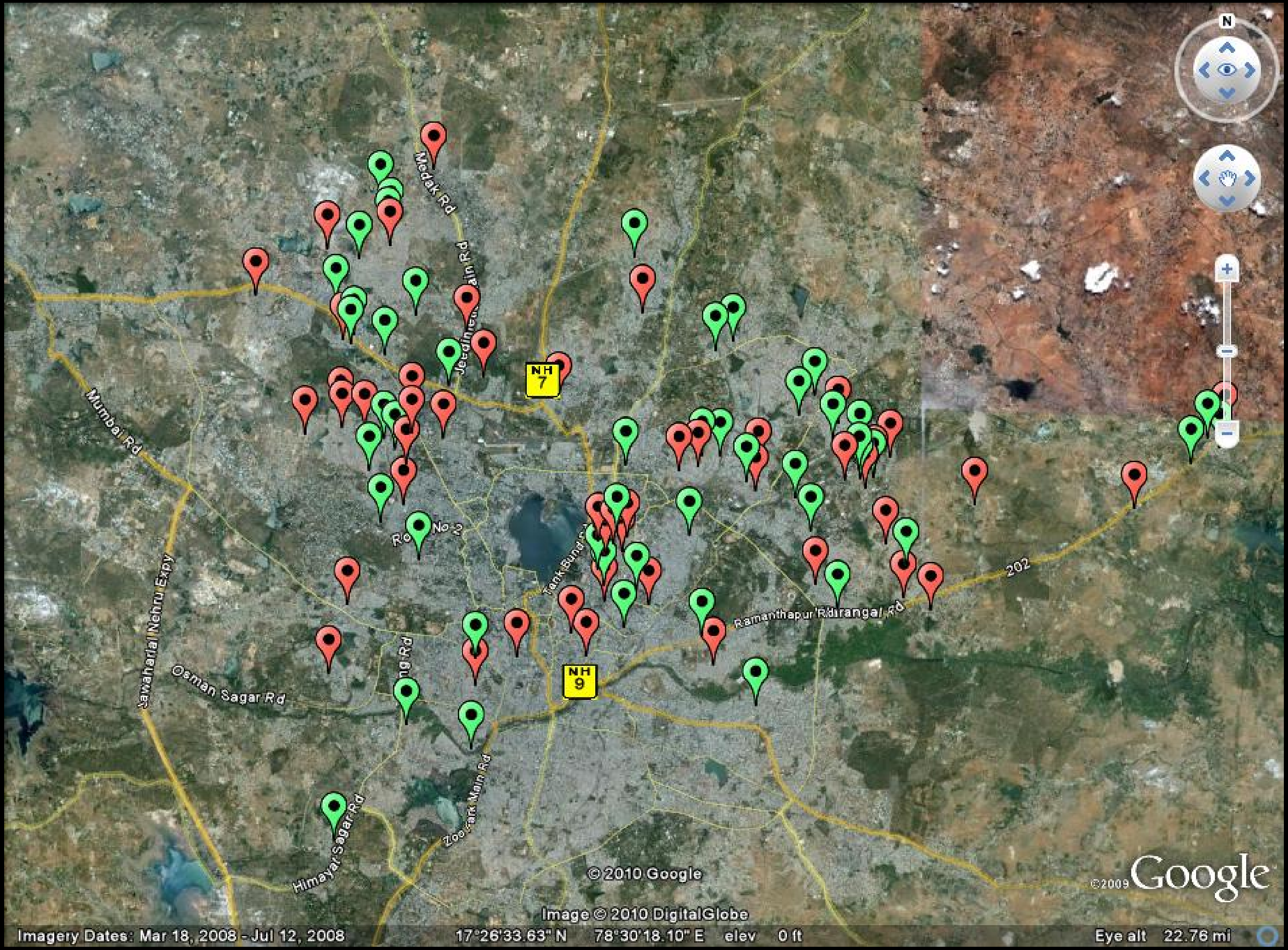
Pros

- People self-identified with these areas on the ground (they knew their neighborhood)
- If bigger unit, would lose power
- If smaller, no way to check out spillover effects

