ECON B225 ECONOMIC DEVELOPMENT

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Access to Financial Services

Microfinance

- **If you have an innovative idea and want to start a business, what is the first thing you'll do?**
  - (1) Write up a business plan
  - (2) Find investors and borrow their money (access credit)
    - If you default on a loan, creditors can collect collateral (mitigates risk)
- **Problem:**
  - Credit is not generally available to poor people in developing countries
- **Reasons: <u>Poor people seen as risky, low return</u>**
  - Poor people lack collateral ⇒ Higher risk
  - Poor people lack traditional credentials ⇒ Higher risk
  - Business projects in poor economies usually low return

Potential Huge Missed Opportunity

- **But think about how many amazing ideas are being ignored by this? (TFP implications)**
  - Innovative talent not cultivated
- **Also, so many product and services not provided to poor people!**
  - Huge market of poor people not accessed (a lot of unmet demand)
- **Solution: Microfinance**
  - Idea: Provide poor entrepreneurs small loans (sometimes 15 USD) to start businesses
    - Smallness of loan mitigates risk
    - Mitigate risk in other ways through training programs and mentorship

History

- **Usually traced back to Muhammad Yunus**
  - Economist from Bangladesh
  - Started Grameen Bank in 1982
- **Becomes Very Popular since 2000**
  - 1997: 7.6 million families with microloans, 2010: 137.5 million families with microloans (18x increase)
  - Commercial banks as well as NGOs participate
- **Yunus wins Nobel Peace Prize in 2006**
- **But does it work?**
  - Lots of anecdotal evidence it works, but is this just marketing by the banks?
  - Surprisingly this is still very controversial and a topic of serious debate

Figure 1: Mohammed Yunus.
Source: Encyclopedia Britannica.

Figure 2: Grameen Bank HQ Dhaka. Source: livemint.com.

Figure 3: KWFT Branch Kenya. Source: victormatara.com.

Controversy and Backlash

- **Helps "wealthy poor"**
  - Only the relatively more privileged will be able to take advantage
- **Limited growth**
  - How successful can a business become in a subsistence economy with few specialized skills?
- **Ethical concerns**
  - If unsuccessful, "beneficiaries" are worse off than before accessing credit b/c default leaves them with a bad credit history
- **Limited quantitative evidence on the effects!**
  - A lot of qualitative anecdotal evidence on both sides

Outline

- **Blattman et al. (2016) focus**
  - Research question
  - Motivation
  - Study context/Data/Identification
  - Results
  - Etc.
- **Banerjee et al. (2015)**
  - Study outline
  - Results
- **Contrast the two studies**

Blattman et al. (2016)

- **Research Question:** Does access to microfinance loans to women in a post-war environment affect incomes, and if so by how much?
- **Secondary Question:** Does social capital affect business success and if so by how much?

