



Measuring (and using!) Cost-Effectiveness

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\$100

School Uniforms



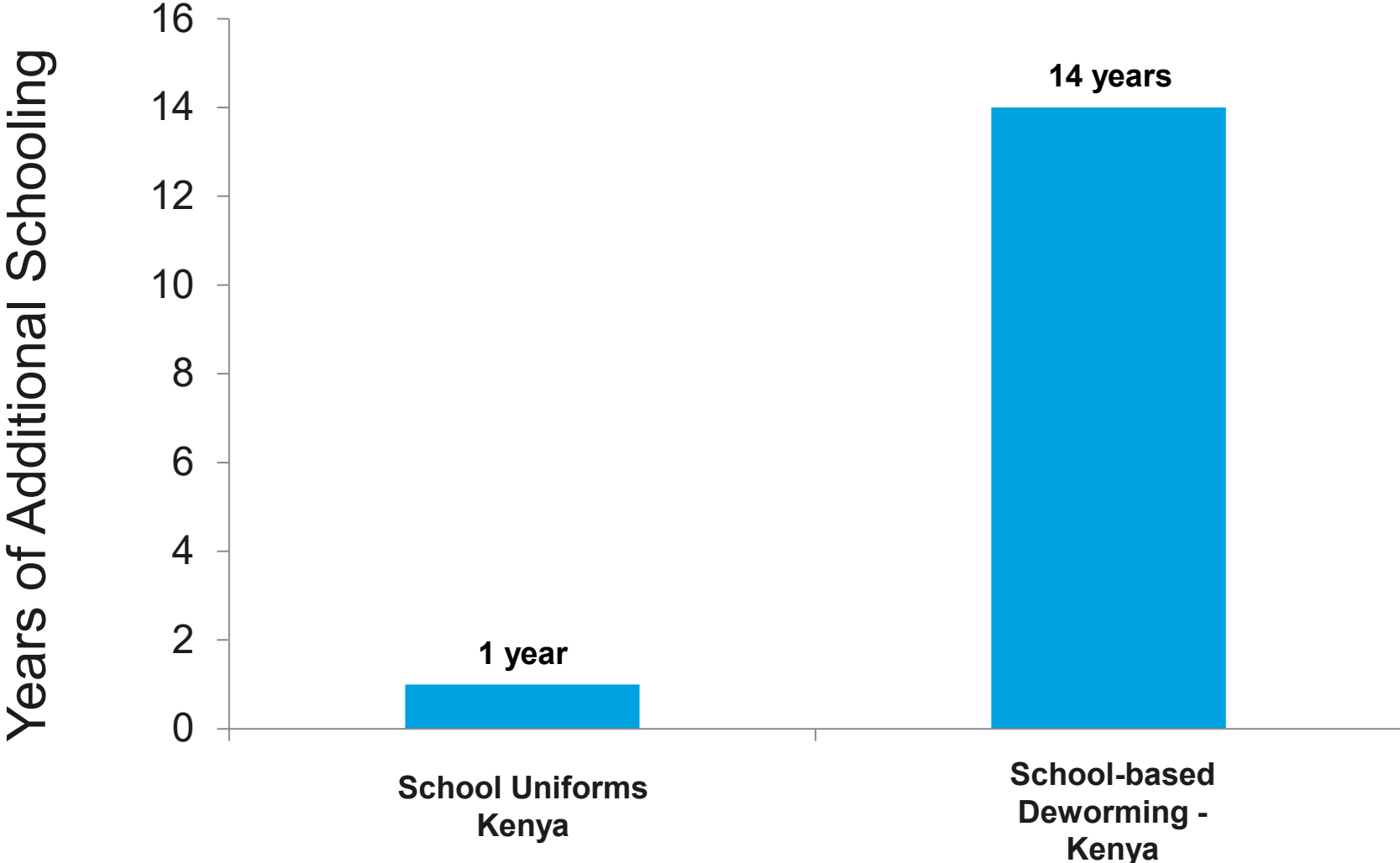
\$100

Deworming Children

Which would you buy?



Additional Years of Schooling for \$100



Source: J-PAL. Numbers are for total additional years, not per child.



