Escaping Poverty?

focusing on psycho-social constraints

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May 2023

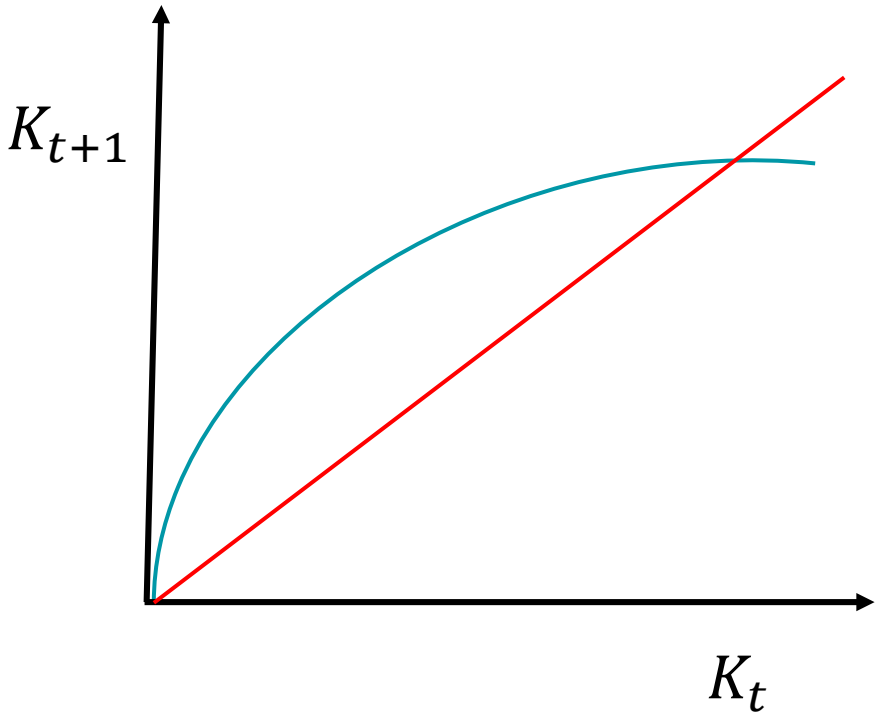
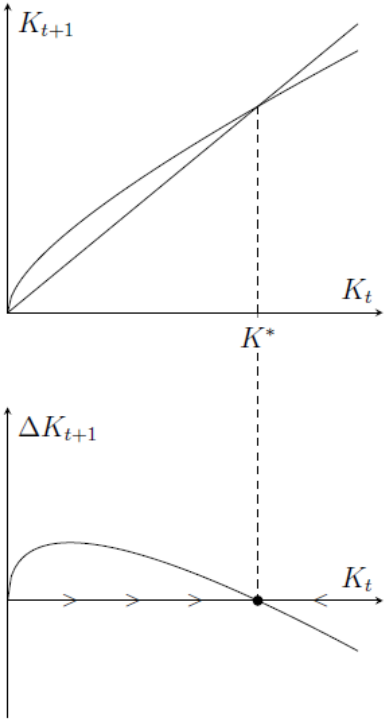
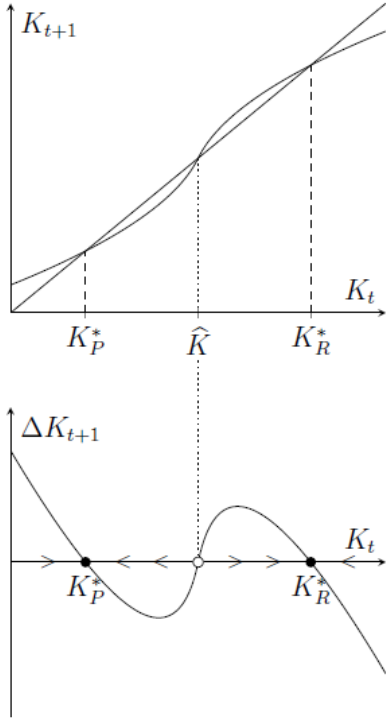

K_{t+1}
K_t

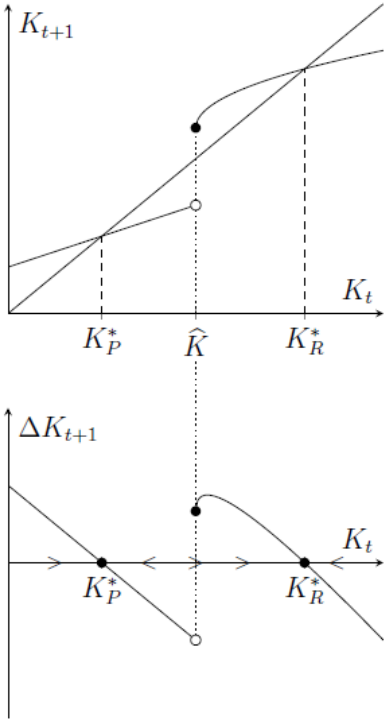
Figure 3: Three Transition Equations and Implied Asset Dynamics



(a) Globally Concave Production Function



(b) S-shaped Production Function



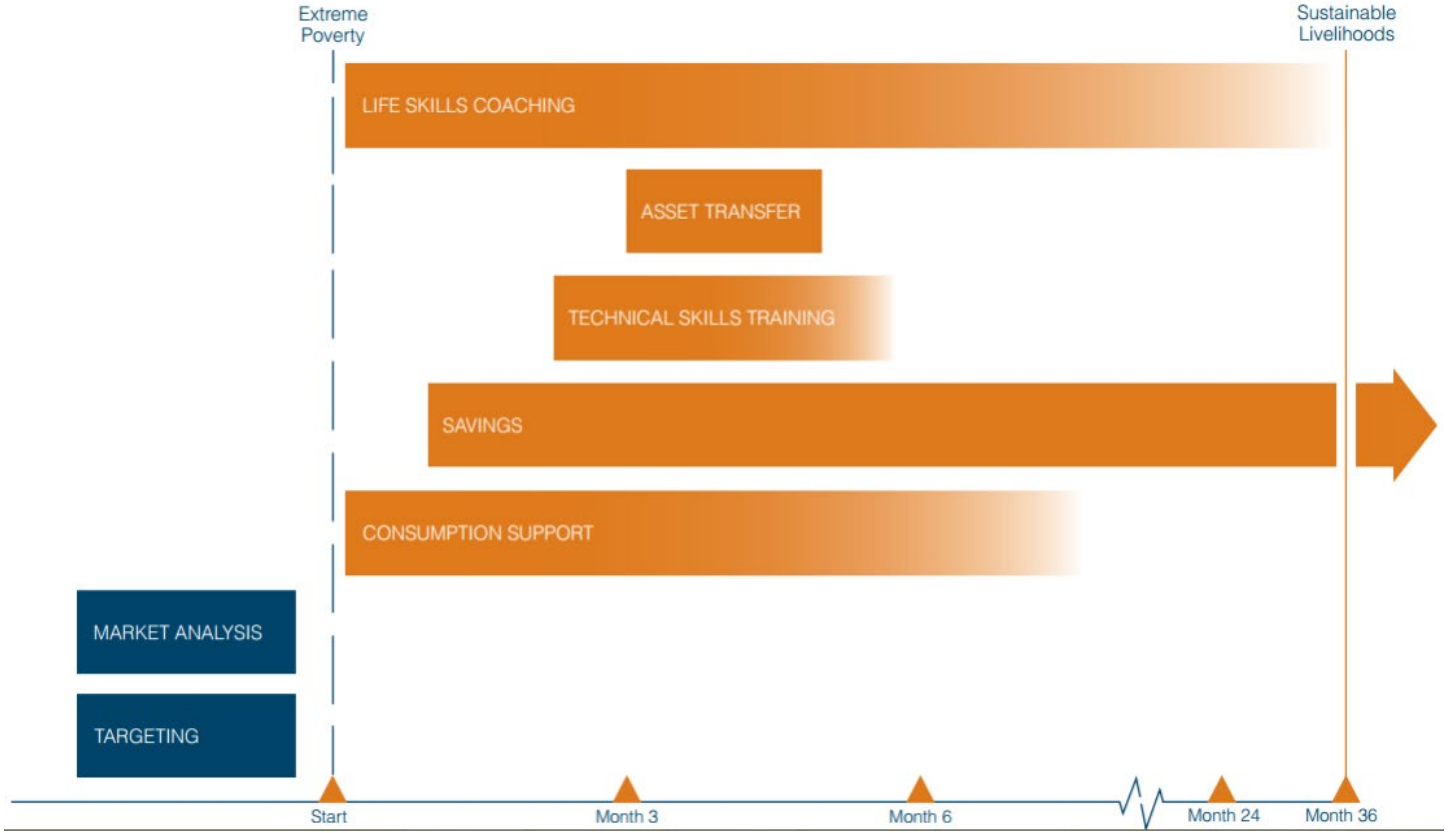
(c) Production Function with Indivisibilities

Escaping Poverty: Psychosocial Constraints and Social Protection

Nathan Barker, Gharad Bryan, Dean Karlan, Angela Ofori-Atta, Christopher Udry

Northwestern

The Multi-Faceted Approach
("Graduation" or "Productive Inclusion" or "Livelihood Plus" or "Cash plus")



Ghana: Escaping Poverty Project Overview

Replication & extension of the
Ghana Ultra Poor ("GUP") Graduation study
Banerjee et al. (2015) *Science*

Key extensions:

1. Cognitive Behavioral Therapy (CBT) treatment arm
   - CBT Implemented prior to Graduation program
   - Short-run results for CBT from survey completed post-CBT and pre-Graduation program
   - Long-run results from post-Graduation program
2. Cash treatment arm

Escaping Poverty – Plan today

1. Notable impact heterogeneity across recipients and programs
   Can mental health/cognitive aspects explain some of this?

2. Can the program work with just psycho-social (& savings)?
   Or, graduation program without the lump-sum grant?

3. Impact of broadly targeted CBT, short-run and long-run?

4. Does improved mental health increase impact of Graduation?

5. How do behavioral and asset-based 'poverty traps' interact?

Behavioral Economics 1.0 → 3.0

Behavioral economics 1.0: Laboratory, theory

Behavioral economics 2.0: Nudge, scalpel-like tests of theory

- Commitment (savings, fertilizer, smoking, etc)
- Attention (reminders)
- Optimism (less studied, beliefs tough to measure! Needs work…)
- Endowment effects & sunk costs
  (less studied, and often nulls: bednets, Halloween candy)
- Social Norms (beliefs, networks/info asymmetries)

Behavioral economics 3.0:

- Broader policy, direct interventions
- Recognizes complexity, heterogeneity
- Built into programs, or are programs

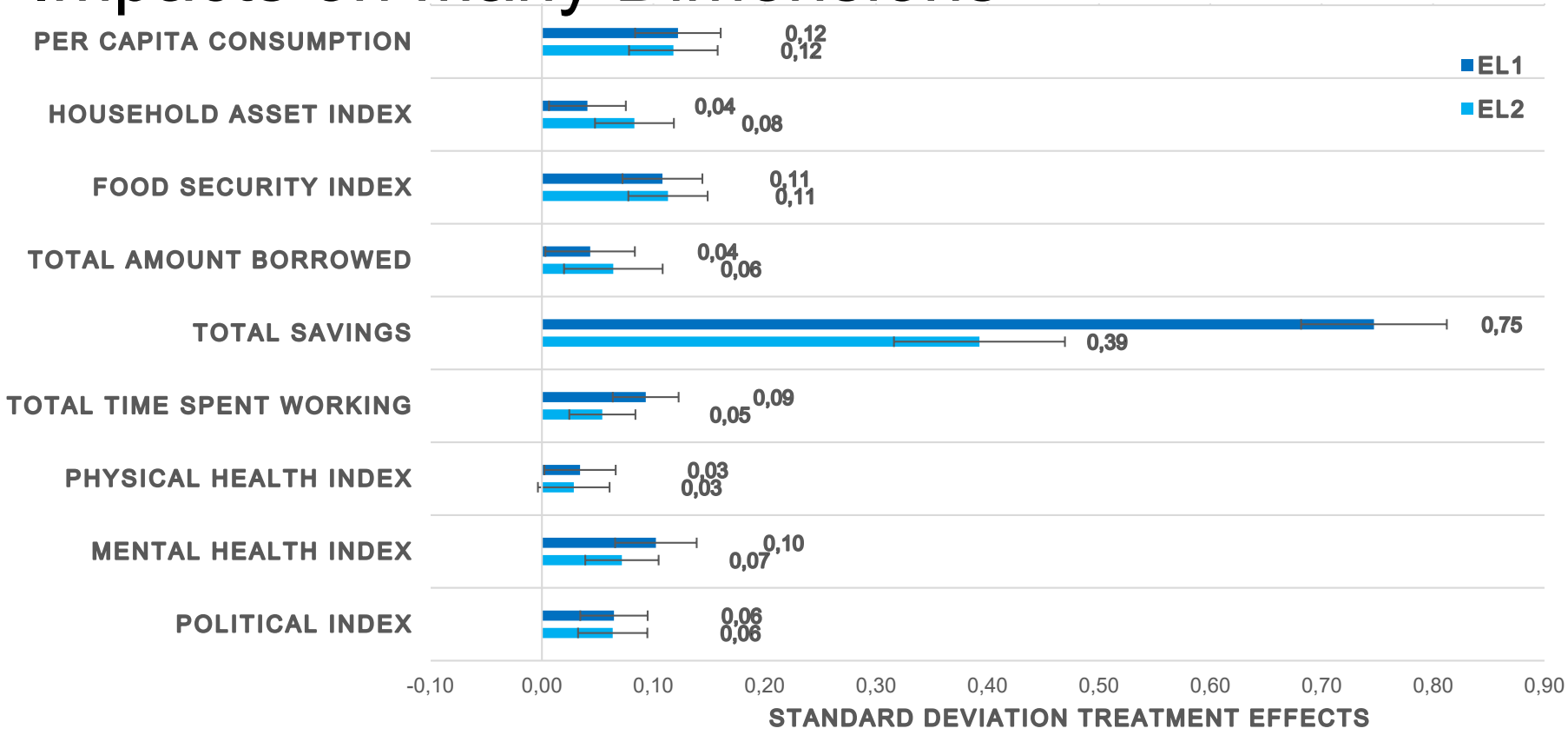
Motivating Evidence

Motivating Evidence

1. “Graduation” programs can be effective in improving multiple dimensions of people’s lives, for at least several years after support has ended