Motivation

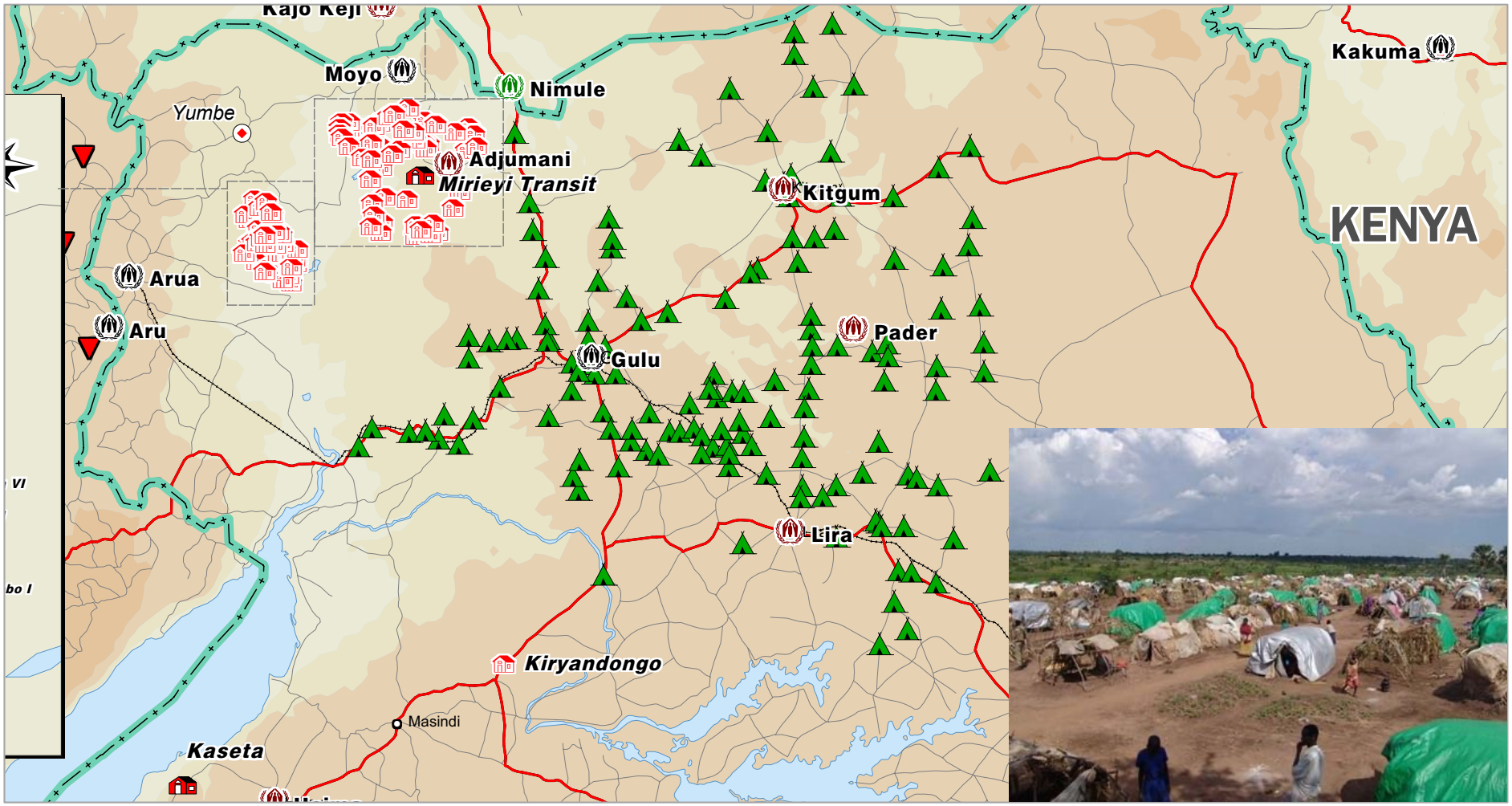
- **Many poor people in the world live in post-conflict settings,**
  - but hard to do research there ⇒ limited empirical evidence for how development works in these places
- **Prior work shows the very poor have large returns to capital held back by lack of access to credit**
  - Unclear if this is true for the "ultrapoor" after the end of a war

Study Context

- **Kitgum and Gulu Districts in Northern Uganda**
- **Region has "rebel bands" operating 1987-2006 conscripting, abusing and stealing from civilians**
  - 1/5 people abducted, usually for short periods of time
  - 5% forced to "marry" rebel leader
- **Government of Uganda moves <u>everyone</u> into camps**
  - Lived there for at least 3 years, losing farms and homes
- **2006 rebels defeated (mostly)**
- **In 2007, 2/3 of population live on food aid**
- **By 2009 (start of study), most people had rebuilt homes and started to farm again**

- Northern Uganda experiences an insurgency with a major secessionist movement in the North
- Study takes place around Kitgum and Gulu

Northern Uganda Map



Internally Displaced Persons Camps (Green) in Northern Uganda. Data: UNHCR

Experimental Design

- **Randomized exposure of the Women's INcome Generating Support program (WINGS) among 1,800 poor people (mostly women) in 120 war-affected villages**
  - 150 USD (~375 USD PPP) grant (30x larger than avg. monthly earning)
    - Meant to start small retail and trading businesses
  - 5 days of training in business skills, marketing, help planning
  - Ongoing supervision and mentorship
  - Half of the treatment villages received encouragement and support in setting up "self-help" groups and training in working together
    - Help forming a rotating savings and credit association

Data

- **120 villages**
- **60 randomly chosen to receive WINGS first (Phase 1) remaining 60 notified they would have to wait to get it ~18 months later (Phase 2)**
  - Within these, 30 were chosen to receive self-help group support – way to test for social network effects
- **1,800 in sample 16 months after first grant**
- **Minimal attrition (3.7%)**

