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An explosion of evidence

• In the last 20 years, there has been an explosion of new evidence on the effectiveness of development programs

• Main driver of this growth: rapid spread of randomized controlled trials (RCTs)

• How should policy-makers use this new body of evidence?

• A key concern: are results based on a particular study relevant for implementation in a new locale?
  – The problem of **external validity**
Example: microcredit

- An urban, individual-lending microcredit program in the Philippines was found to have mixed impacts (Karlan and Zinman 2011)

- Should this study make us similarly pessimistic about the impact of group-based rural microcredit in India?
Find your favorite analogue

- Ideal situation: replicated studies in many contexts
- Several recent randomized controlled trials on microcredit collected in January 2015 *American Economic Journal: Applied*
Using evidence: the challenge

• Rare to have rigorous evidence in exactly the same context in which one is interested

• How should we respond?
  – Wait until there is more evidence?
  – Always do new RCT before introducing in new context?
  – Use less rigorous local evidence?
  – Use results from study conducted in another context?
  – Only use evidence from other countries if at least X replications or if replicated in a similar enough context?

• What counts as a “similar” context?
We should do more replications of RCTs of similar programs in different contexts
  – But we will never have an RCT of a given program in every context
  – Sometimes we may only have one, or none

Rigorous impact evaluations are hard to do well (and costly)
  – We underutilize their potential if we only learn about the precise program and context they evaluate

But understanding local needs, and informal and formal institutions is critical to good policy
Questions we need to ask

• In what **local conditions** were the existing studies conducted?

• What did the **local implementation** of the intervention look like?

• What have we learned about the **underlying mechanism** behind the intervention?
  – A.k.a., the “theory of change”
Generalizability (a.k.a., external validity) is higher when local conditions and local implementation are similar.

Increases confidence that implementing the same program elsewhere will yield similar results.

E.g., if we know that a formal savings program implemented by Opportunity International (OI) increases incomes in Malawi, could expect similar impacts from similar program in neighboring Mozambique.

In two separate studies implemented by OI affiliates in these countries, a simple savings program caused increases in savings, input use, agricultural output, and household consumption.
Similar programs, similar conditions, similar results

• Opportunity Bank of Malawi (OBM) savings program
  • Brune et al (2016)

• Banco Oportunidade de Mozambique (BOM) savings program
  • Carter et al (2016)
Similarities between the two contexts

- Local conditions
  - Low financial services utilization; formal savings relatively novel
  - Both studies focused on relatively successful rural smallholder farmers

- Local implementation
  - Similar savings programs implemented by sister organizations (both OI affiliates)
  - Similar basic bank accounts, similar features

- But what if we want to predict impacts in a different context?
Extrapolating to different contexts

- Underlying mechanism: the channels or mechanisms through which the intervention affects outcomes of interest
  - “Theory of change”

- If we understand the **underlying mechanism**, we can better assess whether a program would have similar effects, even with differing local conditions and implementation
  - And we could also assess whether different programs might have similar impacts

- If we don’t understand the underlying mechanism, much harder to say whether a program would work in a different context
  - New research would then be called for, to shed light on underlying mechanism
Facilitating savings for farmers leads them to hold **buffer stocks** to help them cope with negative shocks.

Can lead farmers to be more willing to invest, leading to later increases in income, consumption.
• Helps us figure out **what local conditions are key** for assessing external validity
  – Key: households are underinsured, lack mechanisms to cope with risk
  – If this is the case, might expect similar effects in differing contexts (other geographies, urban vs. rural, etc.)

• Other approaches to helping households **cope with risk** may have similar effects
  – Weather-based index insurance
  – Emergency credit lines
  – Informal savings schemes with emergency accounts (e.g., modified ROSCAs)
Assessing relevance: the framework

Are local conditions similar? 
Yes → Is local implementation similar? → Yes → Proceed!

No → Do we understand the underlying mechanism? 
Yes → Proceed (maybe)

No → STOP
• Many anti-poverty programs are “bundled”, in that they consist of multiple components

• Millennium Villages implements interventions in food, education, environment, health, etc.

• Programs to help the “ultrapoor” that involve resource transfers, skills training, savings, health, etc.

• Recent studies find dramatic impacts of ultrapoor programs on household well-being
The Graduation Approach

The Graduation approach consists of six complementary components, each designed to address specific constraints facing ultra-poor households.