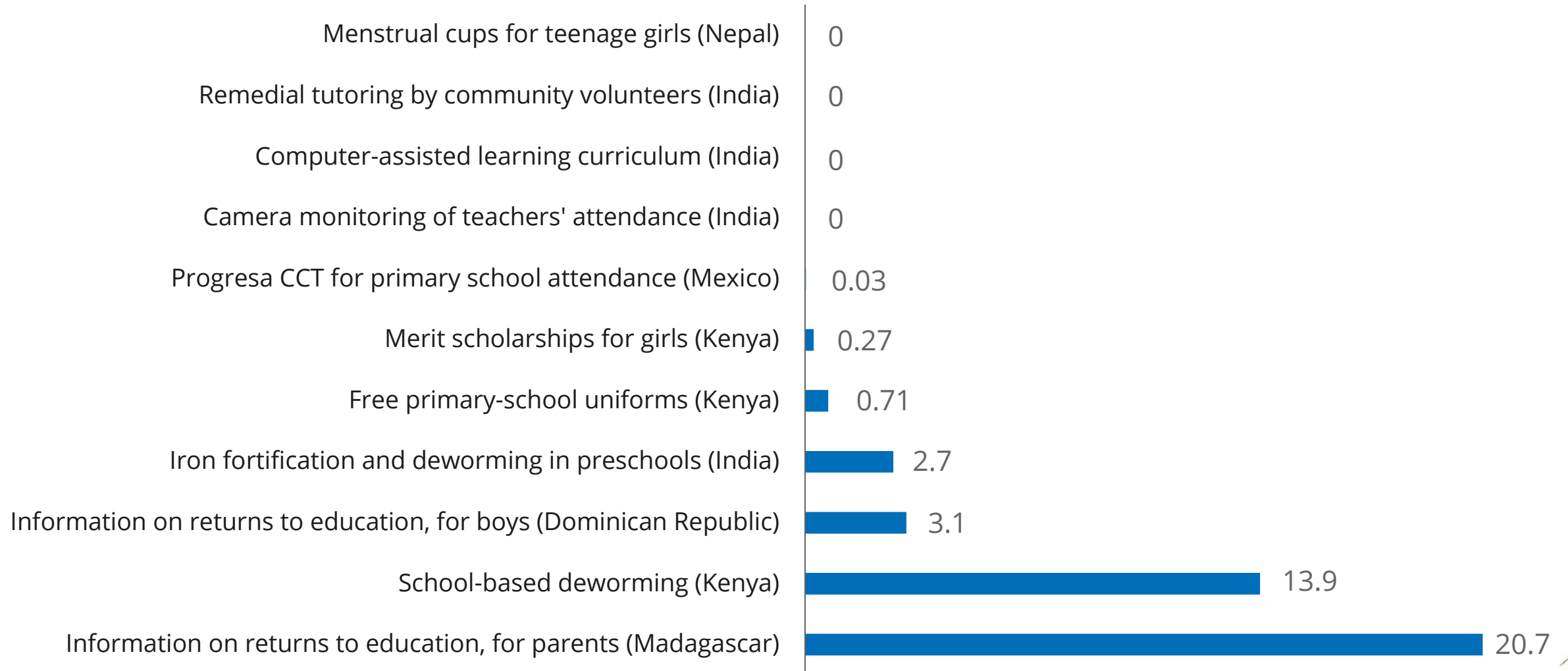


A Bit Harder...

- Build more schools
- Free textbooks
- Free school lunch
- Free uniforms
- Scholarships
- Cash transfers
- Deworming
- Incentivize teacher attendance/performance
- Information about future wages