Eight Sites of Original Graduation Tests

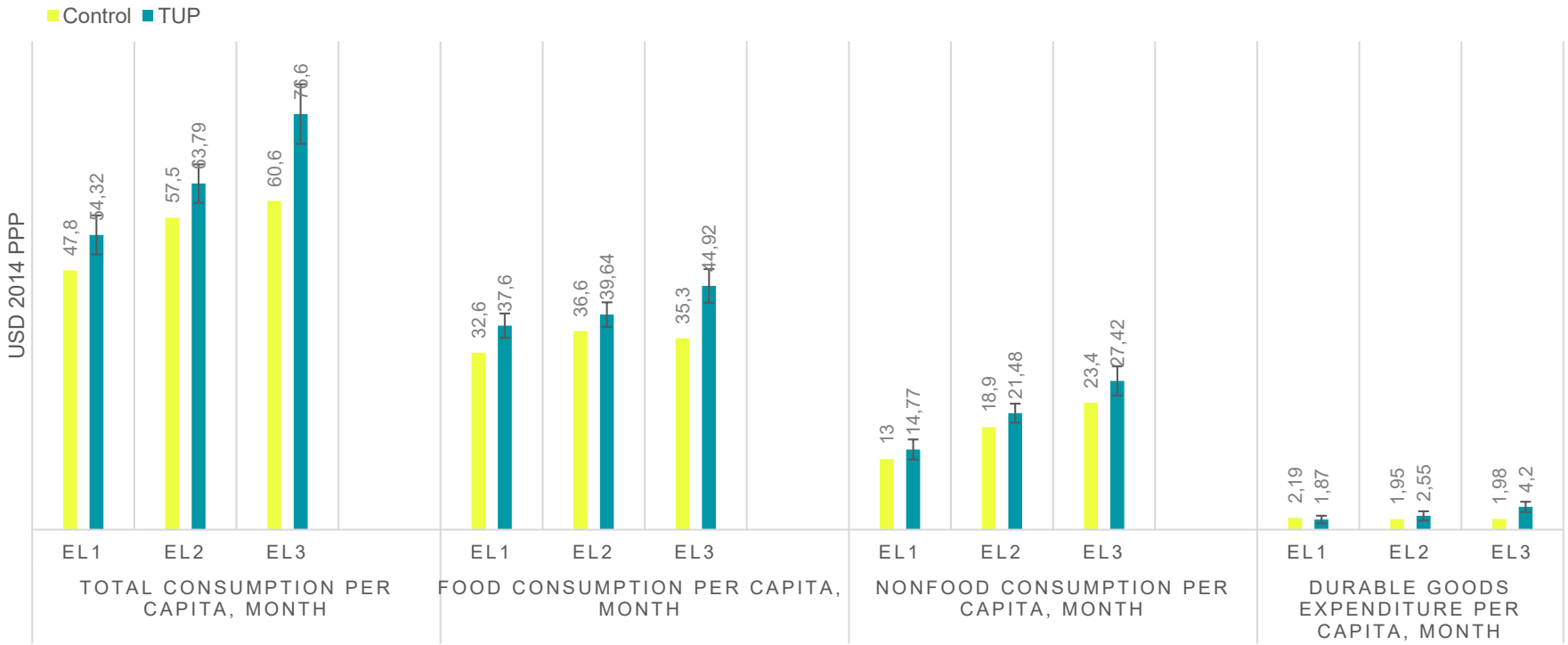
Impacts on Many Dimensions



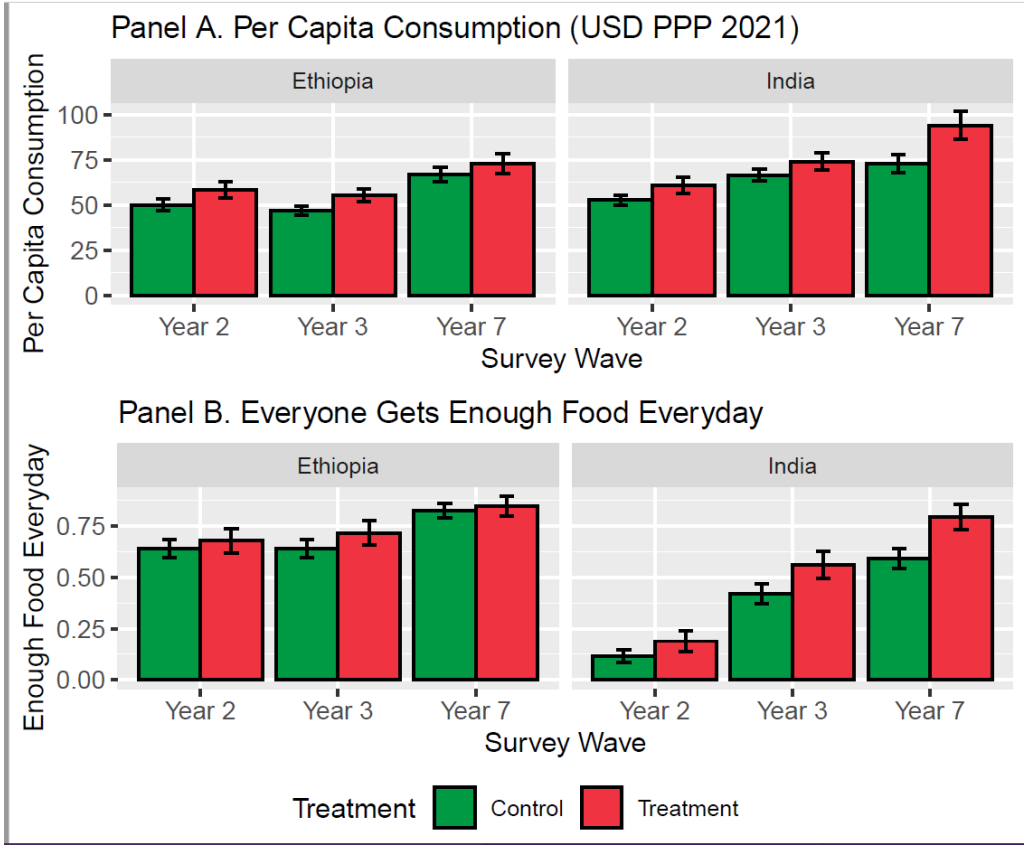
Graduation Can Have Long-Term Impacts

Banerjee, Duflo & Garima, 2021

7-Year Impacts of Bandhan's Program in West Bengal, India



Ethiopia (vs India) 7-year results



Does mental health drive heterogeneity in impacts?

6-Site Study Bayesian Hierarchical Model

w/ Rachael Meager and Witold Wiecek

Table 3: Relative treatment effects for different targeting strategies

Outcome	Target	Mean	LCI	UCI
Assets	Higher than average political involvement	-0.04	-0.06	-0.02
Assets	Household head over 45	-0.03	-0.04	-0.01
Econ. status	Household head over 45	-0.02	-0.03	0.00
Econ. status	Above average consumption	-0.01	-0.03	0.00
Assets	Higher than average health	-0.01	-0.02	0.00
Time working	Majority of household is children	0.01	0.00	0.02
Time working	Over 2/3 of consumption is on food	0.01	0.00	0.02
Time working	Household head 30-45	0.01	0.00	0.02
Assets	Above average household size	0.01	0.00	0.02
Assets	Above average consumption	0.01	0.00	0.02
Assets	Household head 30-45	0.02	0.01	0.03
Assets	Education years in top quartile	0.02	0.00	0.03
Assets	Above average baseline	0.02	0.01	0.04
Time working	Higher than average mental health	0.03	0.01	0.05
Econ. status	Household head is female	0.07	0.03	0.11
Econ. status	Above average baseline	0.08	0.02	0.14

Note: Estimates are given in SDs of endline control. To calculate this, for each Bayesian posterior sample we take the mean ITEs among all households and subtract mean ITE across which households meeting particular criterion. LCI and UCI are lower and upper ends of the 95% uncertainty interval.

Motivating Evidence

2. Evidence from GUP - the Ghana implementation - shows that the asset transfer alone did little to improve lives (Bannerjee, Karlan, Osei, Trachtman, Udry JDE 2021) Details

Motivating Evidence

3. Better saving opportunities did not achieve improvements similar to GUP (Bannerjee, Karlan, Osei, Trachtman, Udry JDE 2021) Details

Motivating Evidence

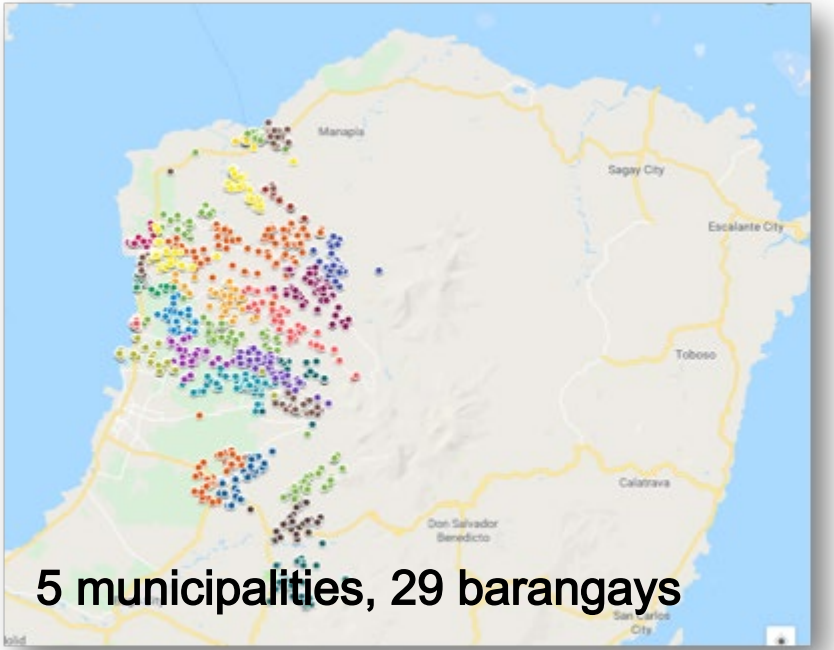
4. Banerjee, Karlan, Trachtman, Udry (WP 2022) shows
    a. GUP increased income, and labor supply. Consistent with
        i. Investments leading to higher productivity on own enterprise + labor market imperfections = household labor pulled into enterprise
        ii. Physiological or psychological graduation labor productivity effect
    b. Bags experiment eliminates (i)

Details

Motivating Evidence

5. DOLE Philippines pilot program evaluation shows little gain from moving to individual coaching from group coaching

Study location and sample



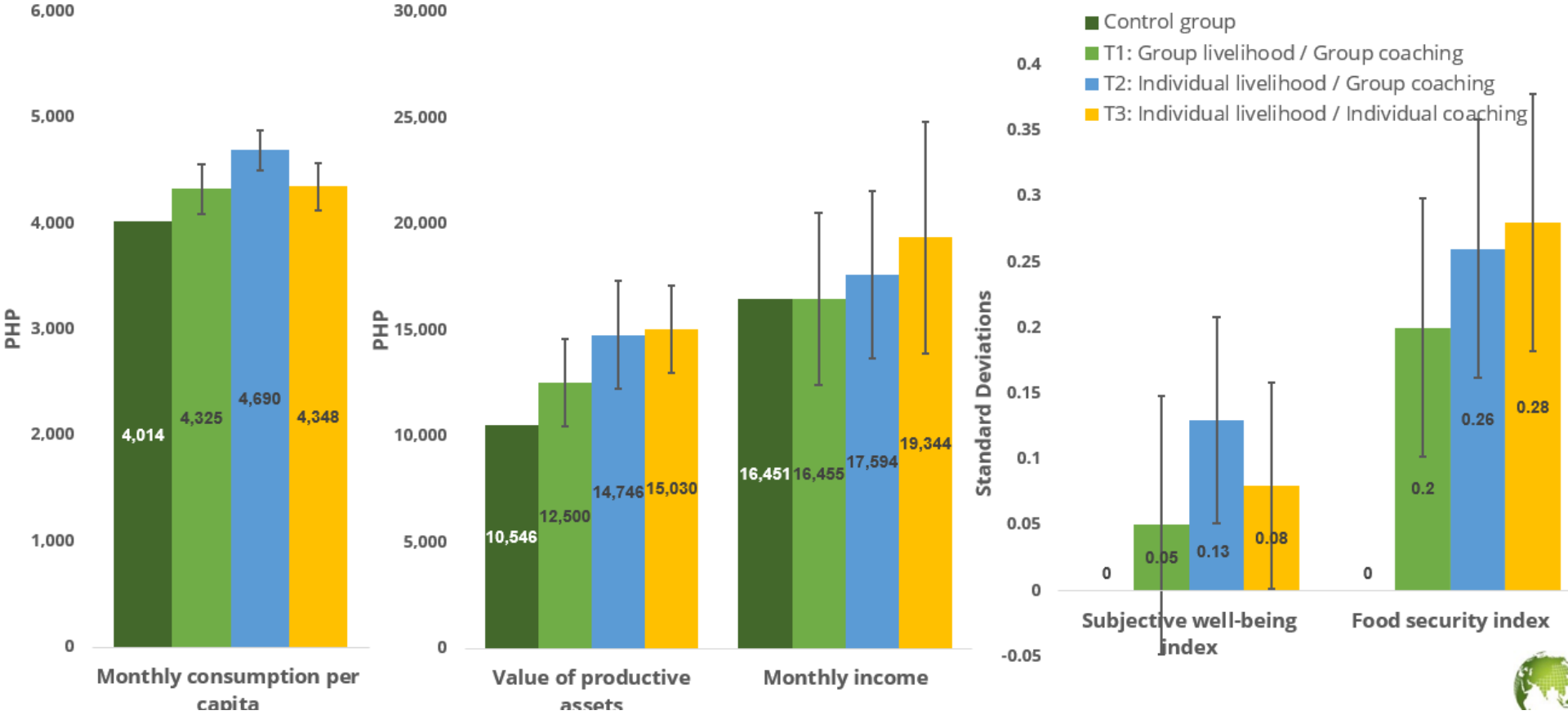
Sample: Poor HHs from 29 barangays that were added to CCT program from 2015-2017, not beneficiary of similar program

RCT with 3 treatment arms + control group

Intervention	Control (N=586)	T1: Group livelihoods and group coaching (N=587)	T2: Individual Livelihoods and group coaching (N=583)	T3: Individual livelihoods and individual coaching (N=583)
4Ps	✓	✓	✓	✓
In-kind asset transfer	✗	$1,500 per group of 5	$300 per individual	$300 per individual
% received transfer	✗	62%	73%	78%
Coaching (two -weekly)	✗	Group	Group	Individual
Skills training	✗	✓	✓	✓
Savings facilitation	✗	✓	✓	✓
Community mobilization	✗	✓	✓	✓

Sample: HHs from 29 barangays in Negros Occidental that were added to 4Ps between 2015 and 2017, not a beneficiary of a similar program (SLP)

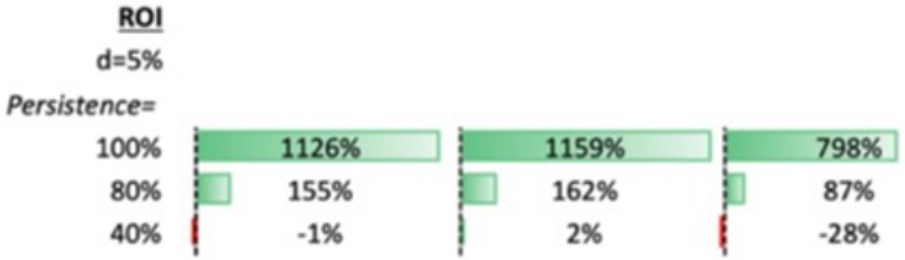
Improved household welfare across multiple measures



Results summary

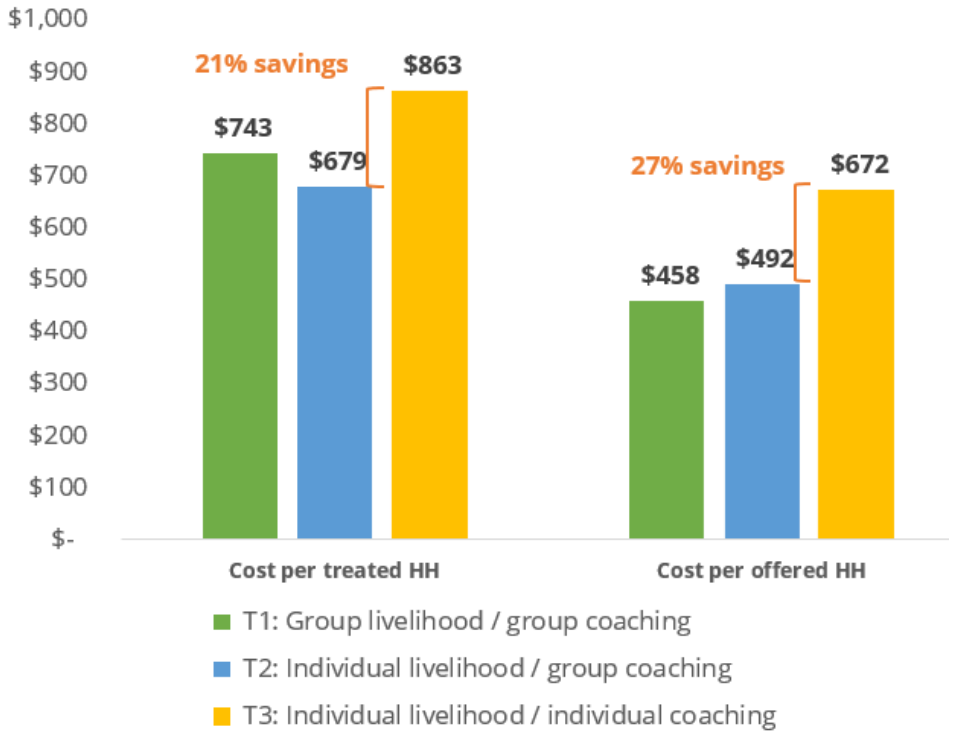
- All arms **increased household well-being on multiple dimensions:**
  - 8–9% increase in monthly per-capita consumption (324–728 Php).
  - 0.20–0.28 s.d. increase in household food security.
  - 19–43% increase in productive asset value (1,954–4,484 Php).
  - 0.13 s.d. increase subjective well-being for individual livelihood w/ group coaching
- No evidence of income change (due to high observed dispersion?)

Cost-effectiveness



Persistence of effects will determine return on investment

Effects may even grow over time (Banerjee et al. 2016)



Motivating Evidence

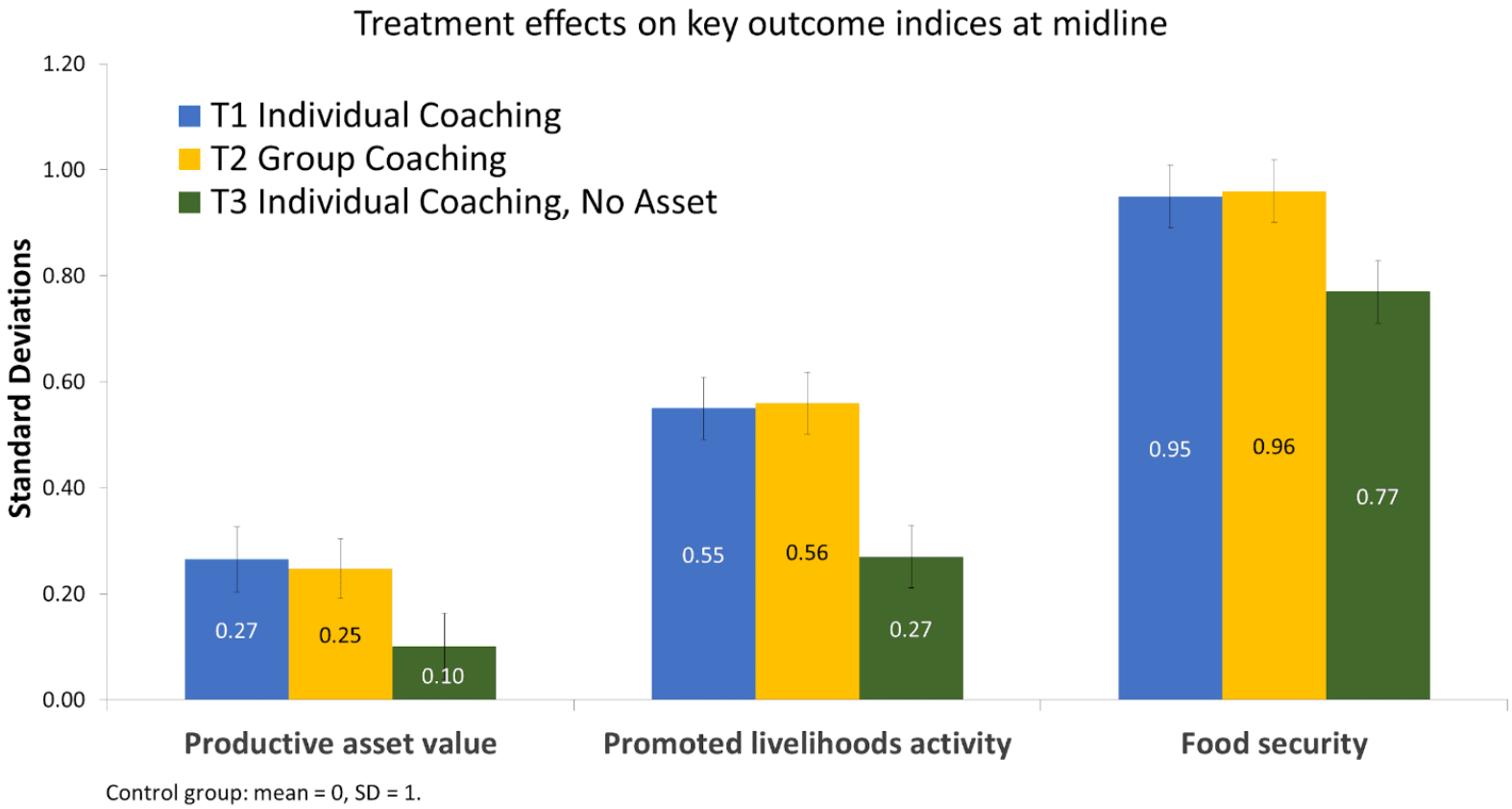
6. AVSI Uganda Mid-line results show remarkable effectiveness of no-asset coaching plus training

AVSI Uganda, Refugee + Host Communities

Intervention	T1: Full program individual coaching (N=2,200)	T2: Full program group coaching (N=2,200)	T3: Individual coaching, no asset (N=2,200)	Control (in treatment villages) (N=2,200)
Consumption support (12 months)	•	•	•	
VSLA, FFBS, more	•	•	•	
Individual coaching	•		•	
Group coaching		•		
Asset Transfer	•	•		

- **Sample:** Kamwenge refugee settlement (50% of sample) and host communities
- **Data:** Midline data; ~12 months after beginning of the program including consumption support; ~6 months after asset transfer

AVSI Uganda: Mid-line Results



Control group: mean = 0, SD = 1.

