Using Randomised Controlled Trials to Estimate Policy Impacts and Inform Policy Design

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My Background

- Development Economist
  - evaluations of economic and social policy
  - Asia - Indonesia, China, Timor Leste, Lao P.D.R.
  - Australia
- Conduct RCTs
  - sanitation, empowerment of female Indonesian migrant workers, influencing gender norms, child-directed speech.
- Other quasi-experimental evaluation methods – RDD, matching, natural experiments, DiDs
- Understand the value of qualitative research

Overview

- RCTs of Community-Led Total Sanitation (CLTS)[ϕ]
  - A coordinated global evaluation - Indonesia, India, Mali, Tanzania, …
    - Standardised questionnaires, same methodological approach
  - Follow up RCT of CLTS + financial incentives in Lao PDR

- multiple locations (addresses concerns of external validity)
- results speak directly to policy design
- evaluations at scale

[Φ] a collaboration with the World Bank. We gratefully acknowledge funding from the Bank, Gates Foundation, USAID and Australian Research Council.

Why RCTs?

- Through randomisation can be confident that the control group and the treatment group are otherwise similar

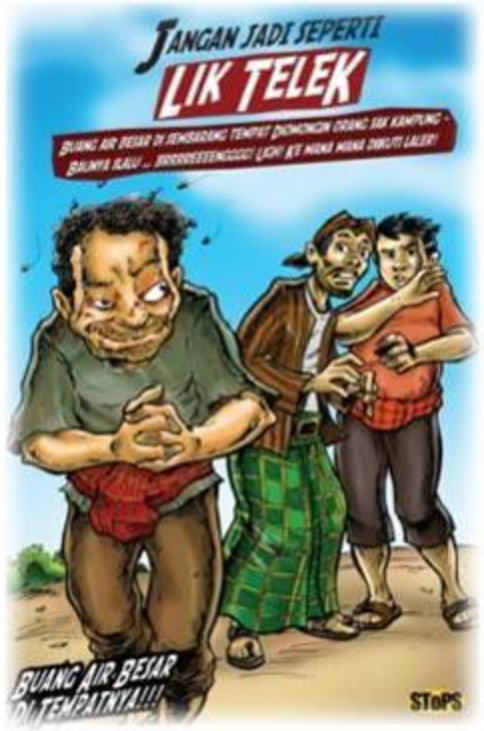
- No selection into treatment (by households or program administrators)
- Results not being driven by other changes over time

- Easily explained -> increases probability of adoption of results

Community-Led Total Sanitation in Indonesia

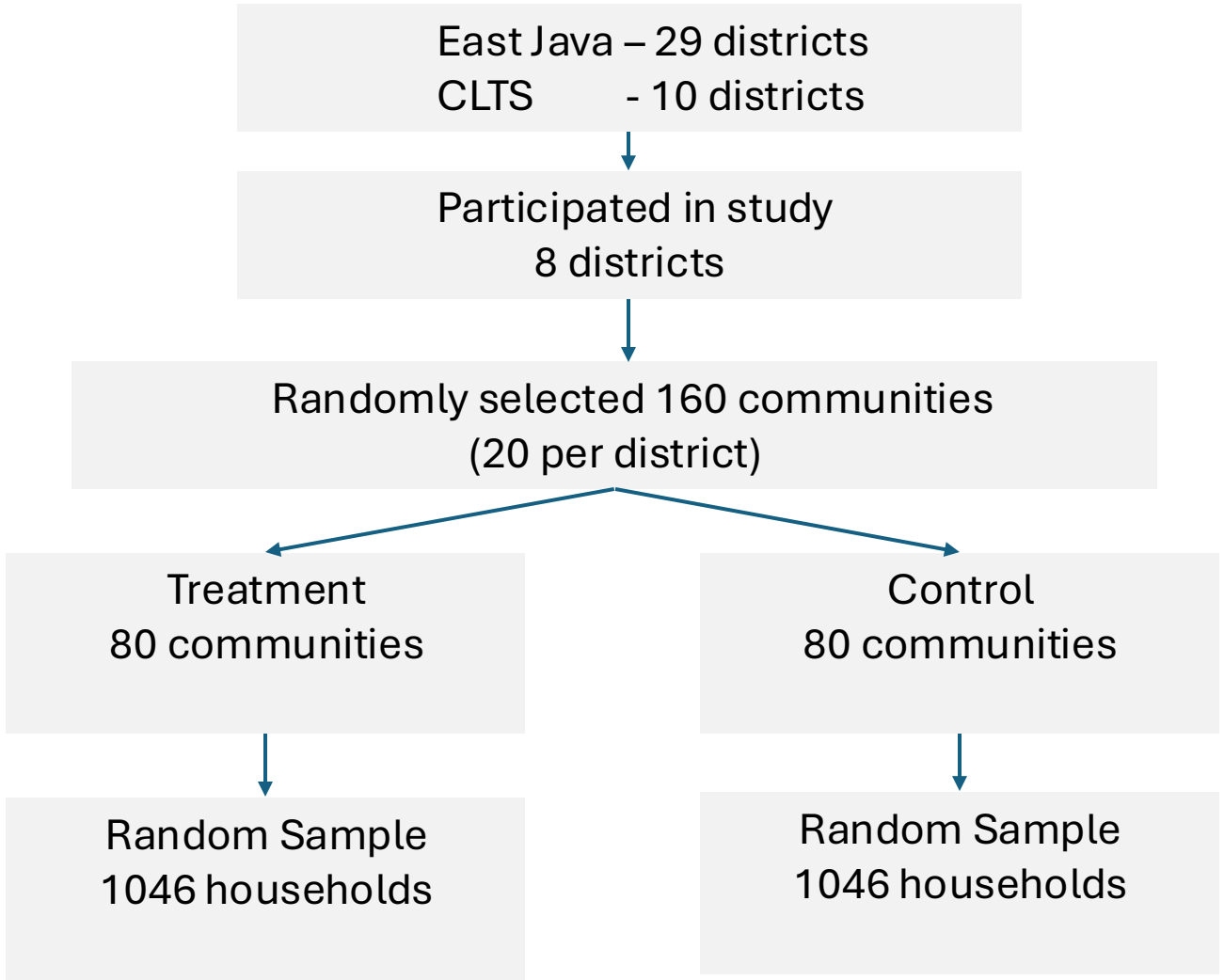
- CLTS has been implemented in 60+ countries in Asia, the Pacific, Latin America, Middle East & sub-Saharan Africa
- Aims to end open defecation by stimulating demand