Rigorous evaluations can provide surprising insights to help inform policy



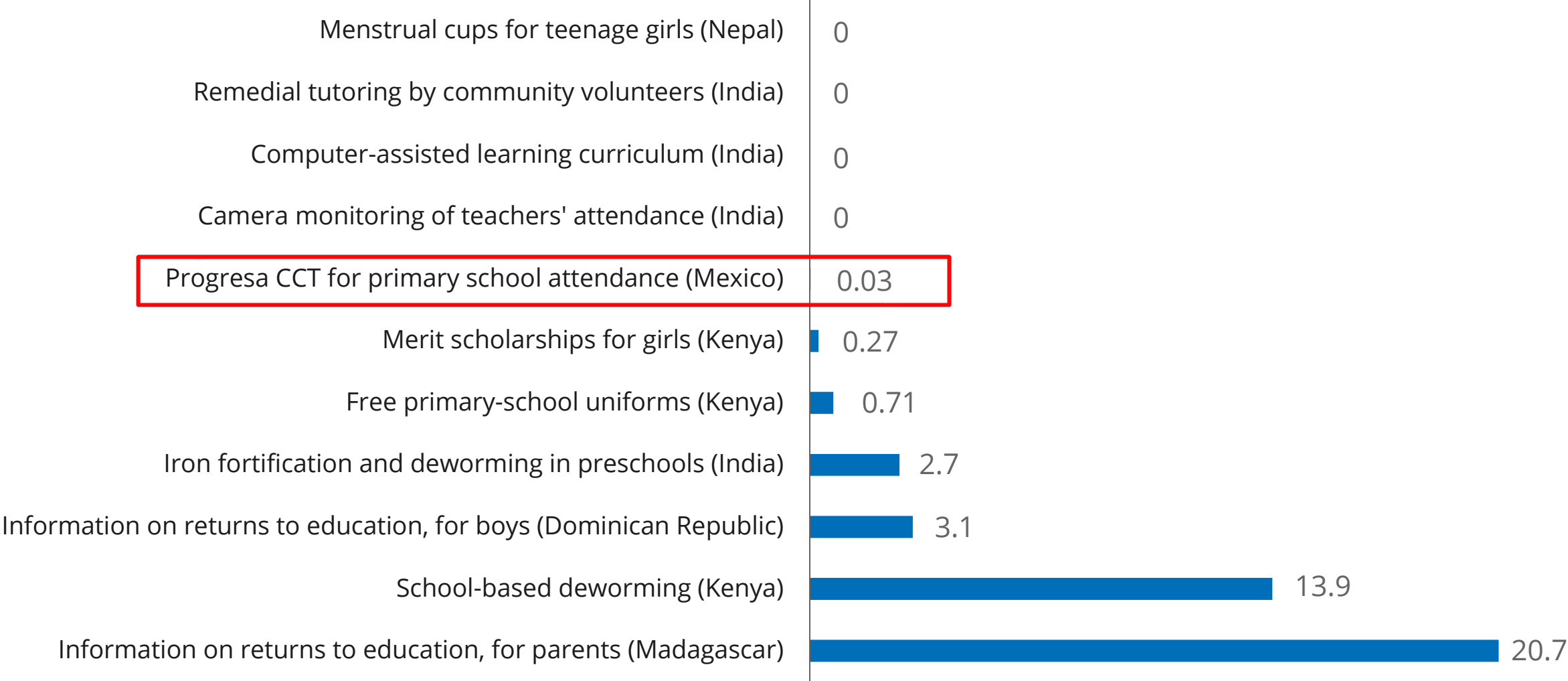
Cost-Benefit vs. Cost-Effectiveness

Cost-Benefit: What is the ratio of the benefits of the intervention to the costs to deliver the program? (ROI)

Cost-effectiveness: How much impact do we get per dollar spent



Cost-Benefit and Cost-Effectiveness can be different, especially when we have multiple types of outcomes



SOURCE: J-PAL



How do we get there?

“Easy!”

1. Measure costs
2. Measure impacts
3. Compare!

We can compare *across* studies, and we can also compare *within* studies



Collect Cost Data During Implementation

	A	B	C	D	E	F	G	H	I	J	K	
1	Part 1: Program Administration											
2	Please include the cost of all full-time staff who worked throughout all phases of the intervention and implementation (not just a portion) and other costs related to program administration. Include any overhead costs here. Please do not include staff that were hired only to identify potential program recipients or staff costs associated with evaluating the program.											
3												
4												
5												
6				Unit	Unit Cost (local)	Unit Cost (USD)	# of Units	Total Cost (local)	Total Cost (USD)	Notes	Instructions	
9	I Salaried											
10	<i>Insert one line for each salaried employee (likely paid on a monthly or yearly basis). Insert additional rows below if necessary, and copy the formula in Column H so that total costs will correctly populate.</i>											
11	1										Cost data for full-time, salaried workers should generally be available by month or year. Please describe employees' main tasks or duties in "Notes."	
12	2											
13	3											
14	4											
15	5											
16	Subtotal:							0	\$0.00			
18	II Not Salaried, but Full Time											
19	<i>Insert one line for each position. If there is more than one employee per position, please sum the hours worked for all employees of that position. Insert additional rows below if necessary and copy the formula in Column H.</i>											
20	1										Cost data for full-time but not salaried staff may be available by day, week, month, or year. Please describe employees' main tasks or duties in "Notes."	
21	2											
22	3											
23	4											
24	5											
25	Subtotal:							0	\$0.00			
27	III Capital Costs											
	1	Cost of facilities									Sum the amount spent on rent per month (or year) for facilities used full-time for the intervention, put the total in "Unit Cost". If you only have a total cost available, enter "Total" for "Unit" and enter 1 in "# of Units." Identify what	

Part 2: Targeting Costs

Please enter the costs that were incurred **to target, identify, and raise awareness among potential subjects as part of the intervention**. Targeting/identification costs may include costs survey given to identify those within a specific region who are eligible and meet certain criteria. This category also includes marketing costs, such as the costs incurred to print and distribute. However, if the information or marketing campaign forms the core of the intervention, these costs should go in Tab 5 - Implementation.