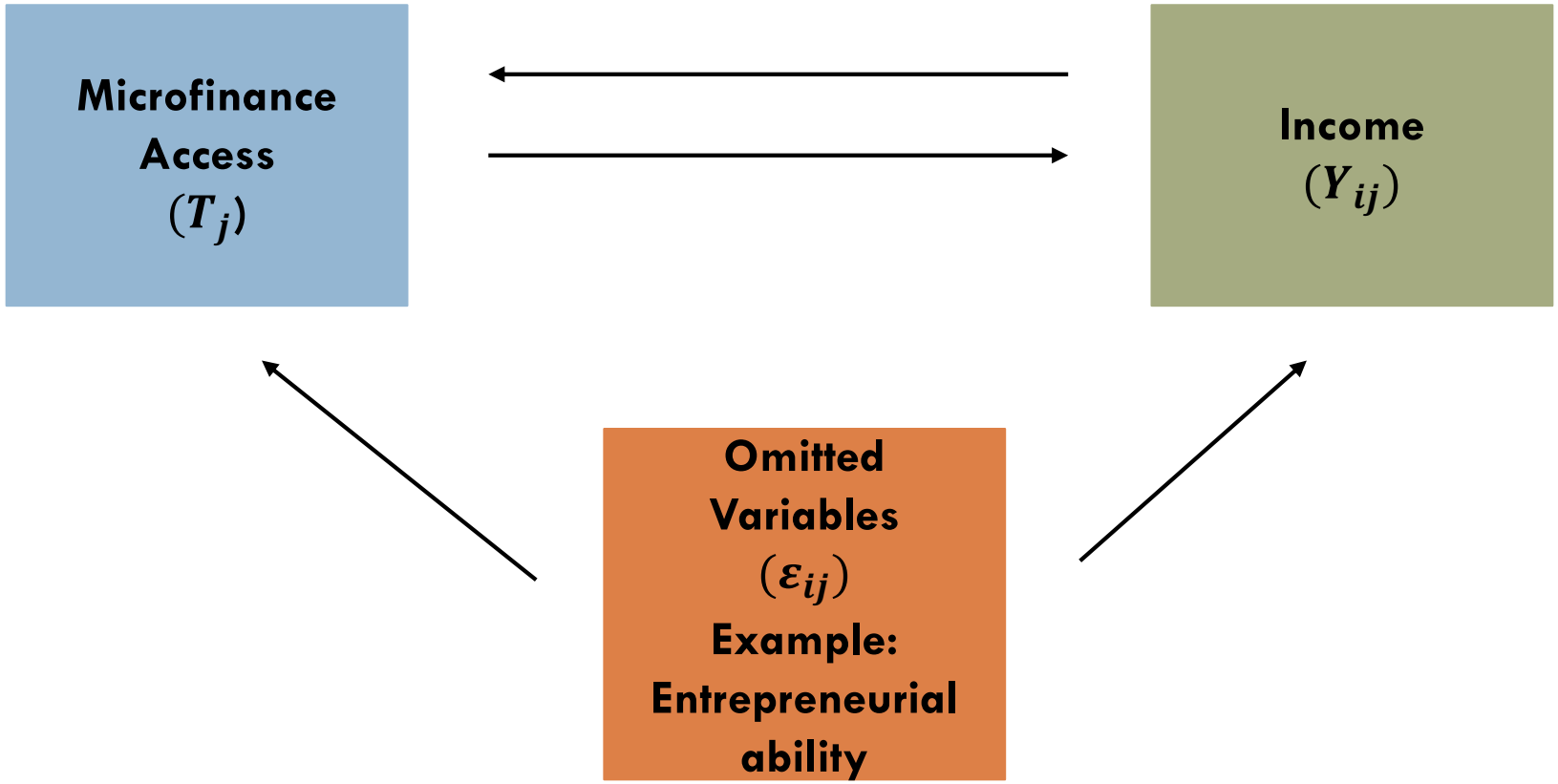
Balancing Tests

TABLE 1—DESCRIPTIVE STATISTICS AND RANDOMIZATION BALANCE FOR SELECT COVARIATES

Variable	Means, full sample		Balance test	
	Treatment (Observations = 896)	Control (Observations = 904)	Difference	*p*-value
	(1)	(2)	(3)	(4)
Demographics				
Age	27.02	27.63	−0.62	0.17
Female	0.86	0.86	−0.01	0.72
Married or living with partner	0.46	0.50	−0.05	0.26
Single-headed household	0.51	0.47	0.04	0.17
Highest grade reached at school	2.82	2.75	0.07	0.70
Forcibly recruited into rebel group	0.20	0.25	−0.05	0.03
Carried gun within rebel group	0.03	0.04	−0.01	0.45
Forcibly married within rebel group	0.03	0.03	−0.00	0.63