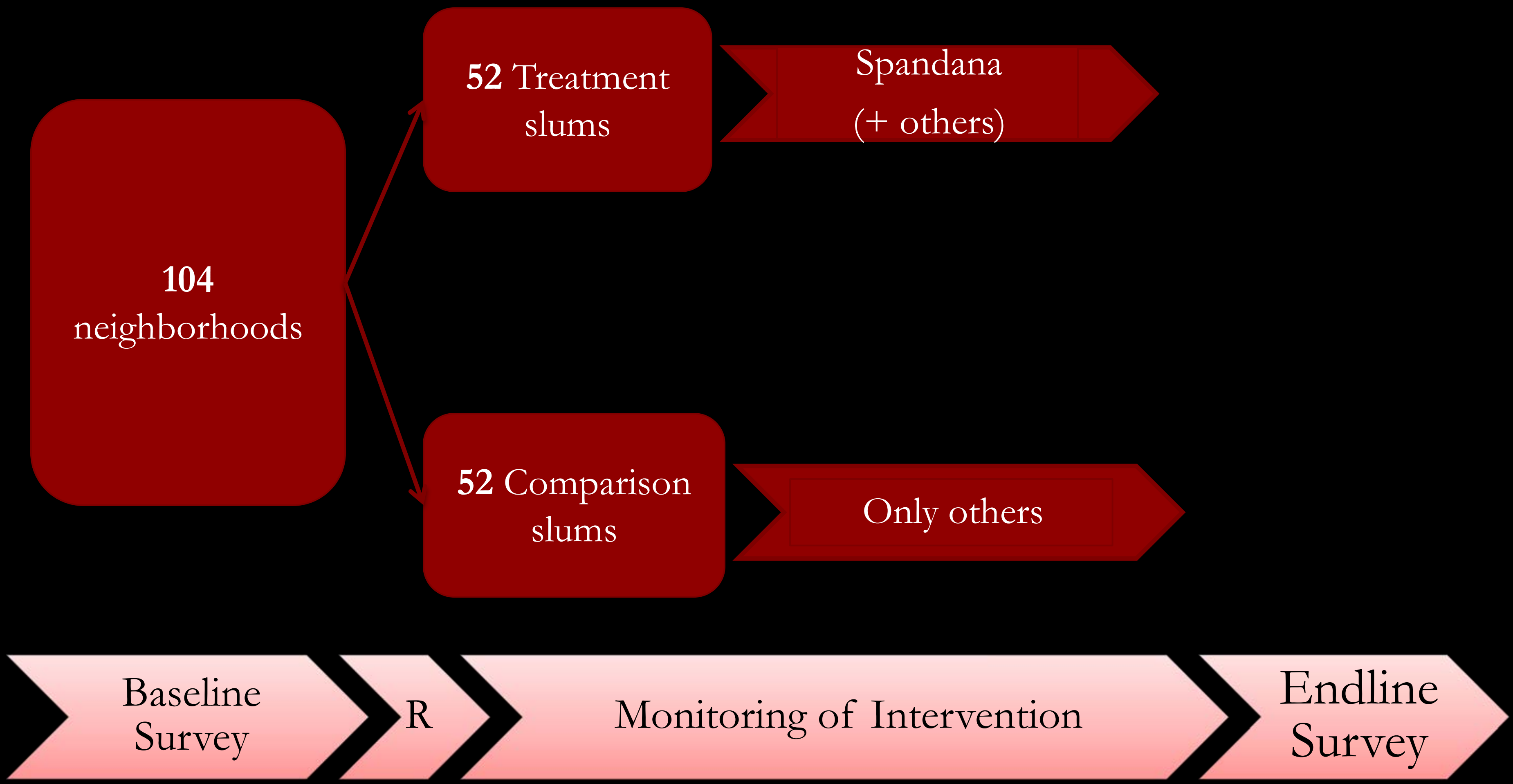
Cons

- Some neighborhoods were pretty small
- Potential for crossovers

Treatment and control areas



Research design



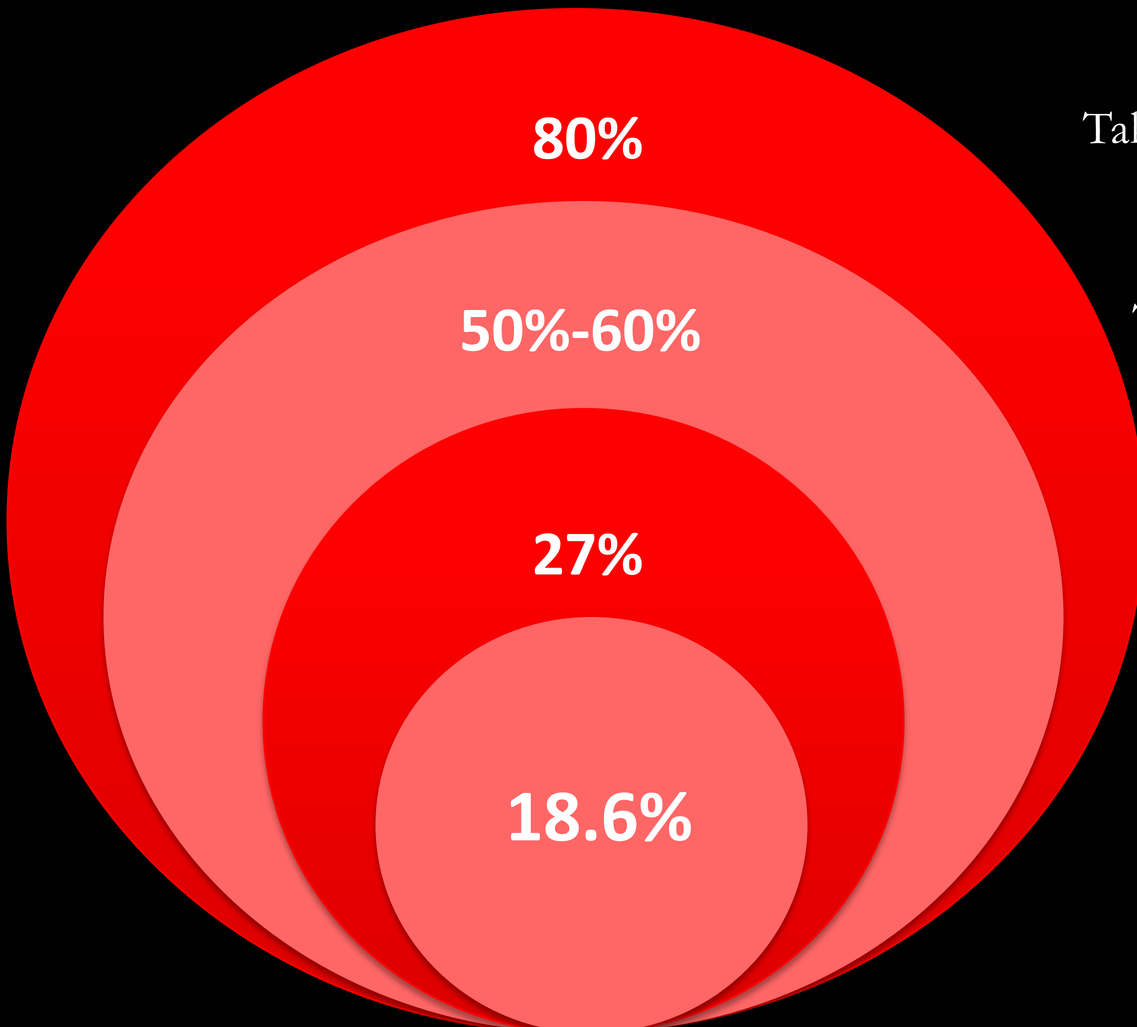
Baseline survey (2004)

- n = 2,800 households
- 120 neighborhoods identified by Spandana
- HHs randomly selected – must have >1 eligible client (18-59 y.o. woman)
- No census, survey company used random walk
  - Ended up with overrepresentation of HH near center of slum
  - Endline done with census to get list of eligible HH

Threats and response to threats

- Invasion of controls
  - Incentivized credit offices went into controls
  - Other MFIs expanded operations rapidly
- Low take up
  - Special surveys to measure take up
- Worked with Spandana to restrict their credit officers
- Timing—take up rising in treatment and comparison
- Should we encourage more take up? No
- Over sample borrowers? No
- Massively increase sample at endline of those likely to borrow. Came with some costs.