Motivating Evidence

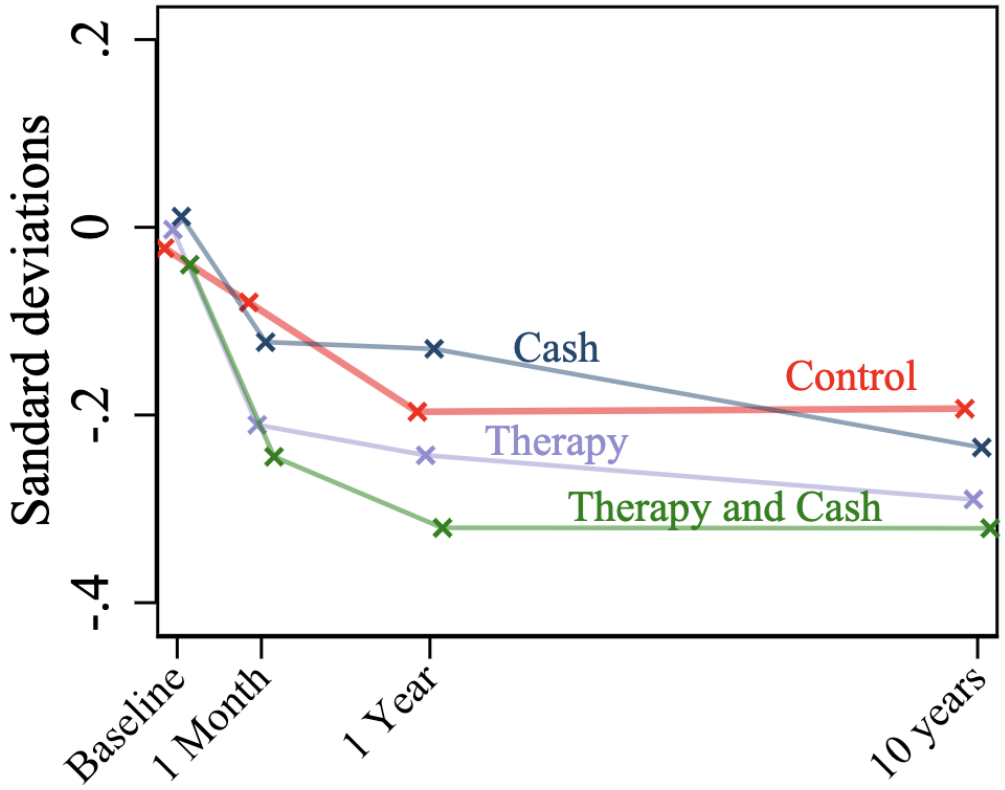
7. Niger ASP Program “psychosocial” package effectiveness (Bossuroy et al 2022)
   Details

Motivating Evidence

8. Blattman, Jamison & Sheridan show CBT effectiveness in Liberia

After 10 years?

All groups decline in antisocial behavior over time



Details : Link to
Liberia slides 23-28

Details

Motivating Evidence

9. Orkin et al. (2023) - an 80 minute workshop on aspirations and planning generated large economic returns in rural Western Kenya after 1.5 years. Large cash transfer did as well. No complementarity.

Economic impacts
Psych: 80 min workshop; Cash: $2237 PPP

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Index Components					
	Economic Index	Labour Supplied (Days)	Inputs & Hired Labour	Education Expenditure	Revenue	Non-Land Assets	Consumption Expenditure
Psych	0.112***	26.8**	230**	22.2	260*	98**	142*
	(0.035)	(11.6)	(100)	(27.7)	(155)	(46)	(74)
	[.]	[0.069]	[0.069]	[0.127]	[0.069]	[0.069]	[0.069]
Cash	0.234***	27.2**	451***	44.8	465***	406***	322***
	(0.039)	(12.4)	(103)	(30.4)	(159)	(50)	(77)
	[.]	[0.012]	[0.001]	[0.036]	[0.003]	[0.001]	[0.001]
Combined	0.258***	9.0	653***	126.4***	546*	352***	232**
	(0.063)	(11.5)	(214)	(31.5)	(303)	(47)	(95)
	[.]	[0.096]	[0.004]	[0.001]	[0.030]	[0.001]	[0.012]
Placebo mean	0.000	525	857	640	2,101	1,529	3,796

Movement in psychological outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Aspir-ations Index	Expect-ations Index	Self-belief Index	Returns Index	Discount Factor	No Present Bias	Risk-taking	Mental Health Z-score
Psych	0.092***	0.091**	0.006	-0.011	-0.006	-0.023	-0.018	-0.015
	(0.035)	(0.039)	(0.046)	(0.037)	(0.011)	(0.016)	(0.038)	(0.035)
	[0.079]	[0.079]	[1.000]	[1.000]	[1.000]	[0.428]	[1.000]	[1.000]
Cash	0.130***	0.178***	-0.053	-0.002	-0.002	-0.015	-0.014	0.086**
	(0.036)	(0.038)	(0.042)	(0.038)	(0.011)	(0.016)	(0.036)	(0.034)
	[0.002]	[0.001]	[0.344]	[0.907]	[0.907]	[0.526]	[0.854]	[0.027]
Combined	0.178***	0.134***	0.025	-0.002	-0.003	-0.028*	-0.030	0.044
	(0.040)	(0.043)	(0.044)	(0.036)	(0.011)	(0.017)	(0.033)	(0.035)
	[0.001]	[0.006]	[0.668]	[0.908]	[0.788]	[0.235]	[0.594]	[0.339]

Motivating Evidence

10. Barker, Bryan, Karlan, Ofori-Atta, Udry (2022) shows that CBT in Ghana improves mental health for entire population of poor, regardless of baseline mental distress

CBT

- Cognitive behavioral therapy (CBT) is a mental health intervention focused on teaching skills to identify negative thought patterns and modify beliefs
- Central idea: when we experience stimuli in the world, we often have an automatic response to them
- In certain cases, we might automatically have an unproductive interpretation (e.g., my husband ignored me because he is mad at me, rather than because he is distracted or busy)
- It is important to recognize that there is a stage where we interpret the stimulus, so we should stop and consider which interpretations are productive vs. unproductive

CBT Logistics

- 37 counselors
  - Worked in pairs: 1 lead + 1 assistant
  - At least a Bachelor's degree with major or minor in psychology
  - Recruited through standard online job posting (JobsinGhana.com) and through Psych Corps' website
  - Two weeks of classroom training, 1 week field practice
  - Thus, EP is also investigating whether mental health services can be effectively provided without first needing to intensively build skill capacity
- Randomly assigned gender-specific groups, target 10/group
- 12-weekly meetings, ≋1.5 hours each
- 90% offered ever attended; 74% mean attendance

CBT Logistics

Transition Matrix

Table 2: Incidence and Transition Rates of Mental Distress

Panel A: Transition Matrix for Control Group

		Endline Mental Distress				
	(1)	(2)	(3)	(4)	(5)	(6)
Level of Baseline Mental Distress, Control Group	Share at baseline	No Mental distress (N=2,562)	Mild Mental Distress (N=1,211)	Moderate Mental Distress (N=892)	Severe Mental Distress (N=904)	Total
(a) No baseline mental distress (N=2,486)	0.45	0.57	0.19	0.14	0.10	100%
(b) Mild baseline mental distress (N=1,309)	0.24	0.42	0.24	0.17	0.17	100%
(c) Moderate baseline mental distress (N=863)	0.15	0.36	0.24	0.18	0.22	100%
(d) Severe baseline mental distress (N=911)	0.16	0.31	0.23	0.20	0.26	100%
(e) Share at endline		0.46	0.22	0.16	0.16	

Share above diagonal (worsened mental health)	0.31
Share at diagonal (no change in mental health)	0.38
Share below diagonal (improved mental health)	0.31

Table 3: CBT Treatment Effects - Health Outcomes

	Average Treatment Effects	
	Control Mean	CBT Average Treatment Effect Full Sample
	(1)	(2)
Panel A: Mental Health Outcomes		
Mental Health Index	0.00	0.15
RI p-value		[0.000]
Kessler Score	21.41	-1.36
RI p-value		[0.000]
No distress (Kessler < 20)	0.45	0.06
RI p-value		[0.004]
No moderate or severe distress (Kessler < 25)	0.69	0.06
RI p-value		[0.001]
No severe distress (Kessler <30)	0.85	0.04
RI p-value		[0.010]
Mental Health Self Rating (1/4)	2.84	0.07
RI p-value		[0.052]
30 minus days in month with poor mental health	25.32	0.53
RI p-value		[0.097]
Panel B: Perceived Physical Health and Effects on Labor		
Perceived Physical Health and Labor Index	0.00	0.13
RI p-value		[0.000]
Physical Health Self-Rating (1/4)	3.04	0.12
RI p-value		[0.000]
30 minus days in month with poor physical health	25.61	0.89
RI p-value		[0.001]
30 minus days in month in which poor mental or physical health limited labor or normal activities	26.90	0.344
RI p-value		[0.160]

	Control Mean	CBT Average Treatment Effect, Full Sample
	(1)	(2)
Panel A: Socioemotional Skills		
Socioemotional Skill Index	0.00	0.27
RI p-value		[0.000]
Generalized Self-Efficacy Score	0.00	0.29
RI p-value		[0.000]
Grit Score	0.00	0.19
RI p-value		[0.000]
Self-Control Score	0.00	0.12
RI p-value		[0.005]
Panel B: Cognition		
Cognition Index	0.00	0.08
RI p-value		[0.012]
Raven's Progressive Matrices, Indexed	0.00	0.03
RI p-value		[0.555]
Digit Span: Forwards, Indexed	0.00	0.08
RI p-value		[0.023]
Digit Span: Backwards, Indexed	-0.01	0.07
RI p-value		[0.033]
Executive Function Test, Indexed	0.00	0.05
RI p-value		[0.170]
Panel C: Economic Self-Perception		
Perceptions of Economic Status Index	0.00	0.20
RI p-value		[0.000]
Self-Reported Economic Status	3.08	0.44
RI p-value		[0.000]
Projected Economic Status in 5 years	5.79	0.36
RI p-value		[0.000]

Heterogeneity by Baseline Mental Distress

	CBT Average Treatment Effect, Minor, Moderate or Severe Baseline Distress (Kessler 20+)	CBT Average Treatment Effect, No Baseline Distress (Kessler < 20)	p-value from Test: Homogenous Treatment Effect by Baseline Distress, 3=4
Panel A: Mental Health Outcomes			
Mental Health Index	0.115	0.182	
RI p-value	[0.008]	[0.009]	[0.385]
Kessler Score	-1.082	-1.611	
RI p-value	[0.002]	[0.006]	[0.422]
No distress (Kessler < 20)	0.0482	0.0496	
RI p-value	[0.034]	[0.146]	[0.974]
No moderate or severe distress (Kessler < 25)	0.0509	0.0717	
RI p-value	[0.010]	[0.041]	[0.603]
No severe distress (Kessler <30)	0.0166	0.0678	
RI p-value	[0.273]	[0.019]	[0.106]
Mental Health Self Rating (1/4)	0.0742	0.0474	
RI p-value	[0.070]	[0.442]	[0.702]
30 minus days in month with poor mental health	0.228	1.197	
RI p-value	[0.522]	[0.052]	[0.169]
Panel B: Perceived Physical Health and Effects on Labor			
Perceived Physical Health and Labor Index	0.114	0.127	
RI p-value	[0.004]	[0.065]	[0.873]
Physical Health Self-Rating (1/4)	0.0999	0.14	
RI p-value	[0.004]	[0.010]	[0.500]
30 minus days in month with poor physical health	0.704	1.112	
RI p-value	[0.036]	[0.056]	[0.566]
30 minus days in month in which poor mental or physical health limited labor or normal activities	0.469	-0.00348	
RI p-value	[0.101]	[0.995]	[0.407]

Ghana: 6-Month Results

- CBT does its work …
- … and then some!
  - Improved cognition
  - Improved perceived physical health
  - Improved economic activity
  - Better economic expectations
- KEY: works well **for all**
- Great deal of movement over time into and out of distress
- **But what about longer term?**

CBT and intimate partner violence: 1 year followup

- Although EP's CBT program is not directly aimed at reducing IPV, it shares many modules with violence -reduction CBT programs e.g., anger management, communication, and conflict resolution
- Moreover, the skills developed through the CBT curriculum are meant to be global in nature
- Ex: learning assertiveness or conflict resolution skills could apply to IPV by helping participants to either resist a partner's violence or deescalate a potentially violent situation

IPV Results

CBT Treatment Effect on Primary Outcomes, Male Spouse Received CBT					
	(1)	(2)	(3)	(4)	(5)
	Child discipline index	Controlling behavior index	Emotionally abusive behavior index	Physically abusive behavior index	Sexually abusive behavior index
Respondent's spouse assigned to CBT	0.0633	-0.0560	0.0236	-0.0366	-0.0123
	(0.0819)	(0.0828)	(0.100)	(0.0942)	(0.102)
Observations	4,392	5,323	5,323	5,322	5,320
control_mean	0	0	0	0	0

IPV Results

CBT Treatment Effect on Primary Outcomes, Female Respondent Received CBT					
	(1)	(2)	(3)	(4)	(5)
	Child discipline index	Controlling behavior index	Emotionally abusive behavior index	Physically abusive behavior index	Sexually abusive behavior index
Respondent assigned to CBT	0.0478	-0.0258	0.161**	0.0612	0.0456
	(0.0973)	(0.0857)	(0.0751)	(0.0788)	(0.0896)
Observations	4,443	5,418	5,418	5,417	5,413
control_mean	0	0	0	0	0

Ghana Context: Escaping Poverty

- Regions: Upper East, Northern, Bono East (formerly Brong Ahafo), Ashanti
- Three districts per region
- 258 communities selected in total
- Approximately 7,700 households that qualified as ultra poor (bottom 25%)
- Peri-urban: close enough to district capitals to be monitored, but rural enough to viably rear livestock

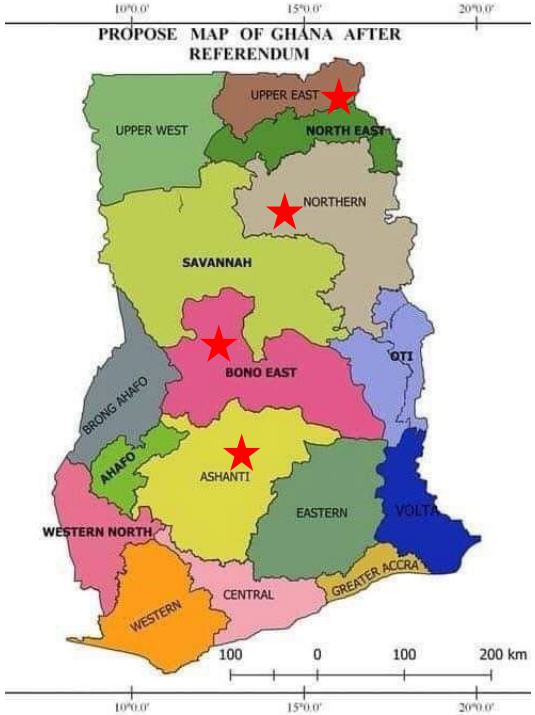


Image from http://districts.ghana -net.com/index.html. Accessed June 18, 2019.