Identification Strategy: RCT

- **Usual worry is that income will be affected by omitted variables**



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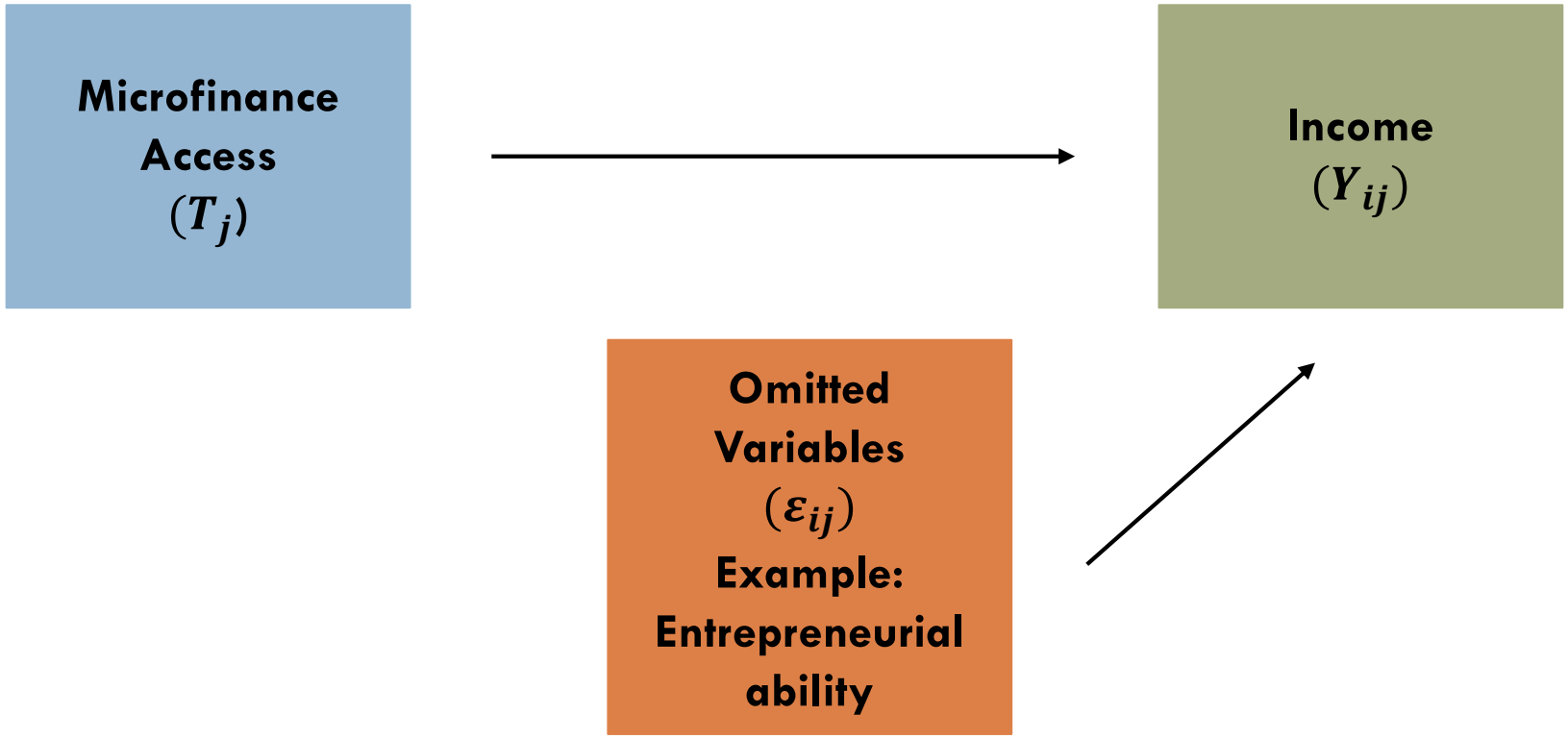
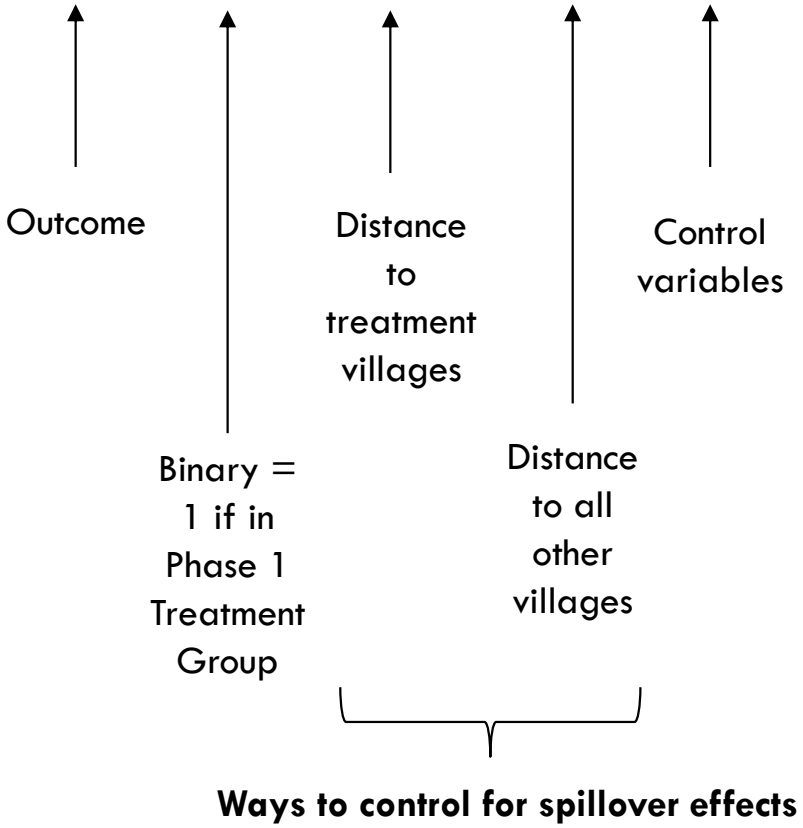