Facilitators hold graphic, shame-inducing community meetings in which the community analyses existing sanitation practices and the negative health consequences.



- No provision of sanitation hardware, no subsidies

Research Design



Data collection

- Baseline data before implementation
- Endline data approximately two years later

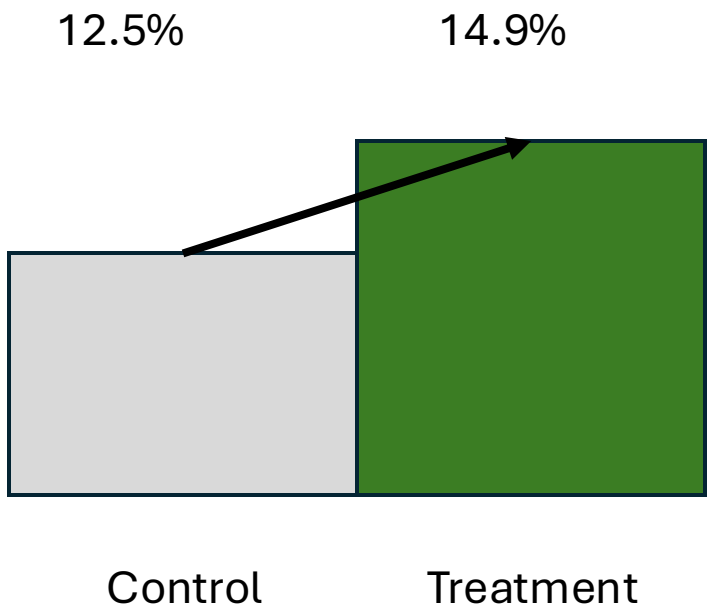
- Extensive household questionnaires
- Child health outcomes (all sampled households had children <2yrs)
  - Anthropometric measurements
  - Blood samples (anaemia)
  - Faecal samples (worm infestations)

Balanced!

- Randomisation worked
- No systematic significant differences between control and treatment villages, nor control and treatment households