Sampling and Randomization Design

- Selected communities classified as poor, with no similar (graduation) programs, access by road, at least 45 compounds
- Within each community: selected 45 compounds with lowest mean poverty scorecard; one household randomly chosen per compound
- Baseline survey: (1) household, (2) adults: 1 male and 1 female
- Three levels of randomization:
    1. community level: Control / cash / CBT / Graduation / Graduation+CBT
    2. gender of CBT in community
    3. individual-level
- Endline survey 1-3 years after program

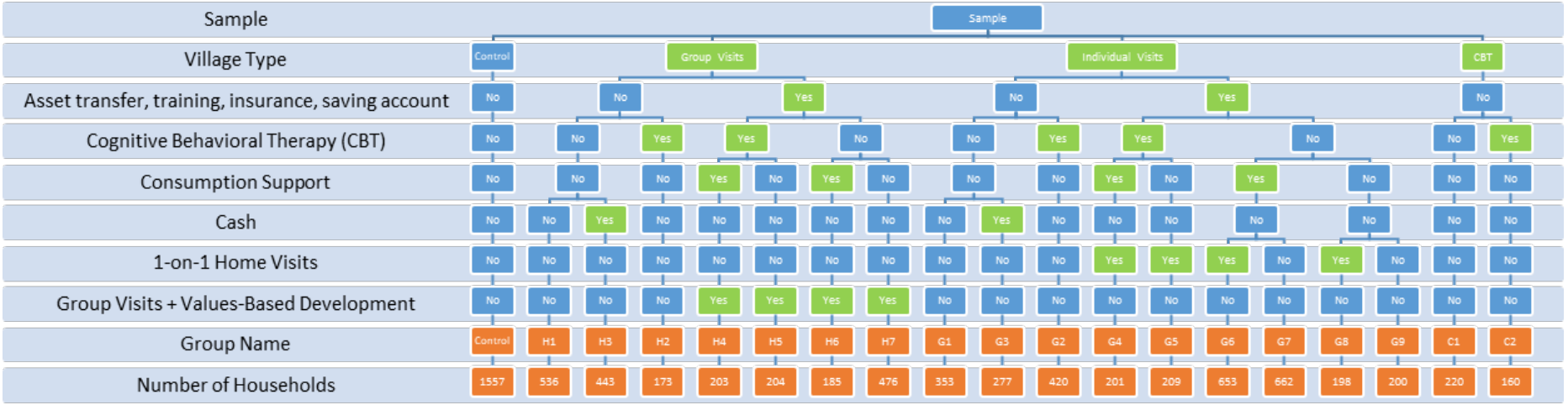
Two additional variants

- “Heifer Graduation” vs “Traditional Graduation”

  = Heifer: Coaching in group (all asset recipients from a single community come together)
  = Heifer: core values (12 cornerstones)

- Household visits for ~1 year

Design

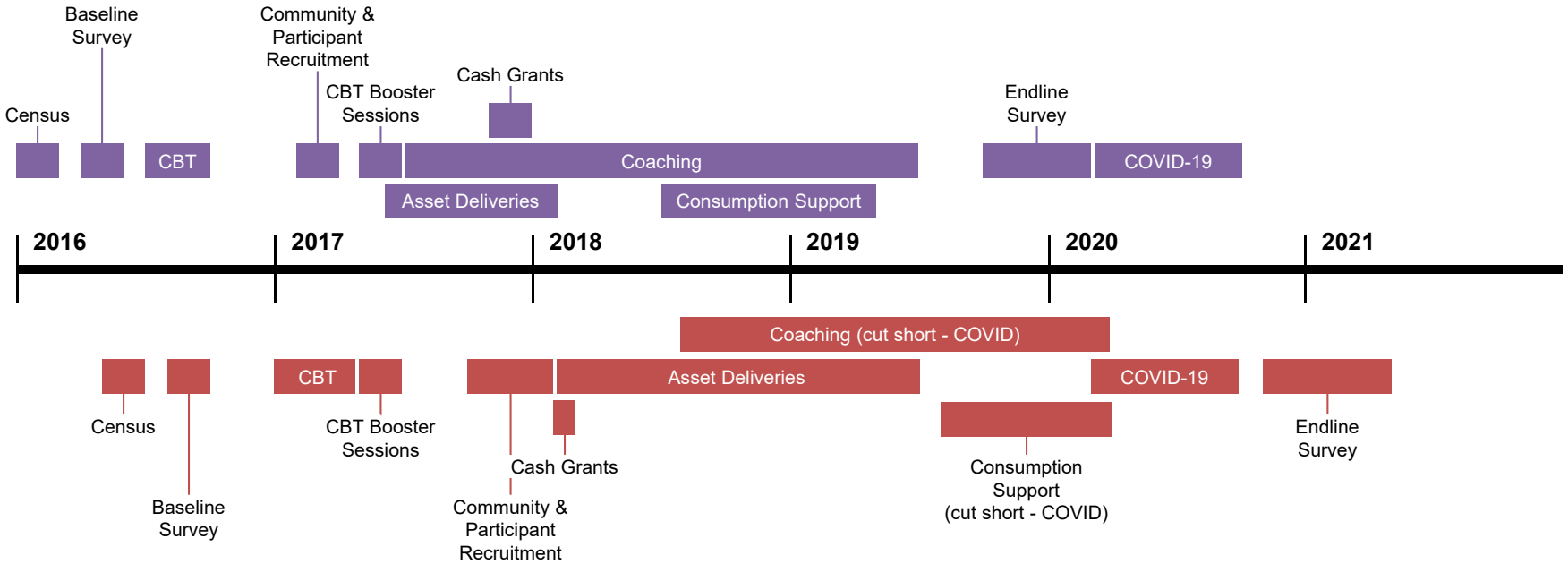

Sample
Village Type
Asset transfer, training, insurance, saving account
Cognitive Behavioral Therapy (CBT)
Consumption Support
Cash
1-on-1 Home Visits
Group Visits + Values-Based Development
Group Name
Number of Households
Sample
Control
Group Visits
Individual Visits
CBT
Control H1 H3 H2 H4 H5 H6 H7 G1 G3 G2 G4 G5 G6 G7 G8 G9 C1 C2
1557 536 443 173 203 204 185 476 353 277 420 201 209 653 662 198 200 220 160

Treatment group key

Control	
Cash	
CBT	
Graduation	
Both	

Timeline

Northern Belt



Middle Belt

Results

Overall Results

Balance

Table 1: Main Outcomes

	Per Capita Consumption	Total Consumption	Per Capita Consumption (Logs)	Total Consumption (Logs)
Cash Only	0.205	18.10	0.0139	0.0264
	(2.211)	(12.86)	(0.0256)	(0.0256)
CBT Only	3.116	22.93*	0.0570**	0.0443*
	(2.292)	(13.24)	(0.0255)	(0.0243)
Graduation Only	-0.763	4.596	0.0161	0.0188
	(1.873)	(10.71)	(0.0211)	(0.0206)
Both CBT & Graduation	3.121	20.26	0.0506*	0.0447*
	(2.546)	(12.83)	(0.0285)	(0.0258)
Observations	6830	6830	6830	6830
Control Mean	84.150	522	4.18	6.08
Control SD	62.66	316.83	0.73	0.62

Table 1: Main Outcomes

	Total Wealth	Total Income	Total Wealth (Logs)	Total Income (Logs)
Cash Only	134.7*	-12.90	0.118***	-0.0208
	(79.46)	(13.48)	(0.0448)	(0.105)
CBT Only	114.9	6.250	0.0326	0.0901
	(78.47)	(14.18)	(0.0458)	(0.125)
Graduation Only	96.23*	6.179	0.163***	0.0229
	(56.71)	(9.960)	(0.0358)	(0.0845)
Both CBT & Graduation	187.3**	-1.371	0.192***	0.114
	(78.89)	(12.60)	(0.0459)	(0.112)
Observations	6830	6830	6814	6830
Control Mean	1519.48	178.45	6.64	3.88
Control SD	2056.22	311.05	1.27	2.71

Food Security

	Food security index
Cash Only	0.0399
	(0.0440)
CBT Only	0.0292
	(0.0445)
Graduation Only	0.0642**
	(0.0324)
Both CBT & Graduation	0.0551
	(0.0419)
Observations	6830
Control Mean	-0.06
Control SD	1.03

Components

Table 4: Wealth Components

	Livestock Value Now	Durable Asset Value	Productive Asset Value	Household Savings
Cash Only	111.2**	17.00	0.248	-2.002
	(54.62)	(22.10)	(16.30)	(12.12)
CBT Only	34.46	31.75	-0.121	-3.426
	(48.60)	(23.16)	(18.25)	(11.87)
Graduation Only	104.6***	27.36*	-22.41*	-9.401
	(38.18)	(16.44)	(11.83)	(8.227)
Both CBT & Graduation	160.2***	33.02	-23.92	3.666
	(50.68)	(21.79)	(16.15)	(10.49)
Observations	6830	6830	6830	6830
Control Mean	594.5	497	278.23	104.51
Control SD	1328.71	541.67	475.7	290.12

Income Components

	Any commercial livestock income	Any livestock sold	Any livestock income	Any business income	Any wage income
Cash Only	0.0350*	0.0112	0.0247	-0.0128	-0.0430**
	(0.0197)	(0.0190)	(0.0200)	(0.0190)	(0.0180)
CBT Only	0.0349	0.0158	0.0445**	-0.0525***	0.0183
	(0.0218)	(0.0197)	(0.0214)	(0.0192)	(0.0201)
Graduation Only	0.0637***	0.0793***	0.0895***	0.0148	-0.00218
	(0.0157)	(0.0152)	(0.0151)	(0.0141)	(0.0130)
Both CBT & Graduation	0.0812***	0.0653***	0.0943***	0.00736	0.0172
	(0.0200)	(0.0201)	(0.0202)	(0.0198)	(0.0168)
Observations	6830	6830	6830	6830	6830
Control Mean	0.52	0.29	0.55	0.28	0.22
Control SD	0.5	0.45	0.5	0.45	0.42

Results

Baseline Wealth

Aggregate Outcomes - Interactions with Baseline Wealth

	(1)	(2)	(3)	(4)	(1)
	Total Consumption	**Total Log Consumption**	**Total Wealth**	**Total Log Wealth**	**Food Security Index**
Cash Low Wealth	4.835	0.001	103.400	0.0918*	-0.018
	(14.470)	(0.029)	(75.700)	(0.053)	(0.054)
Cash High Wealth	58.62**	0.104**	225.000	0.196**	0.140**
	(28.350)	(0.051)	(225.400)	(0.078)	(0.064)
CBT Only Low Wealth	13.450	0.031	66.910	0.000	0.018
	(14.620)	(0.029)	(77.070)	(0.055)	(0.052)
CBT Only High Wealth	51.25*	0.0851*	248.400	0.118	0.049
	(29.520)	(0.049)	(216.100)	(0.079)	(0.074)
Grad Only Low Wealth	-7.316	0.001	65.970	0.175***	0.050
	(11.230)	(0.023)	(43.100)	(0.040)	(0.039)
Grad Only High Wealth	42.93**	0.0773**	206.600	0.126**	0.0882*
	(21.590)	(0.037)	(170.500)	(0.057)	(0.046)
Grad+CBT Low Wealth	3.888	0.018	34.360	0.149***	0.019
	(14.260)	(0.030)	(61.070)	(0.054)	(0.052)
Grad+CBT High Wealth	66.91**	0.121***	607.1***	0.308***	0.096
	(25.810)	(0.041)	(232.400)	(0.075)	(0.069)
Bsl Wealth	1.057	0.028	273.6**	0.048	-0.009
	(16.400)	(0.031)	(135.000)	(0.058)	(0.052)
Observations	6,822	6,822	6,822	6,806	6,817
Control Mean	522	6.08	1519	6.64	4.91
Control SD	317	0.625	2056	1.273	1.265

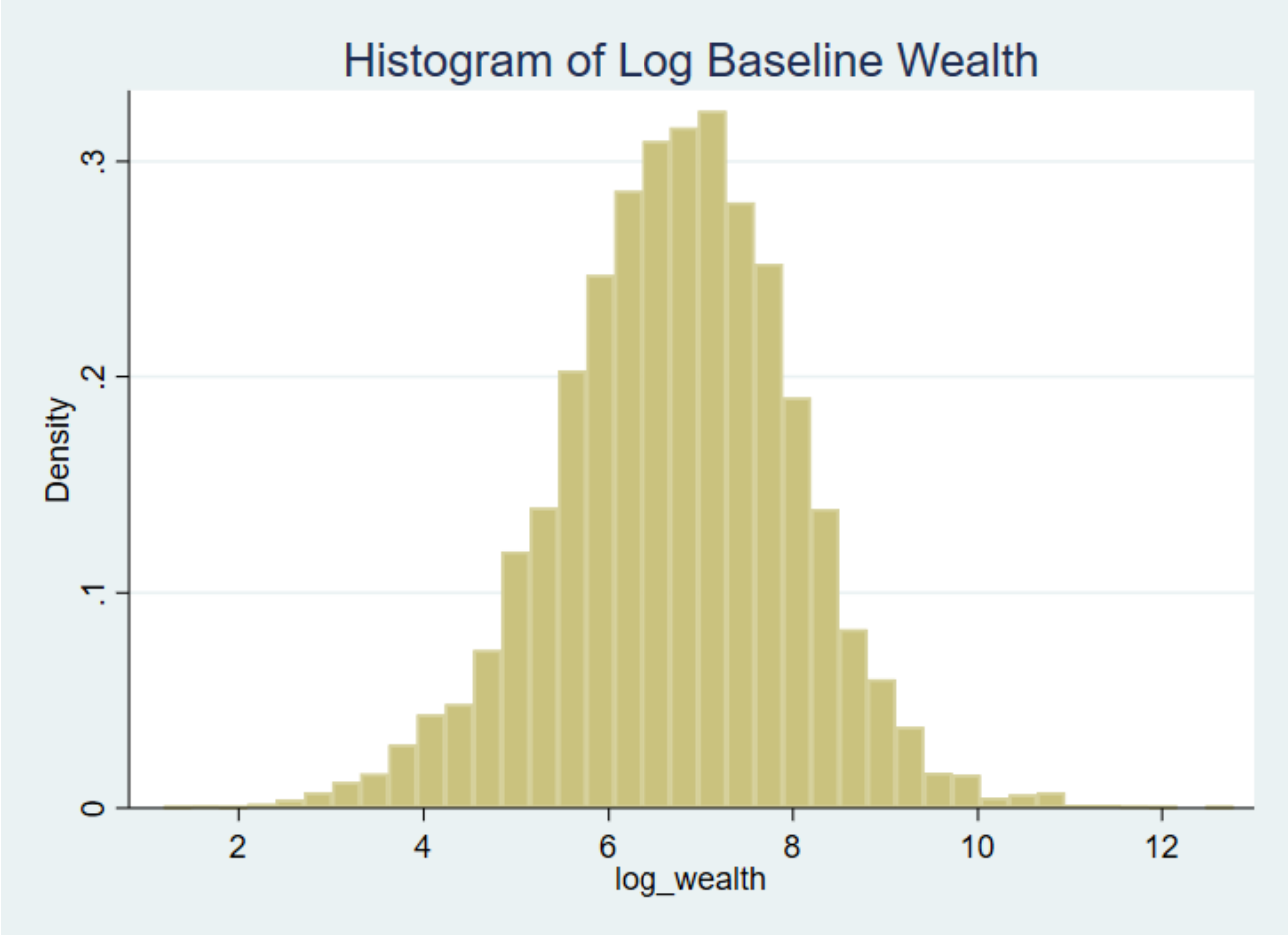
Income Dummies - Interactions with Baseline Wealth

	(1)	(2)	(3)	(4)	(5)
	Any Reported Income	**Any Livestock Commercial Income**	**Any Business Income**	**Any Wage Income**	**Any Agricultural Income**
Cash Low Wealth	0.017	0.035	-0.010	-0.0376*	0.030
	(0.013)	(0.024)	(0.021)	(0.020)	(0.022)
Cash High Wealth	-0.010	0.034	-0.021	-0.0600*	-0.013
	(0.022)	(0.038)	(0.041)	(0.031)	(0.031)
CBT Only Low Wealth	0.017	0.031	-0.0609***	0.0376*	0.029
	(0.013)	(0.026)	(0.021)	(0.023)	(0.023)
CBT Only High Wealth	0.0259**	0.042	-0.030	-0.034	0.031
	(0.013)	(0.031)	(0.039)	(0.032)	(0.029)
Grad Only Low Wealth	0.0307***	0.0740***	0.017	-0.002	-0.007
	(0.009)	(0.017)	(0.016)	(0.014)	(0.020)
Grad Only High Wealth	0.007	0.035	0.011	0.000	0.030
	(0.014)	(0.027)	(0.027)	(0.025)	(0.025)
Grad+CBT Low Wealth	0.0250*	0.0883***	-0.003	0.031	0.010
	(0.014)	(0.024)	(0.022)	(0.019)	(0.023)
Grad+CBT High Wealth	0.0289**	0.0587*	0.036	-0.021	0.045
	(0.013)	(0.032)	(0.039)	(0.036)	(0.029)
Bsl Wealth	0.007	0.0885***	0.026	0.0499**	0.002
	(0.012)	(0.024)	(0.025)	(0.023)	(0.020)
Observations	6,822	6,822	6,822	6,822	6,822
Control Mean	0.91	0.52	0.28	0.23	0.71
Control SD	0.293	0.500	0.449	0.418	0.453