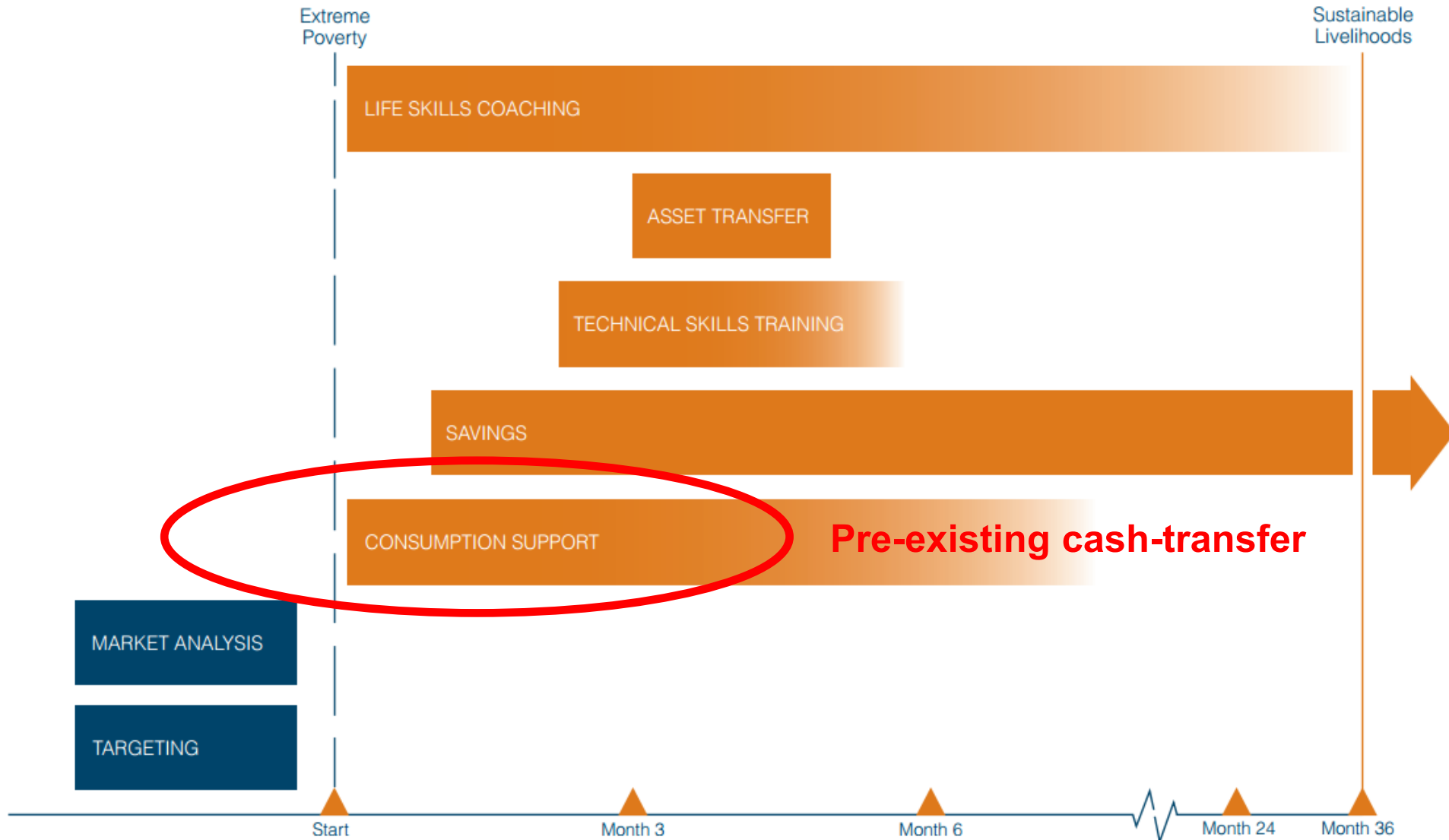
		Unit	Unit Cost (local)	Unit Cost (USD)	# of Units	Total Cost (local)	Total Cost (USD)	Notes	
9	I Labor - Outreach								
10	<i>Insert one line for each position. If there is more than one employee per position, please sum the hours worked for all employees of that position. Insert additional rows below if necessary and copy the formula in Column H.</i>								
11	1							Cost data should estimate, enter "employers' main	
12	2								
13	3								
14	4								
15	5								
16	Subtotal:						0	\$0.00	
18	II Lodging							If the targeting p the cost of lodgi lodging in "Note	
19	1								
20	2								
21	Subtotal:						0	\$0.00	
23	III Transportation								
24	1 Air							If the cost of flig or add an additi and destination	
25	2 Ground							If ground transp rented or owned will depend on t	
26	Car							Please specify if partner	