CLTS increased toilet construction

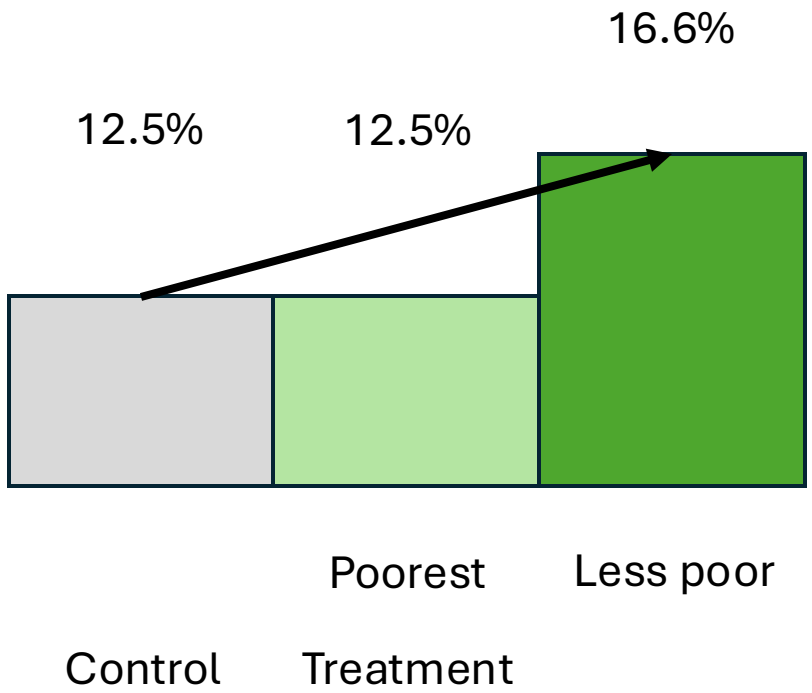
- Treatment households were on average 19% (2.4 ppts) more likely to build a toilet



But toilet construction only increased among less poor households

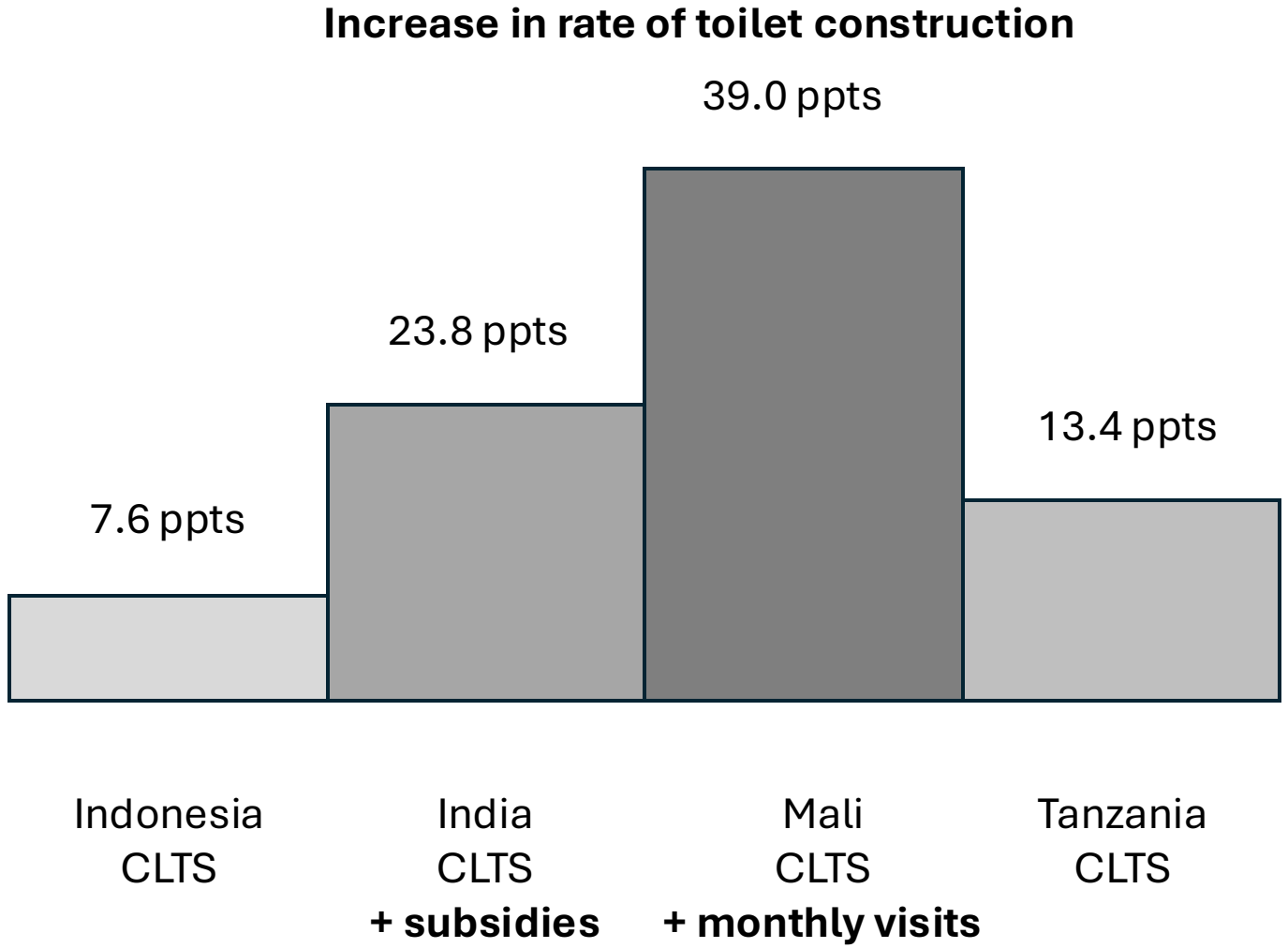
- poorest 20% of households did not increase their toilet construction.
- Less poor households increased toilet construction by 4.1 ppts (42%).