Food Security - Interactions with Baseline Wealth

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Food Security Index	**Anyone went whole day without food (lower is better)**	**Infrequency of whole day without food (higher is better)**	**Any Adults Skipped Meals (lower is better)**	**Infrequency of Adults Skipping Meals (higher is better)**	**Any Children Skipped Meals (lower is better)**	**Infrequency of children skipping meals (higher is better)**	**Frequency of getting enough food (higher is better)**	**Everyone eats at least two meals per day (higher is better)**
Cash Low Wealth	-0.018	0.010	-0.031	0.009	0.008	-0.018	0.033	-0.074	-0.001
	(0.054)	(0.024)	(0.060)	(0.024)	(0.067)	(0.024)	(0.060)	(0.064)	(0.019)
Cash High Wealth	0.140**	-0.0641**	0.152***	-0.057	0.126	-0.034	0.089	0.144*	0.0601*
	(0.064)	(0.030)	(0.058)	(0.040)	(0.093)	(0.034)	(0.069)	(0.085)	(0.032)
CBT Only Low Wealth	0.018	-0.008	0.061	0.026	0.008	0.023	0.013	-0.030	0.010
	(0.052)	(0.023)	(0.053)	(0.026)	(0.067)	(0.026)	(0.062)	(0.064)	(0.020)
CBT Only High Wealth	0.049	-0.0561**	0.113**	-0.040	0.025	0.007	-0.026	0.059	0.024
	(0.074)	(0.028)	(0.057)	(0.039)	(0.102)	(0.035)	(0.085)	(0.097)	(0.031)
Grad Only Low Wealth	0.050	-0.0294*	0.0794**	-0.022	0.056	-0.007	0.027	0.018	0.0237*
	(0.039)	(0.017)	(0.037)	(0.019)	(0.050)	(0.017)	(0.043)	(0.047)	(0.014)
Grad Only High Wealth	0.0882*	-0.0475**	0.106***	-0.020	0.074	-0.024	0.065	0.087	0.038
	(0.046)	(0.021)	(0.040)	(0.028)	(0.065)	(0.025)	(0.055)	(0.061)	(0.023)
Grad+CBT Low Wealth	0.019	-0.031	0.057	-0.009	-0.010	-0.019	0.031	0.010	0.029
	(0.052)	(0.021)	(0.047)	(0.024)	(0.067)	(0.023)	(0.060)	(0.067)	(0.018)
Grad+CBT High Wealth	0.096	-0.0585**	0.110*	-0.031	0.068	-0.002	0.021	0.165**	0.030
	(0.069)	(0.029)	(0.066)	(0.039)	(0.091)	(0.033)	(0.070)	(0.082)	(0.030)
Bsl Wealth	-0.009	-0.003	0.021	0.014	-0.010	0.005	0.019	-0.040	-0.006
	(0.052)	(0.022)	(0.050)	(0.028)	(0.067)	(0.024)	(0.053)	(0.062)	(0.023)
Observations	6,822	6,817	6,814	6,822	6,817	5,893	6,140	6,806	6,814
Control Mean	-0.06	0.30	5.42	0.51	4.91	0.34	5.33	5.05	0.84
Control SD	1.026	0.457	1.030	0.500	1.265	0.473	1.103	1.209	0.372

Distribution of wealth of the poor


Histogram of Log Baseline Wealth
Density
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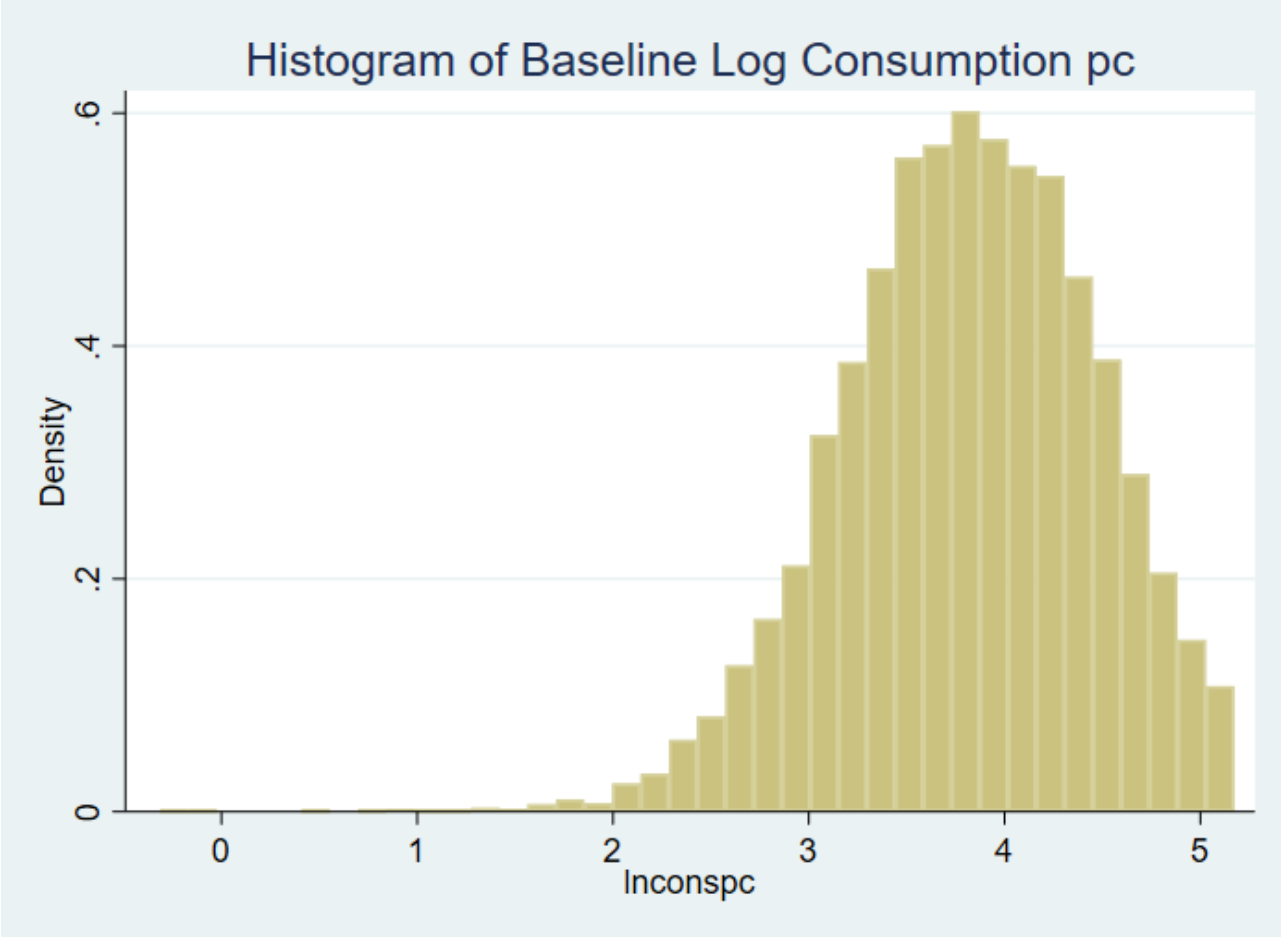
.2
.3
2
4
6
8
10
12
log_wealth


Histogram of Baseline Log Consumption pc
Density
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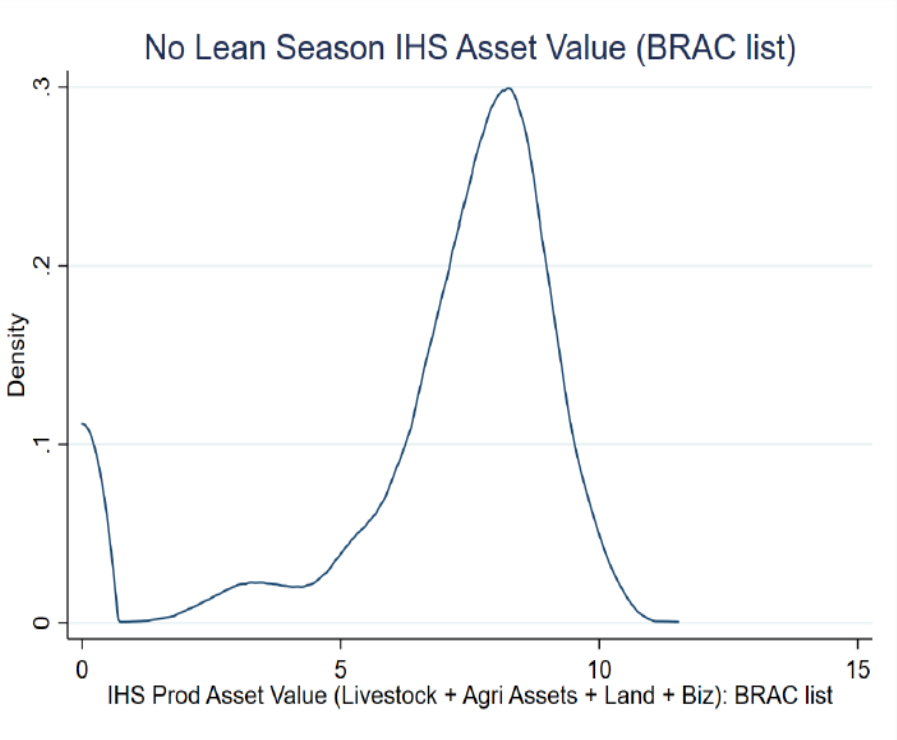
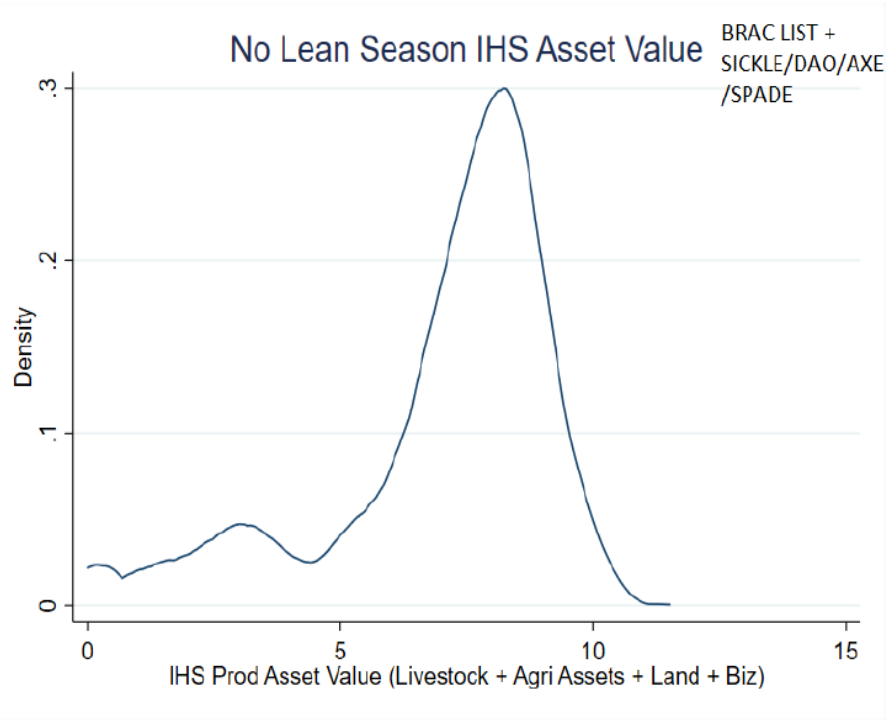
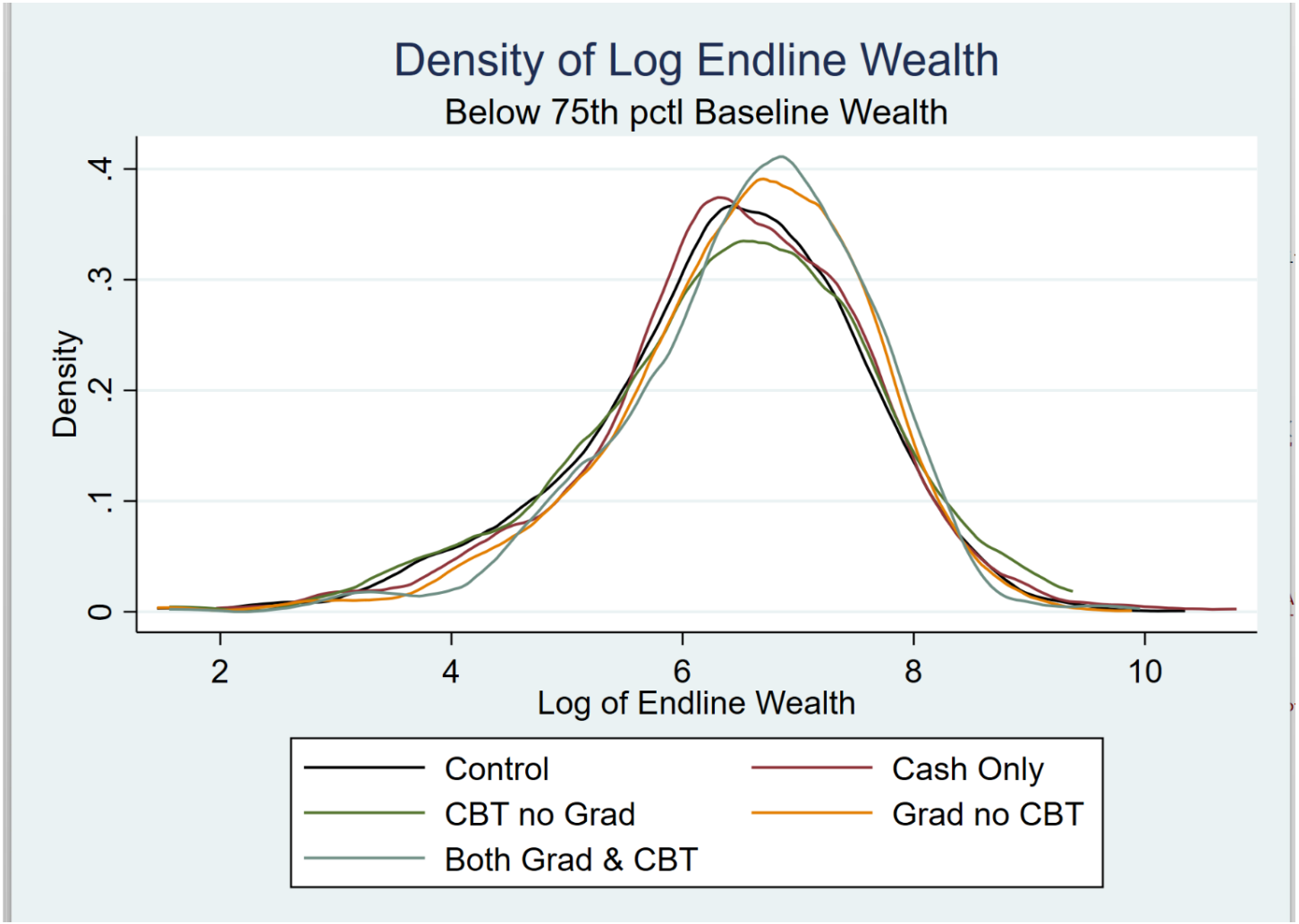
0
1
2
3
4
5
lnconspc

Why no bi-modal distribution a la Bandiera et al?






Density of Log Endline Wealth
Below 75th pctl Baseline Wealth
Density
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.1
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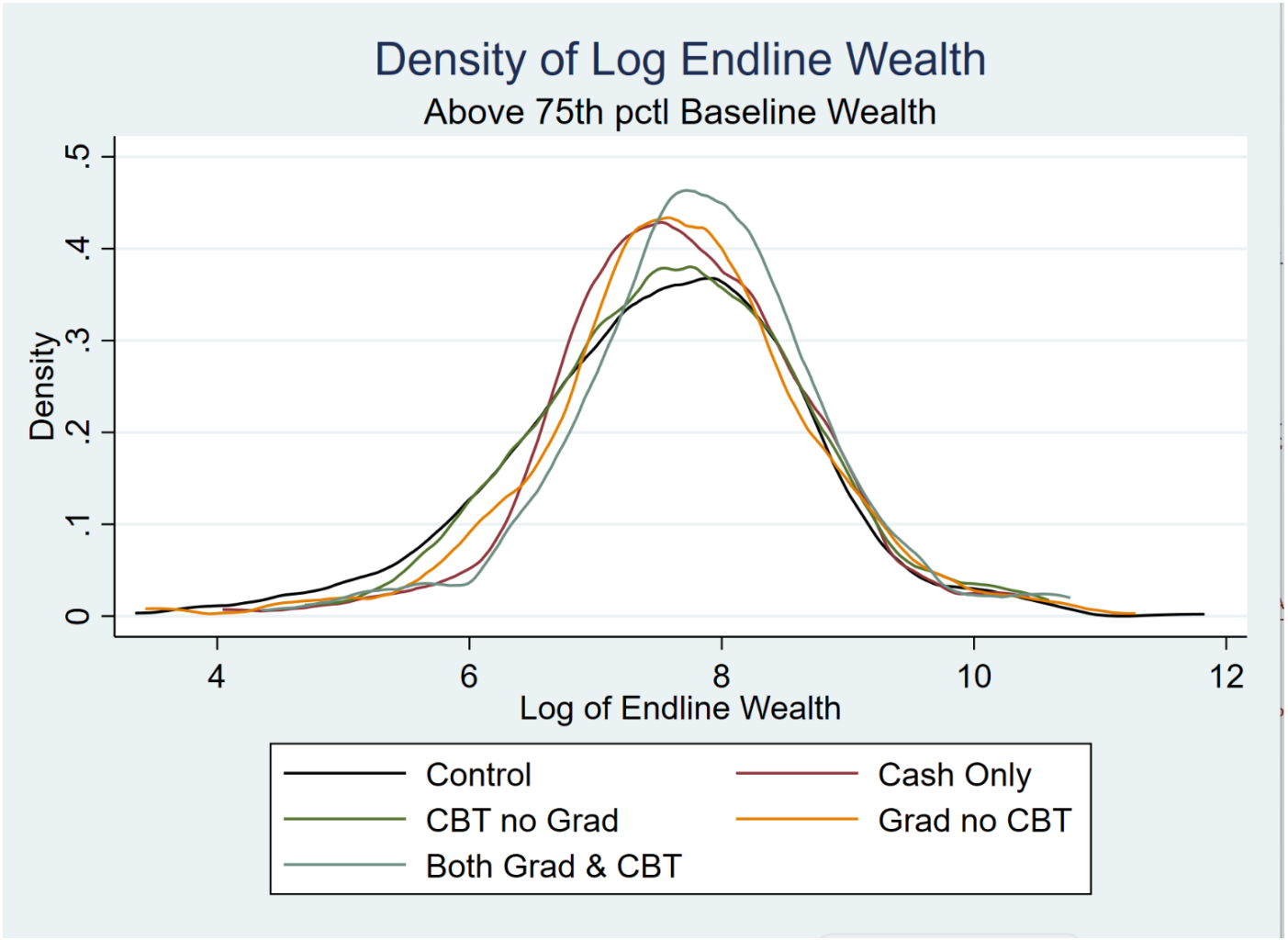
8
10
Log of Endline Wealth
Control
Cash Only
CBT no Grad
Grad no CBT
Both Grad & CBT