Identification

- **Regression framework:**

$$Y_{ij} = \theta T_j + \delta_T D_j^T + \delta_{\bar{T}} D_j^A + \boldsymbol{X}_{ij}\beta + \varepsilon_{ij} \qquad (1)$$



θ is the coefficient of interest. Everything else is a control.

It will provide a measure of the "Intent to Treat" (ITT) the effect of offering the program.

Note how this is subtly different than the effect of the treatment itself.

TABLE 3—ECONOMIC IMPACTS OF WINGS PROGRAM AND GROUP FORMATION

Outcome	Control mean (1)	ITT estimates, 16 months after grants (Observations = 1,734) No group training (2)	Group training (3)	Difference (4)
Occupational choice				
Any nonfarm self-employment	0.39	0.401	0.409	0.008
		[0.030]***	[0.033]***	[0.034]
Started enterprise since baseline	0.50	0.487	0.485	−0.002
		[0.025]***	[0.025]***	[0.018]
Average work hours per week	14.98	9.391	9.877	0.486
		[1.608]***	[1.794]***	[2.029]
Agricultural	9.52	3.496	4.002	0.506
		[1.389]**	[1.300]***	[1.524]
Nonagricultural	5.342	5.895	5.875	−0.020
		[0.893]***	[0.916]***	[1.217]
Average hours of chores per week	39.75	0.305	1.416	1.111
		[1.013]	[1.203]	[1.301]
Income and food security				
Index of income measures, *z*-score	−0.22	0.464	0.616	0.151
		[0.068]***	[0.080]***	[0.087]*
Monthly cash earnings, 000s UGX	15.53	10.372	23.390	13.018
		[3.443]***	[4.607]***	[5.512]**
Durable assets (consumption), *z*-score	0.12	0.327	0.384	0.056
		[0.067]***	[0.068]***	[0.073]
Monthly nondurable consumption, 000s UGX	107.74	31.031	33.439	2.408
		[5.010]***	[5.227]***	[6.049]
Durable assets (production), *z*-score	−0.02	0.402	0.397	−0.005
		[0.064]***	[0.058]***	[0.064]
Times went hungry, past week	0.19	−0.098	−0.084	0.013
		[0.039]**	[0.036]**	[0.043]
Usual number of meals per day	1.76	0.057	0.078	0.021
		[0.028]**	[0.031]**	[0.031]

Notes: All variables denominated in UGX and hours were top-censored at the nintey-ninth percentile to contain outliers. Columns 2 and 3 report the coefficients and standard errors on indicator for assignment to Phase 1 without and with the group dynamics component in an OLS regression of each outcome on treatment indicators, a Gulu district (strata) fixed effect, and baseline covariates. Column 4 reports the difference between the two treatment groups. Standard errors are robust and clustered at the village level.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

* Significant at the 10 percent level.