Total the Costs

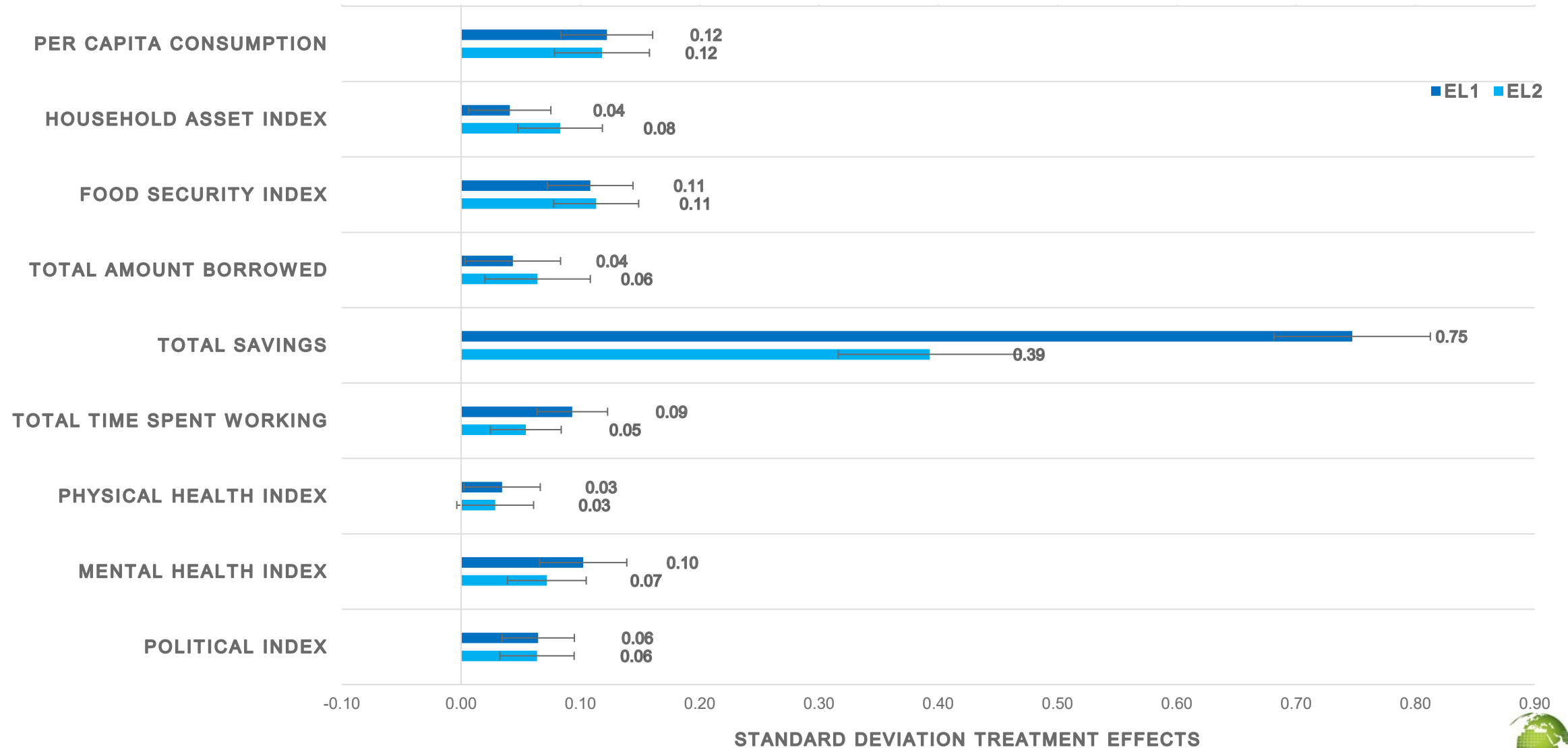
	A	B	C	D	E	F	G	H
1	Summary of Intervention Costs							
2								
3								
4		Part	Section	Description		Total Costs (local)	Total Costs (USD)	
5		1	Program Administration	Costs of all full-time staff who worked throughout all phases of the intervention and implementation (not just for a portion of the intervention) and other costs related to program administration. Include any overhead costs here. Please do not include staff that were hired only to identify potential program recipients, or staff costs associated with evaluating the program.		0.00	\$0.00	
6		2	Targeting	Costs that were incurred to target, identify, and raise awareness among potential subjects as part of the intervention . Targeting/identification costs may include costs of a pre-program census or targeting survey given to identify those within a specific region who are eligible and meet certain criteria. This category also includes marketing costs, such as the costs incurred to print and distribute flyers or host information sessions.		0.00	\$0.00	
7		3	Staff Training	Costs that were incurred to train staff involved in the intervention . If no training sessions were held for staff, then leave this section blank.		0.00	\$0.00	
8		4	User Training	Costs incurred by the program implementer to train participants or beneficiaries .		0.00	\$0.00	
9		5	Implementation Costs	Costs of implementing the intervention . This can include the costs of items distributed to participants or the costs of creating and maintaining technologies or resources developed for the intervention.		0.00	\$0.00	
10		6	User Costs	Costs that the user incurred as a part of the intervention . These costs are divided into new costs, marginal costs, and averted costs.		0.00	\$0.00	
11		7	Averted Costs	Costs averted as a result of the intervention . Only include costs here that are significant.		0.00	\$0.00	
12		8	Monitoring Costs	Costs incurred due to oversight, monitoring, or tracking of the program recipients and their progress during the intervention . This tab would also include the costs of monitoring supply chains or other systems set up for the intervention. Please do not include costs for data collection for program evaluation, which would not take place in a full-scale version of the program.		0.00	\$0.00	
13								
15				Total:		0.00	\$0.00	
16								
17								
18					Aggregate Impact:			
19					Cost per Unit of Impact:			
20								