Density of Log Endline Wealth
Above 75th pctl Baseline Wealth
Density
0
.1
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.3
.4
.5
4
6
8
10
12
Log of Endline Wealth
Control
Cash Only
CBT no Grad
Grad no CBT
Both Grad & CBT

CBT had strong immediate effects on mental health, but not differentially by baseline wealth

	Midline Mental Health Status						
	Mental Health Index	Kessler Score	**No distress (Kessler<20)**	**No moderate or severe distress (Kessler<25)**	**No severe distress (Kessler<30)**	Mental Health Self-Rating (1/4)	30 minus days in month with poor mental health
Low Wealth * CBT Recipient	0.135***	-1.604***	0.0734**	0.0820***	0.0555***	0.0369	0.405
	(0.039)	(0.362)	(0.023)	(0.0215)	(0.0154)	(0.0387)	(0.328)
High Wealth * CBT Recipient	0.155***	-1.158***	0.0391	0.0480*	0.0223	0.100**	0.644*
	(0.037)	(0.342)	(0.022)	(0.0197)	(0.0154)	(0.035)	(0.312)
Constant	0.434***	15.05***	0.615***	0.794***	0.966***	2.958***	26.81***
	(0.095)	(0.696)	(0.046)	(0.049)	(0.0366)	(0.095)	(0.767)
Observations	7227	7221	7221	7221	7221	7227	7195
Pairwise Comparison	0.6607	0.3240	0.2692	0.1988	0.1037	0.1560	0.5507

… except for perceived economic status and expectations

	Midline Economic Status		
	Perceptions of Economic Status Index	Self-Reported Economic Status (relative to the rest of the people of Ghana)	Projected Economic Status in 5 years (relative to rest of the people of Ghana)
Low Wealth * CBT Recipient	0.0901	0.221*	0.142
	(0.050)	(0.102)	(0.132)
High Wealth * CBT Recipient	0.284***	0.616***	0.546***
	(0.045)	(0.098)	(0.115)
Constant	0.113	2.701***	5.199***
	(0.072)	(0.155)	(0.207)
Observations	7227	7227	7227
Pairwise Comparison	0.0015	0.0036	0.0072

2-4 year Mental Health Impacts

	Recipients' Mental Health Index	Perceived Physical Health and Labor Index
Cash Only Low Wealth	-0.114	-0.110*
	(0.0727)	(0.0618)
Cash Only High Wealth	0.0288	-0.0461
	(0.0682)	(0.0549)
CBT Only Low Wealth	-0.0804	0.0572
	(0.101)	(0.0767)
CBT Only High Wealth	0.0452	-0.033
	(0.0899)	(0.0794)
Graduation Only Low Wealth	-0.0614	-0.0736*
	(0.0495)	(0.0423)
Graduation Only High Wealth	-0.0383	-0.0171
	(0.0502)	(0.0393)
Both CBT & Graduation Low Wealth	-0.0582	-0.0599
	(0.0848)	(0.0838)
Both CBT & Graduation High Wealth	0.156*	0.0411
	(0.0813)	(0.0796)
Observations	7410	7410
Control Mean	0.03	0.02
Control SD	0.99	1

Results

Poverty displays different heterogeneity

Table 1: Main Outcomes – By Hi/Low Consumption

	Per Capita Consumption	Total Consumption	Per Capita Consumption (Logs)	Total Consumption (Logs)
Cash Only Low Cons	1.134	26.02	0.0295	0.0647*
	(2.433)	(16.20)	(0.0320)	(0.0338)
Cash Only High Cons	-0.727	10.12	-0.00182	-0.0125
	(3.660)	(19.60)	(0.0370)	(0.0375)
CBT Only Low Cons	3.164	36.19*	0.0631*	0.0867**
	(2.667)	(18.77)	(0.0367)	(0.0365)
CBT Only High Cons	3.103	10.13	0.0516	0.00415
	(3.543)	(17.09)	(0.0338)	(0.0295)
Graduation Only Low Cons	1.044	10.29	0.0277	0.0410*
	(1.802)	(11.86)	(0.0248)	(0.0236)
Graduation Only High Cons	-2.621	-1.131	0.00438	-0.00374
	(2.656)	(12.94)	(0.0254)	(0.0242)
Both CBT & Graduation Low Cons	4.446	30.93*	0.0593*	0.0691**
	(2.827)	(16.32)	(0.0343)	(0.0333)
Both CBT & Graduation High Cons	1.747	9.280	0.0419	0.0197
	(3.728)	(15.87)	(0.0356)	(0.0299)
Observations	6830	6830	6830	6830
Control Mean	84.150	522	4.18	6.08
Control SD	62.66	316.83	0.73	0.62
Pairwise Compar. Cash Only	0.669	0.527	0.502	0.125
Pairwise Compar. CBT Only	0.989	0.281	0.813	0.066
Pairwise Compar. Grad Only	0.15	0.363	0.395	0.066
Pairwise Compar. Grad+CBT	0.521	0.269	0.67	0.181

Table 1: Main Outcomes – by Hi/Low Consumption

	Total Wealth	Total Income	Total Wealth (Logs)	Total Income (Logs)
Cash Only Low Cons	94.94	-16.43	0.169***	-0.0547
	(98.20)	(16.33)	(0.0575)	(0.146)
Cash Only High Cons	174.4	-9.414	0.0649	0.0130
	(113.6)	(18.79)	(0.0644)	(0.147)
CBT Only Low Cons	39.25	6.236	0.0676	0.135
	(103.0)	(17.32)	(0.0578)	(0.163)
CBT Only High Cons	185.9*	5.999	-0.00153	0.0459
	(112.4)	(19.34)	(0.0660)	(0.159)
Graduation Only Low Cons	29.13	-11.37	0.133***	-0.0751
	(67.36)	(11.10)	(0.0401)	(0.0988)
Graduation Only High Cons	165.5**	24.39*	0.193***	0.125
	(72.68)	(13.25)	(0.0466)	(0.107)
Both CBT & Graduation Low Cons	184.4*	-3.859	0.168***	0.0734
	(104.9)	(15.13)	(0.0557)	(0.149)
Both CBT & Graduation High Cons	190.5*	1.132	0.217***	0.156
	(103.7)	(17.84)	(0.0583)	(0.150)
Observations	6830	6830	6814	6830
Control Mean	1519.48	178.45	6.64	3.88
Control SD	2056.22	311.05	1.27	2.71
Pairwise Compar. Cash Only	0.572	0.757	0.209	0.741
Pairwise Compar. CBT Only	0.325	0.992	0.411	0.661
Pairwise Compar. Grad Only	0.098	0.012	0.224	0.091
Pairwise Compar. Grad+CBT	0.964	0.815	0.471	0.674

Results

Predicted Distress Score

Table 1a: Main Outcomes - Cash CBT Only Graduation CBT and Graduation vs Control

	Per Capita Consumption	Total Consumption	Per Capita Consumption (Logs)	Total Consumption (Logs)
Cash - Below Median Depression	5.455	56.38***	0.0664*	0.0889***
	(3.423)	(18.36)	(0.0357)	(0.0342)
Cash - Above Median Depression	-4.841*	-14.22	-0.0356	-0.0267
	(2.669)	(15.14)	(0.0308)	(0.0311)
CBT - Below Median Depression	3.847	38.72**	0.0688**	0.0745**
	(3.249)	(18.23)	(0.0340)	(0.0325)
CBT - Above Median Depression	2.863	13.52	0.0487	0.0275
	(3.003)	(18.68)	(0.0353)	(0.0356)
Graduation Only - Below Median Depression	-0.221	15.47	0.0290	0.0412*
	(2.156)	(12.66)	(0.0237)	(0.0242)
Graduation Only - Above Median Depression	-1.764	-2.278	0.00194	0.00459
	(2.290)	(12.65)	(0.0261)	(0.0244)
Both CBT & Graduation - Below Median	6.262**	31.86**	0.0859***	0.0826***
	(3.111)	(16.06)	(0.0330)	(0.0301)
Both CBT & Graduation - Above Median	-0.406	12.47	0.0135	0.0112
	(3.265)	(17.06)	(0.0382)	(0.0347)
Observations	6766	6766	6766	6766
Control Mean	84.150	522	4.18	6.08
Control SD	62.66	316.83	0.73	0.62

Table 1a: Main Outcomes - Cash CBT Only Graduation CBT and Graduation vs Control

	Total Wealth	Total Income	Total Wealth (Logs)	Total Income (Logs)
Cash - Below Median Depression	181.4*	-18.74	0.223***	-0.114
	(109.9)	(18.56)	(0.0580)	(0.151)
Cash - Above Median Depression	93.73	-8.966	0.0255	0.0493
	(109.5)	(16.79)	(0.0598)	(0.138)
CBT - Below Median Depression	224.1*	14.19	0.101	0.103
	(119.1)	(19.37)	(0.0652)	(0.165)
CBT - Above Median Depression	51.57	3.210	0.00727	0.126
	(112.1)	(17.68)	(0.0630)	(0.158)
Graduation Only - Below Median Depression	115.9	4.298	0.200***	0.0546
	(73.74)	(11.70)	(0.0439)	(0.101)
Graduation Only - Above Median Depression	76.89	7.459	0.137***	-0.0182
	(66.23)	(12.61)	(0.0433)	(0.104)
Both CBT & Graduation - Below Median	291.8***	1.150	0.277***	0.196
	(103.3)	(18.19)	(0.0583)	(0.141)
Both CBT & Graduation - Above Median	87.22	-0.823	0.114*	0.0689
	(103.7)	(15.70)	(0.0578)	(0.158)
Observations	6766	6766	6750	6766
Control Mean	1519.48	178.45	6.64	3.88
Control SD	2056.22	311.05	1.27	2.71

Results

Gender

Table 1: Main Outcomes – by Gender

	Per Capita Consumption	Total Consumption	Per Capita Consumption (Logs)	Total Consumption (Logs)
Cash Only Male	0.920	3.463	0.0260	0.0169
	(3.459)	(18.22)	(0.0405)	(0.0380)
Cash Only Female	-0.217	26.63	0.00677	0.0320
	(2.853)	(16.79)	(0.0315)	(0.0326)
CBT Only Male	6.366**	52.86***	0.101***	0.0895***
	(3.059)	(19.11)	(0.0342)	(0.0339)
CBT Only Female	0.233	-2.996	0.0188	0.00533
	(2.988)	(17.25)	(0.0341)	(0.0321)
Graduation Only Male	-1.188	7.092	0.0169	0.0185
	(2.316)	(13.66)	(0.0261)	(0.0259)
Graduation Only Female	-0.529	3.125	0.0155	0.0188
	(2.073)	(11.88)	(0.0227)	(0.0224)
Both CBT & Grad Male	1.462	34.16**	0.0443	0.0714**
	(3.371)	(17.09)	(0.0365)	(0.0339)
Both CBT & Grad Female	4.928	6.148	0.0586	0.0173
	(3.359)	(16.92)	(0.0397)	(0.0354)
Observations	6830	6830	6830	6830
Control Mean	84.150	522	4.18	6.08
Control SD	62.66	316.83	0.73	0.62

Table 1: Main Outcomes – by Gender

	Total Wealth	Total Income	Total Wealth (Logs)	Total Income (Logs)
Cash Only Male	123.4	-13.73	0.115*	-0.222
	(118.1)	(21.35)	(0.0648)	(0.170)
Cash Only Female	141.5	-12.41	0.119**	0.0971
	(94.65)	(14.91)	(0.0542)	(0.124)
CBT Only Male	105.5	8.783	-0.0230	0.0646
	(114.2)	(21.34)	(0.0685)	(0.172)
CBT Only Female	124.7	4.062	0.0815	0.112
	(100.9)	(17.66)	(0.0566)	(0.171)
Graduation Only Male	99.92	4.503	0.147***	0.0529
	(87.39)	(13.41)	(0.0466)	(0.114)
Graduation Only Female	94.13	7.123	0.171***	0.00614
	(59.47)	(11.54)	(0.0388)	(0.0955)
Both CBT & Graduation Male	262.8**	4.989	0.244***	0.184
	(105.4)	(18.82)	(0.0600)	(0.159)
Both CBT & Graduation Female	107.6	-8.158	0.134**	0.0389
	(111.5)	(16.75)	(0.0615)	(0.149)
Observations	6830	6830	6814	6830
Control Mean	1519.48	178.45	6.64	3.88
Control SD	2056.22	311.05	1.27	2.71

Results

Coaching

Table 1 - Graduation without Coaching and Graduation with Coaching vs Control

	Per Capita Consumption	Total Consumption	Per Capita Consumption (Logs)	Total Consumption (Logs)
Graduation Only	0.950	20.69	0.0475*	0.0550**
	(2.300)	(14.99)	(0.0263)	(0.0268)
Graduation with Coaching	-0.147	3.485	0.0153	0.0133
	(2.005)	(10.27)	(0.0219)	(0.0205)
Observations	5475	5475	5475	5475
Control Mean	84.150	522	4.18	6.08
Control SD	62.66	316.83	0.73	0.62

Table 1 - Graduation without Coaching and Graduation with Coaching vs Control

	Total Wealth	Total Income	Total Wealth (Logs)	Total Income (Logs)
Graduation Only	84.27	8.938	0.140***	-0.0687
	(80.80)	(13.90)	(0.0493)	(0.120)
Graduation with Coaching	134.3**	2.459	0.181***	0.0876
	(55.83)	(9.972)	(0.0363)	(0.0852)
Observations	5475	5475	5462	5475
Control Mean	1519.48	178.45	6.64	3.88
Control SD	2056.22	311.05	1.27	2.71

Results

Group coaching/social (“Heifer”)
vs
Graduation (“GUP”)

Table 1: Main Outcomes - Heifer and GUP vs Control

	Per Capita Consumption	Total Consumption	Per Capita Consumption (Logs)	Total Consumption (Logs)
Heifer	0.708	3.237	0.0257	0.00997
	(2.690)	(13.66)	(0.0307)	(0.0281)
GUP	2.012	14.90	0.0377	0.0351
	(2.672)	(15.65)	(0.0295)	(0.0299)
Observations	5475	5475	5475	5475
Control Mean	84.150	522	4.18	6.08
Control SD	62.66	316.83	0.73	0.62

Table 1: Main Outcomes - Heifer and GUP vs Control

	Total Wealth	Total Income	Total Wealth (Logs)	Total Income (Logs)
Heifer	159.9**	-1.768	0.190***	0.000219
	(65.65)	(13.73)	(0.0445)	(0.129)
GUP	58.79	-0.227	0.126***	0.0357
	(74.49)	(12.77)	(0.0467)	(0.110)
Observations	5475	5475	5462	5475
Control Mean	1519.48	178.45	6.64	3.88
Control SD	2056.22	311.05	1.27	2.71

Concluding Thoughts: Puzzles

1. 2-3 Year Impacts of Cash Grant and Graduation Program similar
   - Strong, persistent impacts on consumption and wealth for the less poor
   - Null impacts for the more poor
   - Contrast with Unpacking GUP
2. CBT alone had even larger effects for the less poor
3. CBT strengthened the impact of Graduation for the less poor
   - But not more than linear
4. Not a simple asset poverty trap story
   - Baseline log wealth is normally distributed
   - CBT is operating via a different path

Concluding Thoughts: Lessons Learned

1. Psycho-social health
   - Perhaps “the” true primary outcome
   - Movable. For all.
   - Treatment effects can persist, but not always (hopefully we can say more in ~5-10 years)
   - Merely additive at best: what does that say about our understanding and models on productivity?
     - Interaction with treatments. Evidence light. But power tough, and extra level of nuance
2. No one study is end-all holy grail
   - Instead: share & replicate & iterate & share etc…
   - There is a *lot* of data, from many different programs, over multiple time scales.
   - We’re going to need it

Concluding Thoughts: CBT Gaps

3. CBT mechanisms
    - Strong HTE wrt wealth
    - But not so much wrt
        - consumption poverty,
        - most initial mental health outcomes, or
        - later economic outcomes
    - CBT treatment itself seems to work similarly, but transition into actions varies
4. CBT → wealth
    - Beliefs about possibilities
    - Beliefs about **your** possibilities
    - Acting on Beliefs
    - Executing well
    - Getting lucky

Concluding Thoughts: Poverty traps

5. No evidence of a classic asset indivisibility poverty trap
    - Doesn't really make sense in the context, anyway
6. The strong wealth HTE may suggest
    - Risk/wealth/specialization feedback (commercial livestock)
    - Selection on entrepreneurial opportunities or abilities
7. Convergence in GUP and Ethiopia long-run (but divergence in India!)
    - Stochastic opportunities?
    - Redistribution, land rights, mobility?

Thank you!