TABLE 5—IMPACTS OF WINGS ON HEALTH, SOCIAL RELATIONS, AND EMPOWERMENT

Outcome	Control mean (1)	ITT estimates, 16 months after grants: No group training (2)	Group training (3)	Difference (4)
Health				
Physical health index, *z*-score	0.002	0.020	−0.013	−0.033
		[0.070]	[0.069]	[0.085]
Died since baseline	0.003	−0.005	−0.005	0.000
		[0.002]*	[0.003]*	[0.002]
Social relationships				
Quality of family relationships, *z*-score	0.018	0.034	0.011	−0.023
		[0.057]	[0.052]	[0.067]
Social support received, *z*-score	−0.084	0.195	0.159	−0.037
		[0.069]***	[0.063]**	[0.081]
Community participation, *z*-score	−0.086	0.159	0.345	0.187
		[0.055]***	[0.062]***	[0.070]***
Community hostility index, *z*-score	−0.070	0.164	−0.018	−0.182
		[0.073]**	[0.050]	[0.076]**
Empowerment				
Autonomy in purchases, *z*-score[a]	−0.026	0.082	0.089	0.007
		[0.059]	[0.062]	[0.075]
Physical and emotional abuse, *z*-score[a]	−0.030	0.066	−0.046	−0.113
		[0.079]	[0.078]	[0.088]
Degree of partner control, *z*-score[a]	−0.110	0.170	0.129	−0.041
		[0.082]**	[0.079]	[0.086]
Partner relationship quality, *z*-score[a]	−0.086	0.180	0.201	0.021
		[0.085]**	[0.111]*	[0.119]
Female and lives with partner at endline	0.536	0.046	0.072	0.026
		[0.020]**	[0.022]***	[0.024]

Notes: See notes to Table 3. Means and ITTs for index components are in online Appendix D.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

[a]Women with partners at endline only ($n = 961$).

Conclusion

- **Finds large effects of MFI program on business creation and income**
  - Income effect enhanced by encouragement to form social groups
    - Implies poorest are constrained by social networks
- **Large potential for MFI access to help "ultrapoor" in post-conflict environments**
  - Counter to the criticism that MFIs only help the "wealthy" poor

Banerjee et al. (2015)

- **What's the Research Question?**
- **Research Question:** Does access to microcredit affect business creation and consumption, if so how much?

Study Context

- **Neighborhoods in Hyderabad, India (South-central India, pop. 6.8 million)**
- **Limited extent of microfinance in the city at this point in time**
- **Treatment: Spandana**
  - MFI in India with 1.2 million active borrowers in 2008
  - Group loan product
  - Loan to 6-10 women, 25-45 groups in each "center"
  - First loan: 1,000 USD PPP at 12% interest rate
  - If all in group repay (group social pressure to repay), eligible for second loan
  - Second loan: 1,000 to 2,000 USD PPP
- **Eligibility:**
  - Female
  - Aged 18-59
  - Resided in same area for $\geq$ 1 year
  - Valid ID
  - 80% of group must own their own home (groups are formed by the members not Spandana)
  - NO requirement to start a business with the loan

Balancing Tests

- **Table 1a:** Column 5 provides statistical significance of differences between control group and treatment group before treatment. If selection is purely random, these should show no statistical significance

TABLE 1A—BASELINE SUMMARY STATISTICS

	Control group			Treatment − control	
	Obs. (1)	Mean (2)	SD (3)	Coeff. (4)	*p*-value (5)
Household composition					
Number members	1,220	5.038	(1.666)	0.095	0.303
Number adults (>=16 years old)	1,220	3.439	(1.466)	−0.011	0.873
Number children (<16 years old)	1,220	1.599	(1.228)	0.104	0.098
Male head	1,216	0.907	(0.290)	−0.012	0.381
Head's age	1,216	41.150	(10.839)	−0.243	0.676
Head with no education	1,216	0.370	(0.483)	−0.008	0.787