- Poorer households reported construction costs as being the main barrier
  - ➢ CLTS commitment to no subsidies?



Implications for Policy Design

- Cross-country results with variations in CLTS implementation indicates variations that increase impacts



Results of Laos RCT

Control: CLTS

T1: CLTS + poorer households received reimbursement of portion of costs of construction

T2: CLTS + community reward when certified as “Open Defecation Free” (USD300-500)

T3: 1 & 2

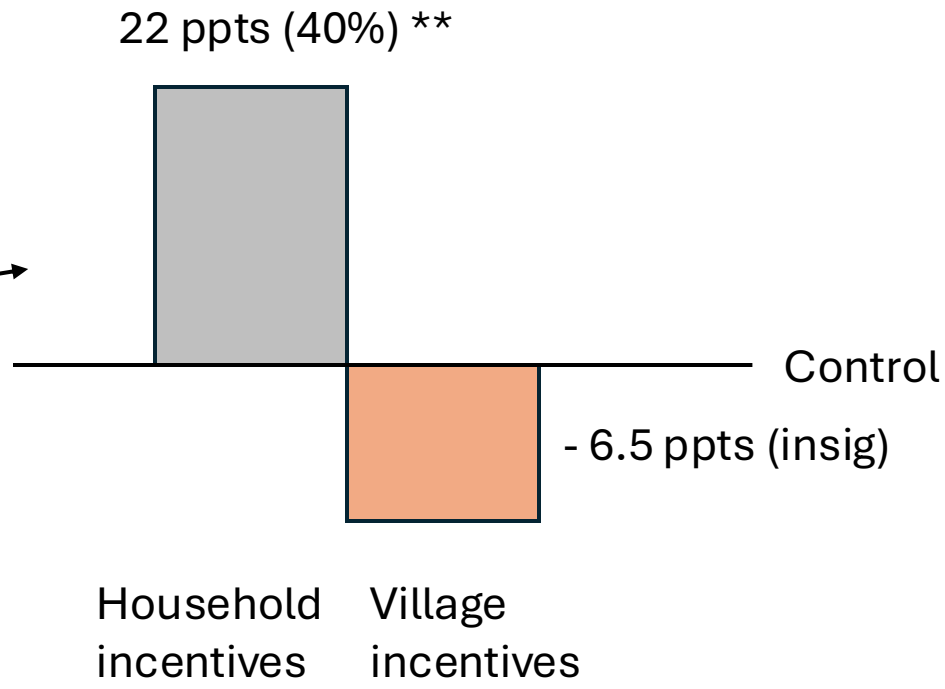
Overall:

- Household incentives increased toilet construction by 7.1 ppts (13%) relative to controls

- Village incentives had little effect

Household incentives were pro-poor

- Increased probability of a poor household building a toilet by 22 ppts (40%) relative to a poor household in a control village.



What else can the results tell us? 1. Scale up

- RCT was conducted at scale with implementation by local (district) governments
- World Bank trained trainers who then trained local government staff
  - 50% of treatment villages were implemented by the Bank
  - 50% of treatment villages were implemented by local government

- All the impacts came from World Bank implementation
  - greater engagement with village staff
  - greater community engagement
  - greater implementation intensity (more visits).

What else can the results tell us? 2. Role of Social Capital

- We collected data on community social capital
  - extent of networks and community participation
  - trust/community cohesiveness
  - safety, crime, corruption

- High social capital associated with more toilet construction
  - X Not due to better sharing of information
  - X Not due to greater willingness to be involved in community activities
  - ✓ More responsive to social sanctions

- If social capital was low, CLTS decreased toilet construction.

What else can the results tell us? 3. Child Health

Indonesia

- 46% decrease in roundworm infestations
- No effect on anaemia, height-for-age or weight-for-age

India

- no increase in child height
- lots of toilet construction but no impact on child height
- started from a very low base so still high rates of OD

Mali

- Child height increased
- Lots of toilet construction and started as higher base sanitation coverage so low OD rates at endline

Threshold effects with child height increasing once village sanitation coverage 50-75%.

Thank you.

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References

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