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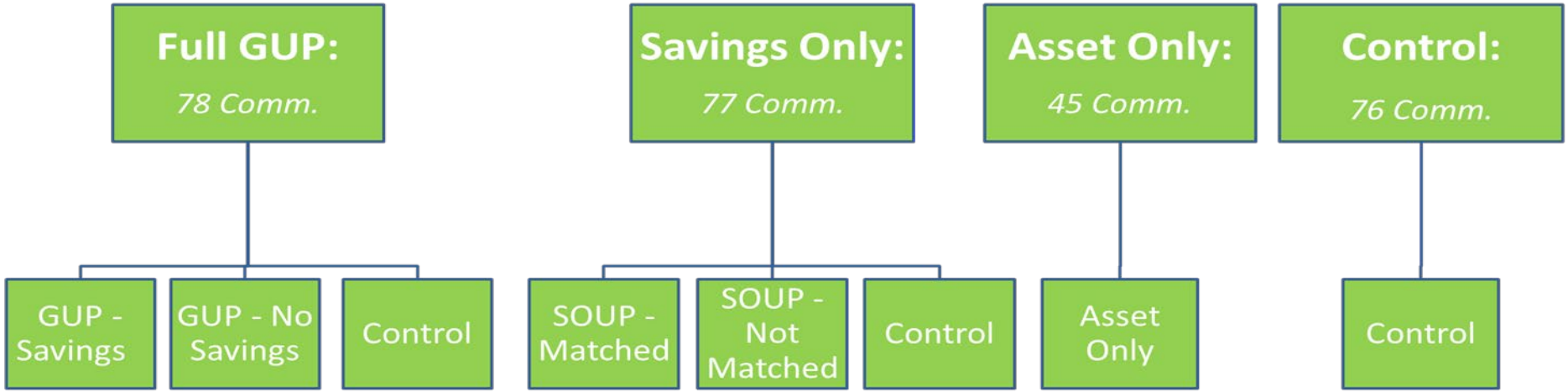
Additional Slides

GUP design


Full GUP:
78 Comm.
GUP - Savings
GUP - No Savings
Control
Savings Only:
77 Comm.
SOUP - Matched
SOUP - Not Matched
Control
Asset Only:
45 Comm.
Asset Only
Control:
76 Comm.
Control

Bags Experiment

Village Assignment			Villages	Households
control bags	simple		21	189
	complex		21	208
GUP bags	simple	high UCS	10	69
		low UCS	10	90
	complex	high UCS	9	79
		low UCS	10	75
SOUP bags	simple		19	202
	complex		20	186
TOTAL			120	1098

* low UCS = \$1.30
* high UCS = \$3.90

Panel A: Income during Bags Program: GUP, SOUP Effects

		Monthly HH Income (1)	(1) + UCT (2)	(2) + Bags Earnings (3)
GUP-Bags	ITT	6.74	18.95	20.88
	SE	(5.88)	(5.94)	(6.02)
	p-val	0.26	0.00	0.00
	q-val	0.35	0.02	0.02
	Bsl p-val	0.684	.	.
SOUP-Bags	ITT	-3.59	-4.19	-3.06
	SE	(2.78)	(2.94)	(3.66)
	p-val	0.21	0.16	0.41
	q-val	0.31	0.28	0.45
	Bsl p-val	0.345	.	.
Ctrl Mean		8.01	8.01	17.93
Ctrl SD		25.04	25.04	24.67
Obs		288	288	288

(Relative to Control-bags households)

Productive Labor during Bag-Making: Labor Supply

		(1) time bags	(2) time field	(3) time business	(4) time home labor
GUP-bags	itt	-2.12	-20.96	9.22	1.18
	se	(11.64)	(9.80)	(4.80)	(11.79)
	pval	0.86	0.04	0.06	0.92
	qval	0.88	0.17	0.21	0.92
SOUP-bags	itt	-21.85	-24.02	10.06	4.41
	se	(12.37)	(10.86)	(4.74)	(11.42)
	pval	0.08	0.03	0.04	0.70
	qval	0.23	0.17	0.17	0.80
Ctrl Mean		112.94	206.61	28.48	299.27
Ctrl SD		106.61	185.65	78.23	155.09
Obs		1978	3442	3442	3442

Perhaps less time in the field, more in the business, no change in home labor

GUP vs. SOUP Effects on Bags Production

		(1) bags production index	(2) number of bags	(3) participates (0/1)	(4) bags earnings
GUP-Bags	ITT	0.28	1.14	0.12	0.66
	SE	(0.12)	(0.50)	(0.05)	(0.35)
	p-val	0.03	0.03	0.02	0.06
	q-val	0.11	0.11	0.11	0.15
SOUP-Bags	ITT	-0.17	-0.65	-0.11	-0.33
	SE	(0.13)	(0.49)	(0.06)	(0.38)
	p-val	0.19	0.18	0.06	0.39
	q-val	0.31	0.31	0.15	0.41
Ctrl Mean		0.00	3.76	0.58	2.45
Ctrl SD		1.00	3.97	0.49	3.01
Obs		18816	18816	18816	18816
GUP-Bags - SOUP-Bags	ITT	0.44	1.79	0.24	0.99
GUP-Bags - SOUP-Bags	Lower CI	0.14	0.59	0.10	0.10
GUP-Bags - SOUP-Bags	Upper CI	0.75	3.00	0.37	1.87
GUP-Bags - SOUP-Bags	p-val	0.00	0.00	0.00	0.03

Back

		(1) asset value index	(2) consumption index	(3) financial inclusion index	(4) food security index	(5) income index
PANEL A: GUP vs. SOUP						
SOUP	itt	0.029	-0.013	0.129	0.002	-0.071
	se	(0.076)	(0.034)	(0.073)	(0.044)	(0.062)
	p-val	0.701	0.700	0.078*	0.962	0.254
	q-val	0.825	0.825	0.156	0.963	0.373
	bsl p-val	0.051*	0.993	0.555	0.098*(+)	0.277
GUP no sav.	itt	0.280	0.124	0.204	0.114	0.202
	se	(0.078)	(0.046)	(0.086)	(0.050)	(0.073)
	p-val	0.000***	0.007***	0.018**	0.024**	0.006***
	q-val	0.003***	0.022**	0.051*	0.059*	0.022**
	bsl p-val	0.741	0.022**	0.014**	0.282	0.205
GUP sav.	itt	0.318	0.050	0.532	0.092	0.243
	se	(0.082)	(0.036)	(0.105)	(0.050)	(0.076)
	p-val	0.000***	0.169	0.000***	0.062*	0.001***
	q-val	0.002***	0.282	0.001***	0.139	0.008***
	bsl p-val	0.592	0.100	0.632	0.704	0.794
GUP sav. - SOUP	diff	0.289	0.063	0.402	0.090	0.314
	se	(0.105)	(0.046)	(0.122)	(0.063)	(0.094)
	p-val	0.006***	0.173	0.001***	0.150	0.001***
	bsl p-val	0.240	0.176	0.426	0.138	0.353

back

		(1) asset value index	(2) consumption index	(3) financial inclusion index	(4) food security index	(5) income index
PANEL B: GUP vs. Asset Only						
asset	itt	-0.022	-0.009	0.050	-0.079	-0.133
	se	(0.103)	(0.055)	(0.073)	(0.070)	(0.085)
	p-val	0.832	0.867	0.490	0.261	0.119
	q-val	0.913	0.913	0.654	0.373	0.218
	itt, ctrls	-0.043	-0.006	0.029	-0.075	-0.148
	p-val, ctrls	0.684	0.909	0.692	0.283	0.080*
	q-val, ctrls	0.866	0.910	0.866	0.708	0.399
GUP no sav. - asset	diff	0.325	0.114	0.154	0.188	0.345
	se	(0.135)	(0.073)	(0.113)	(0.086)	(0.114)
	p-val	0.016**	0.116	0.172	0.029**	0.002***
	itt, ctrls	0.288	0.123	0.160	0.178	0.319
	p-val, ctrls	0.032**	0.091*	0.153	0.039**	0.004***
	obs	4102	3883	3893	3893	4102

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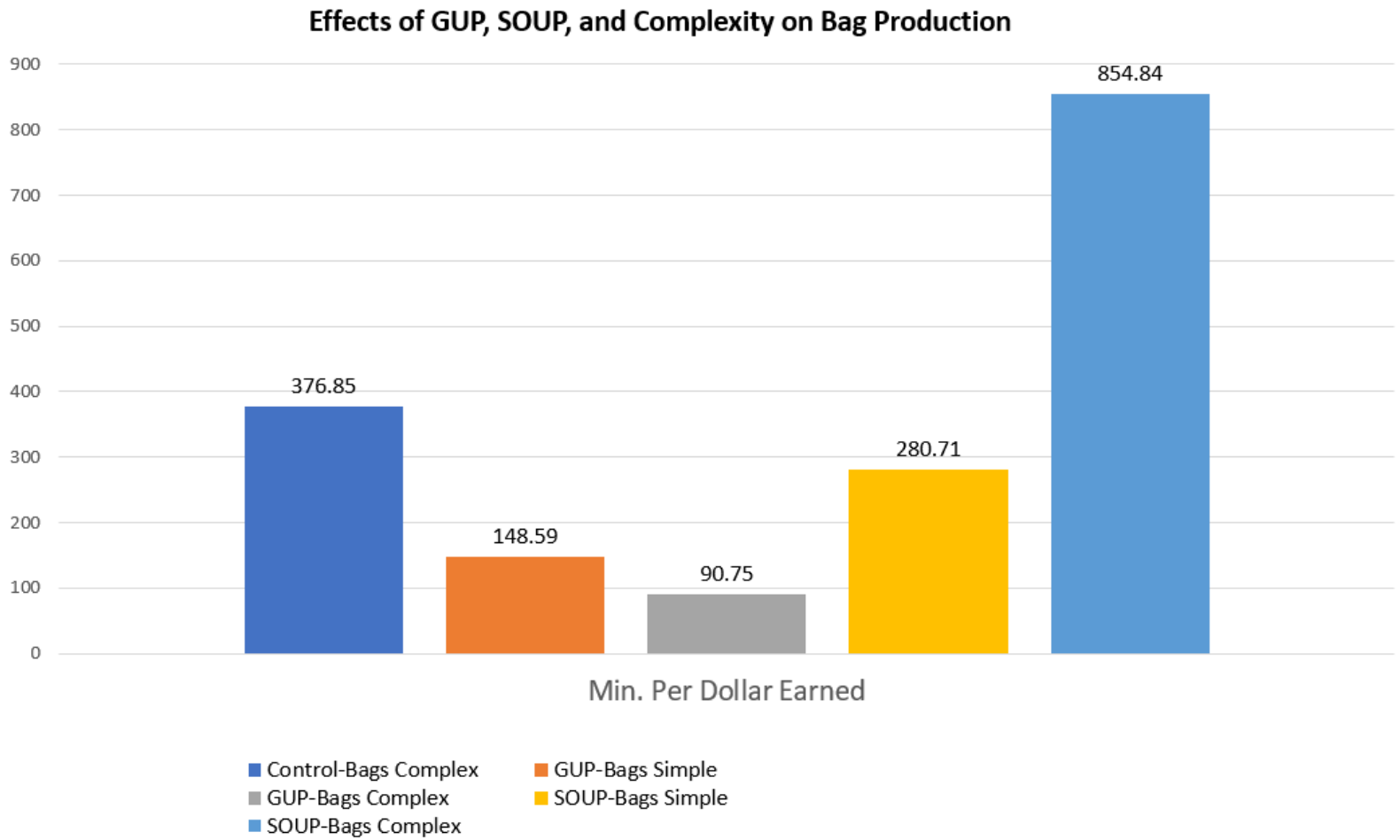

Effects of GUP, SOUP, and Complexity on Bag Production
900
800
700
600
500
400
300
200
100
0
376.85
148.59
90.75
280.71
854.84
Min. Per Dollar Earned
Control-Bags Complex
GUP-Bags Simple
GUP-Bags Complex
SOUP-Bags Simple
SOUP-Bags Complex

Unpacking, augmenting, and understanding EP

- Results from unpacking
  - GUP vs Asset only Tables 1& 2 Panel B
  - Table 3 Panel B
  - Nor does saving alone suffice: Tables 1&2 panel A

- Results from Bags
  - GUP increased income, and increased labor supply. Table4.A.2&3&7 Consistent with
    - Investments leading to higher productivity on own enterprise + labor market constraints = household labor pulled into enterprise
    - Physiological or psychological graduation labor productivity effect
  - Bags program eliminates investment productivity effect Table 8.A.1&2, 8.B.1&2
  - Especially complex bags Table 9.5
- summary the high UCT households are more productive at farming, and no less productive in business.
- They earn 34% more overall and yet produce more bags in less time. It appears that the fact of
- receiving the high UCT is encouraging those households to produce more from the same amount of time. It
- is of course possible that in addition there is an encouragement effect that is partly driving the differences
- between GUP-Bags and Control-Bags.

STYL: An 8-week program of cognitive behavior therapy + economic assistance

Developed by NEPI Liberia through trial and error over years

https://www.nepiliberia.org/

Blattman, Jamison & Sheridan (AER for short-run; AER-Insight for long-run)

1. Fostering skills of “self-control”

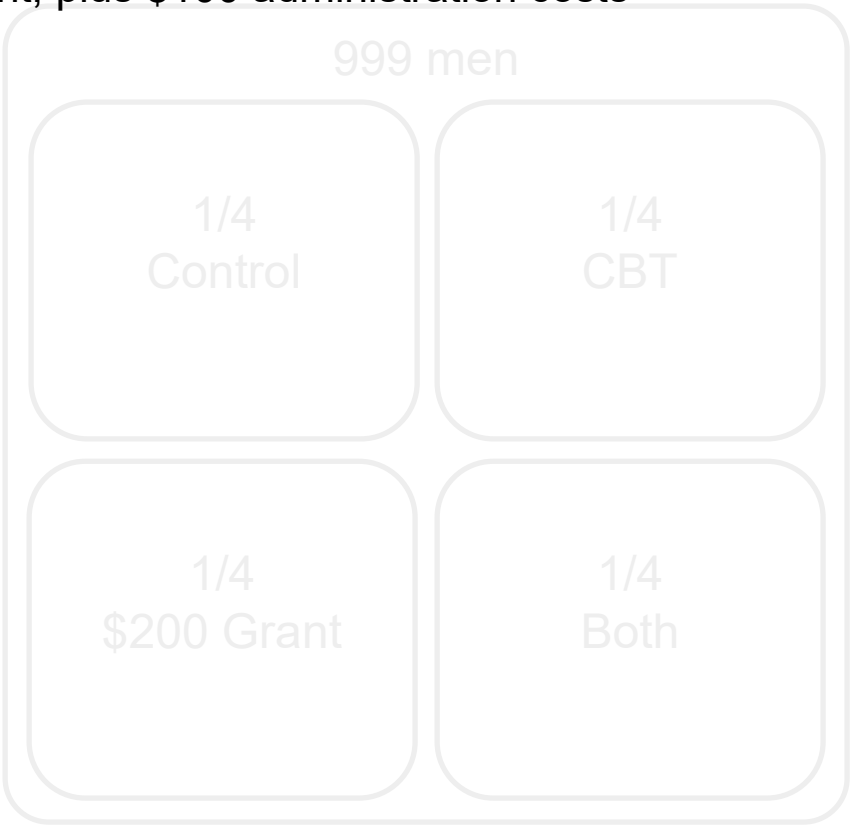
- Learning to plan
  - Break down large goals into smaller concrete sub-goals
  - Feed your family for next week
  - Set personal goals (e.g. a garden)
  - Plan a business activity
- Reducing automatic behaviors, especially anger
  - Practice nonaggressive responses to angry confrontations in class
  - Techniques to calm oneself

2. Changing self-image & values

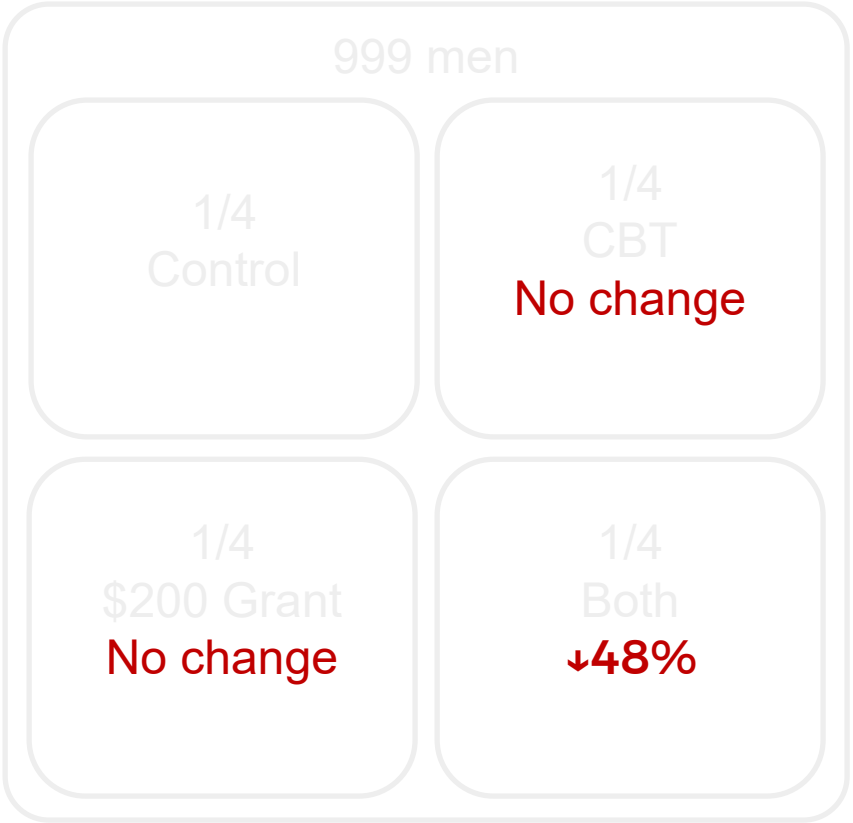
- Get men to think of themselves not as outcasts but normal members of society
- They know what constitutes acceptable behavior, but doesn't apply to their social category
- Try new image on for size:
  - Appearance change
  - Home cleanliness
  - Exposure (banks, supermarkets)
- Success positively reinforced, failures and setbacks processed

Two interventions

~$200 each to implement, plus $100 administration costs



What happened to violence & antisocial behavior after 1 year?