Experimental Design

- **120 areas selected by Spandana**
  - Desirable potential borrowers ⇒ Poor but not poorest
    - Although commonly referred to as "slums"
  - Population range of 46-555 households
  - Not continuous to avoid spillovers
  - 16 areas dropped b/c large pop. Of migrant laborers
  - Pairs grouped on similar avg. per capita consumption and HH debt, 1 randomly chosen to receive Spandana services
- **Spandana rolls out services 2006-2007**
  - 2 rounds of post-treatment data collection (1) 2007-2008 and (2) 2009-2010

Regression Framework

- **Regression:**

$$y_{ia} = \alpha + \beta \times Treat_{ia} + X_a'\gamma + \varepsilon_{ia} \qquad (Page\ 35\ Equation)$$

Outcome of Interest

Binary = 1 if living in an area receiving Spandana

Control variables

β is the coefficient of interest.

It will provide a measure of the "Intent to Treat" (ITT) the effect of offering the program.

Note how this is subtly different than the effect of the treatment itself.

Threats to Identification

- Attrition
- Selective Migration

- Check this out on your own.

TABLE 2—CREDIT

	Spandana (1)	Other MFI (2)	Any MFI (3)	Other bank (4)	Informal (5)	Total (6)	Ever late on payment? (7)	Number of cycles borrowed from an MFI (8)	Index of dependent variables (9)
Panel A. Endline 1									
Credit access									
Treated area	0.127***	−0.012	0.084***	0.003	−0.052**	−0.023	−0.060**	0.084**	0.106***
	(0.020)	(0.024)	(0.027)	(0.012)	(0.021)	(0.014)	−0.026	(0.041)	(0.0291)
Observations	6,811	6,657	6,811	6,811	6,811	6,862	6,475	6,811	6,862
Control mean	0.051	0.149	0.183	0.079	0.761	0.867	0.616	0.330	0.000
Hochberg-corrected *p*-value									0.000
Loan amounts (*in Rupees*)									
Treated area	1,334***	−94	1,286***	75	−1,069	2,856			
	(230)	(336)	(439)	(2,163)	(2,520)	(4,548)			
Observations	6,811	6,708	6,811	6,811	6,811	6,862			
Control mean	597	1,806	2374	8,422	41,045	59,836			
Panel B. Endline 2									
Credit access									
Treated area	0.063***	−0.039	0.002	0.001	0.002	0.000	0.007	0.085	0.0288
	(0.019)	(0.026)	(0.029)	(0.009)	(0.018)	(0.010)	(0.021)	(0.067)	(0.0253)
Observations	6,142	6,142	6,142	6,142	6,142	6,142	6,142	5,926	6,142
Control mean	0.111	0.268	0.331	0.073	0.603	0.904	0.598	0.724	0.000
Hochberg-corrected *p*-value									0.256
Loan amounts (*in Rupees*)									
Treated area	979***	−217	799	−1,181	158	2,554			
	(287)	(628)	(669)	(1,086)	(2,940)	(6,156)			
Observations	6,142	6,142	6,142	6,142	6,142	6,142			
Control mean	1,567	4,775	5,544	6,127	32,356	88,632			

Results (All Business Outcomes)

TABLE 3—SELF-EMPLOYMENT ACTIVITIES: REVENUES, ASSETS, AND PROFITS (*All households*)

	Assets (stock) (1)	Investment in last 12 months (2)	Expenses (3)	Profit (4)	Has a self-employment activity (5)	Number of self-employment activities (6)	Has started a business in the last 12 months (7)	Has closed a business in the last 12 months (8)	Index of dependent variables (9)
Panel A. Endline 1									
Treated area	598	391*	255	354	0.0083	0.018	0.009	0.002	0.0357
	(384)	(213)	(1,056)	(314)	(0.0215)	(0.0380)	(0.006)	(0.008)	(0.0188)
Observations	6,800	6,800	6,685	6,239	6,810	6,810	6,757	2,352	6,810
Control mean	2,498	280	4,055	745	0.349	0.503	0.047	0.037	0.000
Hochberg-corrected *p*-value									0.175
Panel B. Endline 2									
Treated area	1,261**	−134	−530	542	0.023	0.045	−0.000	−0.000	0.0151
	(530)	(207)	(547)	(372)	(0.023)	(0.040)	(0.010)	(0.006)	(0.0186)
Observations	6,142	6,142	6,116	6,090	6,142	6,142	6,142	6,142	6,142
Control mean	5,003	1,007	5,225	953	0.418	0.561	0.083	0.053	0.000
Hochberg-corrected *p*-value									>0.999