The problem of take-up



Take-up (according to Spandana)

Take-up (PIs revise downwards)

Actual take-up (any MFI)

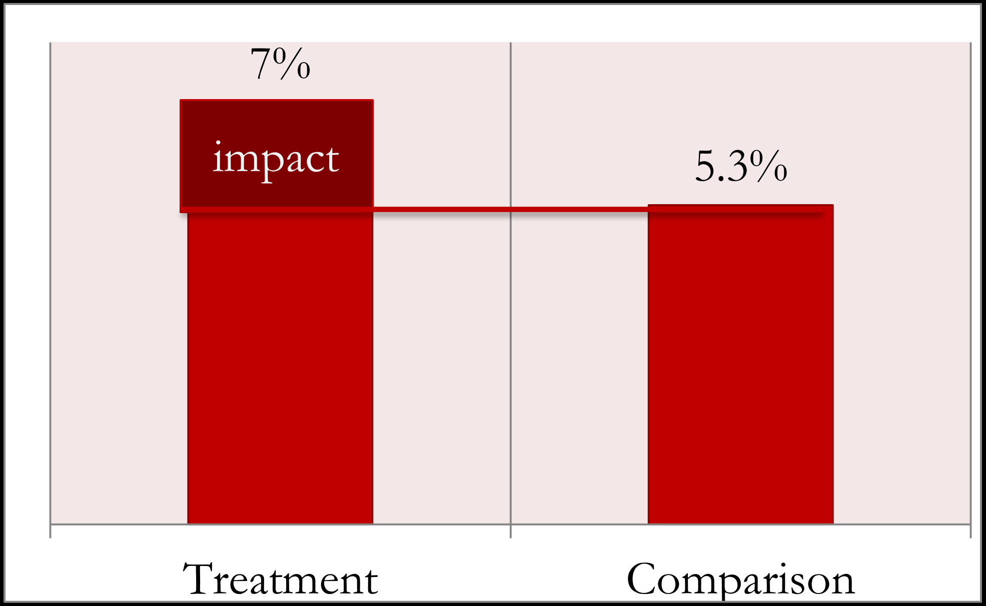
Actual take-up (Spandana)

Endline survey (2007-2008)

- Census of HH
- n = 6,800 households
- same 120 neighborhoods
- resampled (new households)

Results: Businesses

- Overall take-up of loans: 27% (vs. 18.7%)
- 30% of loans were used to start new businesses
- 22% to buy stock for existing businesses



Percent of households operating a new business.

Results: Spending

- HHs with existing businesses
  - bought more durable goods
- HHs likely to start a business
  - cut back on temptation goods (tobacco, eating out, etc.)
  - and invested more
- HHs unlikely to start a business
  - Spent more on non-durable consumption
- No change in health, education, empowerment

The fourth estate chimes in

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Guest columnist

Microfinancing changes lives around the world — measurably

Microfinancing can help poor people around the world with small loans that can change their lives, writes guest columnist Brigit Helms. The anecdotes are plentiful but a new study shows the benefit.

By Brigit Helms
Special to The Times

IT is the question I hear more than any other — does microfinance actually work? It's a good question and one we should ask about any activity that purports to have an impact on the lives of the poor, marginalized and vulnerable. But answering that question is rarely as straightforward as a simple yes or no.

Long-term follow-up (2010-2011)

- n = 6,300
- 91% of first endline households identified
- Looking for long-term effects on expenditure, investment, health, empowerment etc.
- Are those who increased nondurable consumption in debt trap? Or did the extra spending come from reduced interest payments?
- Results forthcoming