1. **Productive asset transfer**: One-time transfer of productive assets, such as cows, goats, or supplies for petty trade.

2. **Technical skills training**: Training to manage the productive asset.

3. **Consumption support**: Regular cash or food support for a few months to a year.

4. **Savings**: Access to a savings account, or encouragement to save.

5. **Home visits**: Frequent home visits by implementing partner staff to provide accountability, coaching, and encouragement.

6. **Health**: Health education, health care access, and/or life skills training.

All evaluations in this bulletin include these six components; see Table 1 for country-by-country variation in program design.
FIGURE 2 IMPACT OF GRADUATION: PERCENT CHANGE IN PER CAPITA CONSUMPTION BY COUNTRY

Percent change in per capita consumption relative to comparison households

Bangladesh | Ethiopia | Ghana | Honduras | India | Pakistan | Peru

Note: Error bars represent 95% confidence intervals. Statistical significance relative to comparison households at each endline is noted at the 1% (***) or 10% (*) level.
When to implement ultrapoore programs?

- Are local conditions similar?
- Is local implementation similar?
- Do we understand the underlying mechanism?

- Yes → Proceed!
- No → Only pursue when local conditions and implementation are similar
- No → Need more research on mechanisms

STOP
Example: fingerprinting in microlending

• Gine, Goldberg, and Yang (2012) study on impact of fingerprinting on loan repayment in rural Malawi

• Local conditions:
  – Very low formal credit access in rural areas (<5% of hhs have formal production loans)
  – Poor repayment rates on rural loans
  – No national ID system

• Local implementation:
  – Malawi Rural Finance Co. (MRFC), quasi-governmental MFI making paprika production loans to smallholder farmers
  – Research team takes fingerprints of borrowers at time of loan application
A borrowing group
Fingerprinting

- Carried out by U. Michigan field assistants
Demonstrating fingerprint identification
Young paprika in the field
A healthy paprika crop
Packing paprika for sale
Repayment: % of balance paid on-time

- Worst: 88%
- 2nd quintile: 79%
- 3rd quintile: 91% and 92%
- 4th quintile: 93% and 96%
- Best: 89% and 98%

Bar chart showing repayment rates for fingerprinted and control groups.
Assessing relevance: fingerprinting

Are local conditions similar? [Yes / No]

Is local implementation similar? [Yes / No]

Do we understand the underlying mechanism? [Yes / Proceed (maybe)]
Fingerprinting: the mechanism

- Fingerprinting leads borrowers to perceive higher downside from defaulting
  - Loss of access to future loans

- Fingerprinting leads to less adverse selection and moral hazard
  - Less adverse selection: voluntary choice of smaller loans
  - Less moral hazard: less diversion of loan proceeds to other uses (more paprika farming)
Market inputs used on paprika (MK)

- Worst: Fingerprinted 9,600, Control 2,503
- 2nd quintile: Fingerprinted 8,381, Control 4,911
- 3rd quintile: Fingerprinted 9,858, Control 11,803
- 4th quintile: Fingerprinted 8,088, Control 11,262
- Best: Fingerprinted 8,874, Control 12,378
What local conditions are key?

• Local conditions
  – Absence of other means of identification
  – Limited local credit market competition (unless lenders are fingerprinting)
    • Borrowers could simply borrow elsewhere

• Local implementation:
  – Fingerprinting needs to actually happen
    • Not guaranteed, if (e.g.) loan officers are in charge, and have other responsibilities, lack incentives, etc.
Other interventions to achieve similar results

• Understanding the mechanism behind the fingerprinting effect provides rationale for other interventions that operate on the same mechanism

• Implement national ID system and attach IDs to loan applications

• Educate borrowers on the importance of their credit history

• Establish credit bureau to share borrower credit histories across lenders
In sum

• Is evidence from an existing study (or studies) relevant for policy decision-making in a new context?

• First, need to ask:
  – Are the **local conditions** similar?
  – Will **local implementation** be similar?

• If so, existing evidence is relevant, and can support implementation in the new context

• If not, do we understand the **underlying mechanism**?
  – Helps identify key aspects of local conditions and implementation
  – And points to other interventions that may achieve similar goals
Further reading