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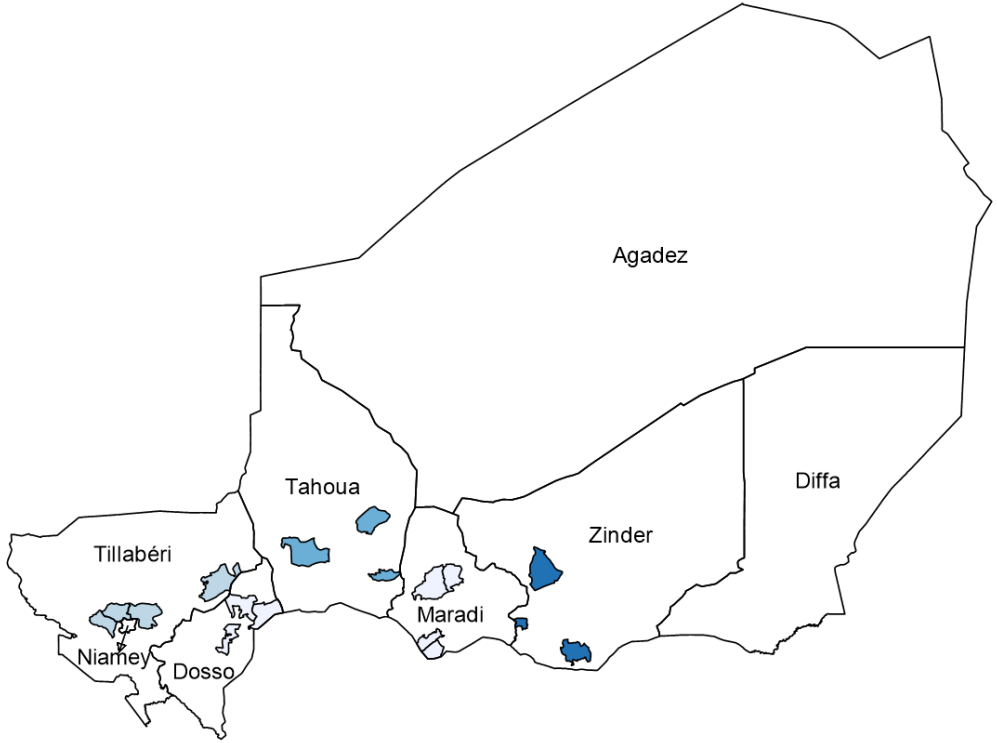
Niger Context: ASP

- **WB Partner: Africa Gender Innovation Lab and DIME**
- **Implementation:** Government run; Sep. 2017-Jan. 2019
- **Design:** 325 villages. Mostly women. Village-level randomization.
- **Scale/Sample** : Part of large -scale program: 20,600 beneficiaries (4608 HHs measured); >100k in cash transfer program
- **Data:** Follow-up 2; 3 years after baseline
- **Cost**: ~$300USD per beneficiary, not including cash transfers



Notes: Authors' creation; boundaries from OCHA Common Operational Data.

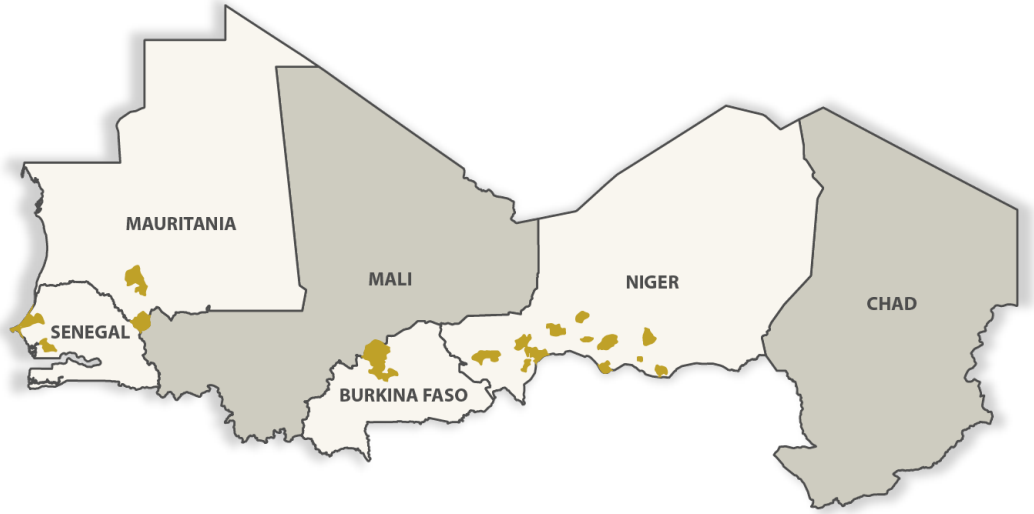
Niger: Program built on Cash Transfer program
4-country Sahel Adaptive Social Protection Program (ASP)

		CONTROL	*CAPITAL Package*	*PSYCHOSOCIAL Package*	*FULL Package*
	Regular cash transfer program	•	•	•	•
Core components	Group formation and coaching		•	•	•
	Savings groups		•	•	•
	Micro-entrepreneurship training		•	•	•
	Market access facilitation		•	•	•
Psychosocial components	Community sensitization on aspirations and social norms			•	•
	Life-skills training			•	•
Cash grant component	Lump-sum cash grant		•		•
Number of villages (322)		81	80	78	83
Number of sample households (4712)		1206	1191	1112	1203

Niger: Larger Context for ASP

ASP Country	Beneficiaries (households)
Burkina Faso*	17,900
Mauritania*	2,000
Niger	16,700
Senegal*	14,800
Total	51,400

*Analysis underway



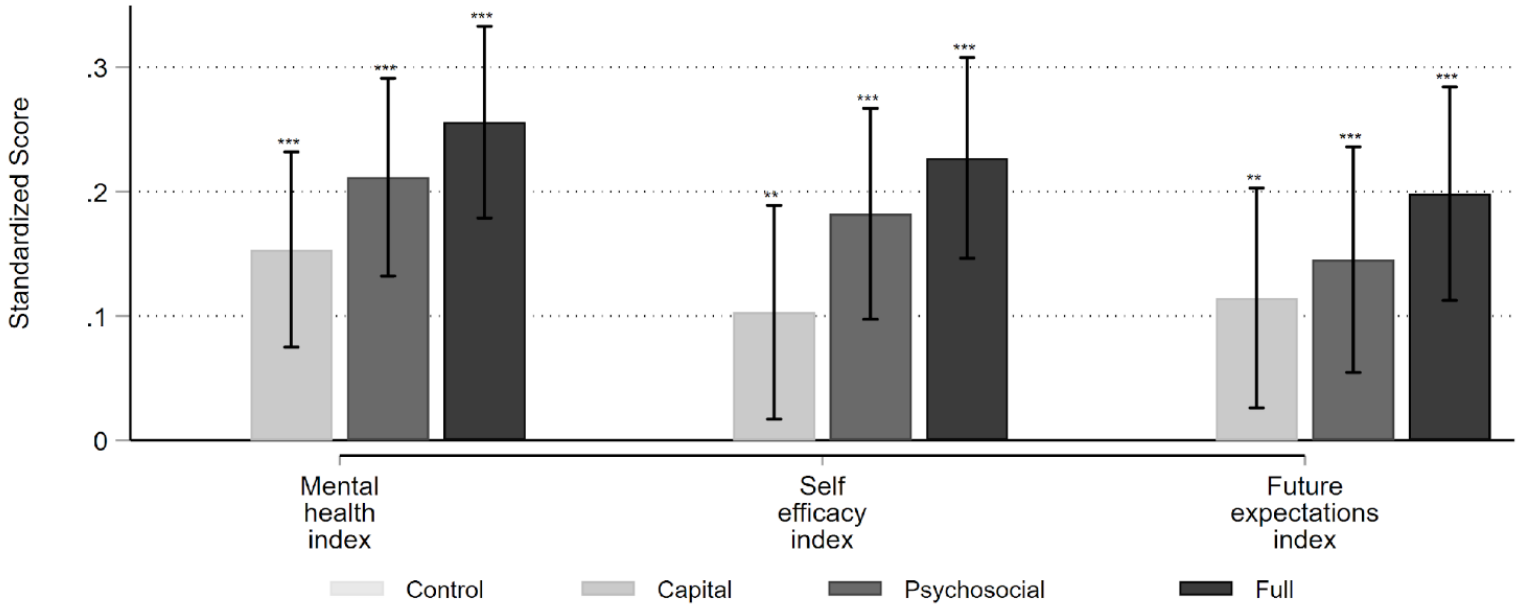
Implementation areas chosen by Governments. No further targeting of beneficiary households

95% women

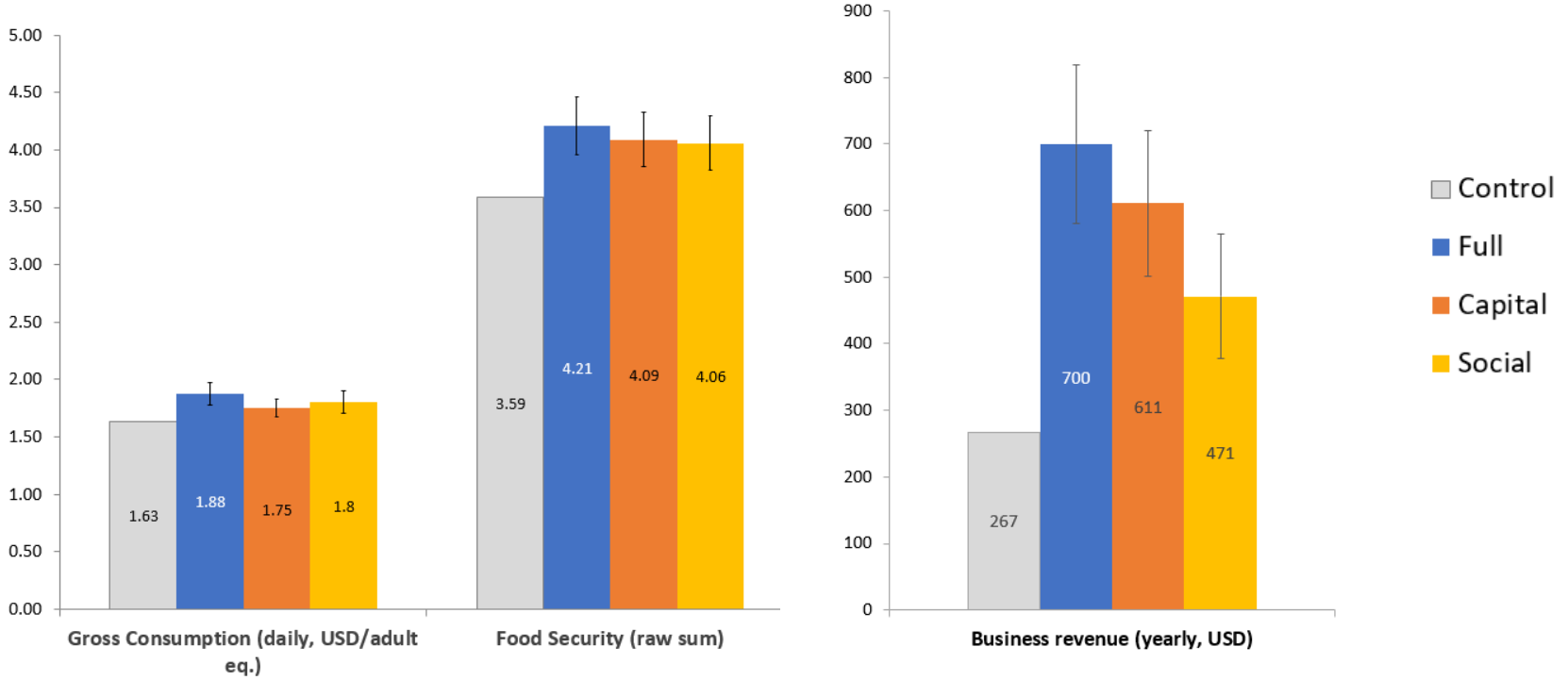
Senegal implemented in urban areas. Other three countries implemented in rural areas

Chad and Mali also implemented productive measures but outside of the multi -country study.

Niger Results (18 months): Mental Health



Niger Results (18 months): Consumption and Business Revenue



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Baseline Balance: CBT

Table 1: Baseline Summary Statistics

	Treatment Mean	Control Mean	p-value: test treatment coefficient = 0
	(1)	(2)	(3)
A. Male Respondent Characteristics			
Age	43.07	42.99	[0.663]
Married	0.90	0.93	[0.580]
Polygynous	0.17	0.18	[0.908]
Ever attended school	0.50	0.46	[0.386]
Experiencing mild, moderate or severe distress	0.49	0.53	[0.123]
30 - Days in last month in which poor physical or mental health prevented work or regular activities	26.83	26.86	[0.882]
Observations	709	3822	
B. Female Respondent Characteristics			
Age	38.38	39.31	[0.075]
Married	0.75	0.75	[0.096]
Ever attended school	0.40	0.40	[0.797]
Experiencing mild, moderate or severe distress	0.58	0.57	[0.599]
30 - Days in last month in which poor physical or mental	26.69	26.93	[0.456]
Observations	782	5249	
C. Household-Level Characteristics			
Household size	7.69	7.55	[0.371]
Number of children under age 5	1.53	1.47	[0.525]
Household walls made of mud	0.73	0.75	[0.116]
Household connected to electric grid	0.45	0.43	[0.512]
Household practices open defecation	0.54	0.53	[0.751]
Any adults skipped meals last year	0.50	0.53	[0.631]
Any adults went whole day without food last year	0.29	0.29	[0.551]
Household has agricultural plot	0.89	0.88	[0.154]
Acres owned	5.15	5.06	[0.331]
Household has non-farm enterprise	0.42	0.41	[0.488]
Any household member worked for agricultural wage	0.08	0.08	[0.775]
Any household member works in formal employment	0.06	0.05	[0.017]
Household has cattle	0.09	0.09	[0.285]
Household has goats / sheep / pigs	0.48	0.47	[0.066]
Household has poultry	0.61	0.59	[0.340]
Household has any financial savings	0.40	0.39	[0.964]
Observations	1570	5760	

Orthogonality Table

	Control	Cash Only	CBT no Grad	Grad no CBT	Both Grad & CBT	Joint Significance Test	N
Household Head Age	44.762	44.763	43.782	45.064	43.490	0.012	6830
	(0.261)	(0.521)	(0.463)	(0.302)	(0.447)		
Female Household Head	0.269	0.273	0.158	0.280	0.144	0.000	6830
	(0.016)	(0.023)	(0.021)	(0.021)	(0.020)		
Number of children under 5	1.517	1.549	1.608	1.508	1.558	0.623	6830
	(0.058)	(0.091)	(0.077)	(0.072)	(0.088)		
HH size	7.768	7.736	8.124	7.834	7.757	0.605	6830
	(0.211)	(0.251)	(0.276)	(0.245)	(0.261)		
Total Baseline Livestock Value	1179.224	1170.693	1177.215	1180.130	1168.431	1.000	6830
	(90.195)	(139.209)	(127.760)	(104.228)	(129.061)		
Total Baseline Asset Value	1265.186	1270.634	1397.165	1287.566	1329.470	0.584	6830
	(49.655)	(79.135)	(86.112)	(68.037)	(74.579)		
Total Baseline Savings Value	142.560	142.464	170.177	167.338	169.621	0.447	6830
	(9.316)	(17.101)	(25.979)	(16.646)	(19.733)		
Total Baseline Land Size	5.328	4.708	5.460	4.991	5.087	0.266	6830
	(0.286)	(0.329)	(0.382)	(0.308)	(0.324)		
Total Baseline Business Profits	78.750	80.588	86.213	81.152	75.513	0.882	6830
	(4.751)	(9.391)	(8.887)	(5.892)	(7.444)		
Kessler Score of Household Head	21.497	21.687	20.876	21.448	20.662	0.016	6310
	(0.198)	(0.363)	(0.325)	(0.245)	(0.300)		
N	2476	667	688	2228	771		

Back

Behavioral Economics & Poverty: Applied to Social Protection

- Broad theory:
  - Psychosocial akin to a subset of human capital
  - Psychosocial “health” ? outcomes
    - Execution shift: Higher return on investment (of time or capital)
    - Beliefs shift: Higher investment due to higher return on investment (Income effect offset? No!)
  - Outcomes ? better psychosocial “health"

Behavioral Economics 1.0 □ 3.0

Behavioral economics 1.0: Laboratory, theory

Behavioral economics 2.0: Nudge, scalpel-like tests of theory

- Commitment (savings, fertilizer, smoking, etc)
- Attention (reminders)
- Optimism (less studied, beliefs tough to measure! Needs work…)
- Endowment effects & sunk costs
  (less studied, and often nulls: bednets, Halloween candy)
- Social Norms (beliefs, networks/info asymmetries)

Behavioral economics 3.0:

- Broader policy, direct interventions
- Recognizes complexity, heterogeneity
- Built into programs, or are programs

Today's Plan

1. Can the program work with **just** psycho-social (& savings)?
   - Asked differently: impact of Graduation program without the lump-sum grant?
2. Is mental health "movable"?
   - Short-run? Ghana CBT and Liberia CBT and Niger = Yes
   - Long-run? Ghana CBT maybe ; Liberia CBT Yes; Niger Yes
3. Does mental health increase impact of Graduation?
   - Ghana Escaping Poverty Heifer project: No. At best, substitutes.
4. Mental health/cognitive aspects explain impact heterogeneity?
   - Glance at Bayesian hierarchical modelling paper from original 6-site study

Additional Tables (Nate’s email)

Baseline Income Components - Cash CBT Only Graduation CBT and Graduation vs Control

	Any commercial livestock income	Any livestock sold	Any business income	Any wage income
High Wealth	-0.00000206	-0.000293	-0.000601	0.000585
	(0.00101)	(0.000293)	(0.00273)	(0.000717)
Observations	6830	6830	6830	6830
Control Mean	1	1	0.99	1
Control SD	0.04	0	0.11	0.03