Results (Existing Businesses)

TABLE 3B—SELF-EMPLOYMENT ACTIVITIES: REVENUES, ASSETS AND PROFITS (*Households with old businesses*)

	Assets (stock) (1)	Investment in last 12 months (2)	Revenue (3)	Expenses (4)	Profit (5)	Employees (6)	Index of dependent variables (7)
Panel A. Endline 1							
Treated area	898	1,119	5,266	1,620	2,105*	−0.05	0.09
	(1,063)	(698)	(3,720)	(3,257)	(1,100)	(0.0824)	(0.0406)
Observations	2,083	2,083	1,955	2,020	1,624	2,088	2,088
Control mean	6,757	678	14,505	12,325	2,038	0.41	0.00
Hochberg-corrected *p*-value							0.057
Panel B. Endline 2							
Treated area	1,682	−948	343	−2,644*	839	−0.12	−0.007
	(1,412)	(588)	(1,263)	(1,491)	(945)	(0.099)	−0.0263
Observations	1,878	1,878	1,859	1,862	1,844	1,878	1,878
Control mean	10,301	2,292	12,564	12,418	1,948	0.46	0.00
Hochberg-corrected *p*-value							>0.999

Results (Consumption)

TABLE 6—CONSUMPTION (*Per capita, per month*)

	Total (1)	Durables (2)	Nondurable (3)	Food (4)	Health (5)	Education (6)	Temptation goods (7)	Festivals and celebrations (8)	Home durable good index (9)
Panel A. Endline 1									
Treated area	10.24	19.73*	−6.50	−12.11	−3.7	−2.061	−8.785*	−14.16*	−0.051
	(37.22)	(11.35)	(31.81)	(12.06)	(11.51)	(9.865)	(4.92)	(8.09)	(0.057)
Observations	6,827	6,781	6,781	6,827	6,827	5,415	6,827	6,827	6,841
Control mean	1,419	116	1,305	525	140	168	84	69	2.37
Hochberg-corrected *p*-value	>0.999								
Panel B. Endline 2									
Treated area	−48.83	0.42	−45.45	−11.20	−22.54	12.16	−10.07	6.17	−0.0127
	(51.53)	(9.88)	(46.92)	(17.88)	(17.50)	(15.19)	(6.61)	(4.12)	(0.0426)
Observations	6,142	6,140	6,142	6,142	6,141	4,910	6,142	6,103	6,142
Control mean	1,914	131	1,755	687	187	206	118	90	2.66
Hochberg-corrected *p*-value	0.691								

Findings

- **Mostly weak to inconclusive effects**
  - Some expansion of female-owned businesses
  - No improvement in welfare (measured by monthly consumption)
  - Business profits did not increase for the vast majority of businesses despite high macro econ. growth
  - No discernable effect on education, health, women's empowerment in short run
  - Very little evidence of persistent statistically significant effects
- **No evidence for microfinance "miracle"**
  - Evidence to question the popular narrative for microfinance

Reconciling Blattman et al. (2016) and Banerjee et al. (2015)

- **Very similar papers**
  - Same research question
  - Same identification strategy
  - Same journal (AEJ: Applied Economics)
  - Published within a year of each other!
- **Pretty Different conclusions**
  - Blattman et al. say MFI big effects on business creation and welfare
  - Banerjee et al. say not much is happening
- **Why? Maybe:**
  - Different socio-economic contexts (but why would this matter?)
  - Different treatments (different MFI programs)
  - Others? Up to you to think about what convinces you

Chris Blattman has a great blog

- **Chris Blattman is a an incredible researcher at the Harris School of Public Policy at the University of Chicago**
  - Great development-focused blog: https://chrisblattman.com/
  - Exciting research: https://chrisblattman.com/research/
  - Choosing graduate school:
    - MPA/MIA/MA: https://chrisblattman.com/2013/10/04/what-ma-mpa-or-mia-program-is-for-you/
    - PHD: https://chrisblattman.com/about/contact/gradschool/