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# Partnership for Economic Inclusion Impact Collaborative

Technical Workshop

Ben Crost  
Associate Professor  
Department of Economics, University of Calgary

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# Overview of Discussion

- Two well-designed studies on a very important question
  1. Statistical power for distinguishing treatment arms
  2. Systems for tracking participants to minimize attrition

# Power Analysis

- Do we have enough statistical power to detect effect of a small change in program delivery?
  - E.g. training preferred female versus non-preferred male in South Sudan study
- Differences across treatment arms are likely much smaller than Treatment-to-Control differences
- Need large sample sizes to detect even quite large differences in treatment effects

## Example

- Treatment effect of intervention is 0.2 SD
- No baseline data
- Good chance of detecting effect with 400 T, 400 C
- Treatment effect on preferred female is 50% larger than on non-preferred male (0.16 versus 0.24 – difference of 0.08)
- Need almost 2500 T and 2500 C to detect with 80% power



## Design:

HH with...	Control	Treatment, Participant = 1st choice	Treatment, Participant = 2nd choice
2+ eligibles, M preferred [35%]	900	1,050 / 750	450
2+ eligibles, F preferred [35%]	600	600	0 / 300
1 eligible only (M) [15%]	450	450	
1 eligible only (F) [15%]	450	450	
Total	2,400	3,000	

Required: 50% Female 50% Male

**Open Question:** 0 vs 300, 2nd choice under F preferred?



## 1. Monthly transfer arm

Monthly cash transfers  
\$35/month for 15 months

## 2. Capital arm

Monthly cash transfers  
\$35/month for 15 months

Productive subsidy planning day

Productive cash subsidy  
**\$500**

## 3. Full arm

Monthly cash transfers  
\$35/month for 15 months

Individual support/coach

Socioemotional and  
entrepreneurship training

Productive subsidy planning day

Productive cash subsidy  
**\$500**

**No pure control;** program budget ~400-500 beneficiaries  
per arm

**Individual randomization,** stratified by area

Government requires **public, individual lotteries** in the  
presence of organizations for people with disabilities due to low  
trust

If there is low registration/verification numbers, package 2 may be  
dropped to increase power

## Efforts to minimize attrition

- Poor populations in fragile settings likely have high migration rates
- Migration likely higher in control group – can lead to unbalanced attrition
- Put in place system to track participants
  - Duflo, Dupas and Kremer (2021) have had high success with giving people mobile phones and credit
  - Put in place tangible economic incentives to stay in touch



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**Thank you!**