Example: Graduation Approach



Graduation Has Wide-Ranging Impacts



Compare with Impacts

Panel A: Program costs per household, USD PPP 2014		Ethiopia	Ghana	Honduras	India	Pakistan	Peru
	Direct transfer costs	1228	680	724	700	2048	1095
(1)	Asset cost	1228	451	537	437	1043	854
	Food stipend	0	229	187	263	911	241
	Total supervision costs	1900	2832	1633	407	–	3357
	Salaries of implementing organization staff	347	1994	801	297	–	2477
	Materials	33	119	112	1	–	55
	Training	850	44	121	19	–	111
	Travel costs	174	293	210	17	–	55
	Other supervision expenses	496	382	388	73	–	660
	Total direct costs	3127	3513	2356	1107	4680	4452
	Start-up expenses	43	133	104	38	–	45
	Indirect costs	421	1026	209	112	470	462
	Total costs, calculated as if all incurred immediately at beginning of year 0	3591	4672	2670	1257	5150	4960
(2)	Total costs, inflated to year 3 at 5% annual discount rate	4157	5408	3090	1455	5962	5742
	Exchange rate to PPP adjustment scalar	3.41	2.19	1.90	3.52	4.44	1.84

Panel B: Benefits per household, USD PPP, all values inflated or deflated to year 3 at 5% annual social discount rate

(3)	Year 1 annual nondurable consumption ITT, assuming treatment effect equal to year 2	451	293	66	344	613	339
(4)	Year 2 annual nondurable consumption ITT treatment effect	451	293	66	344	613	339
(5)	Year 3 household asset ITT treatment effect	63	15	–20	6	7	37
(6)	Year 3 nondurable annual consumption ITT treatment effect	424	332	–218	251	451	263
(7)	Year 4 onward total consumption ITT treatment effect, assuming year 3 gains persist in perpetuity	9417	6241	–6011	5354	8994	7402
(8)	Total benefits: (3) + (4) + (5) + (6) + (7) = (8)	10805	7175	–6118	6298	10678	8380
(9)	Year 3 productive asset ITT treatment effect	851	118	32	171	163	59
(10)	Year 3 savings balance ITT treatment effect	272	11	32	9	7	45

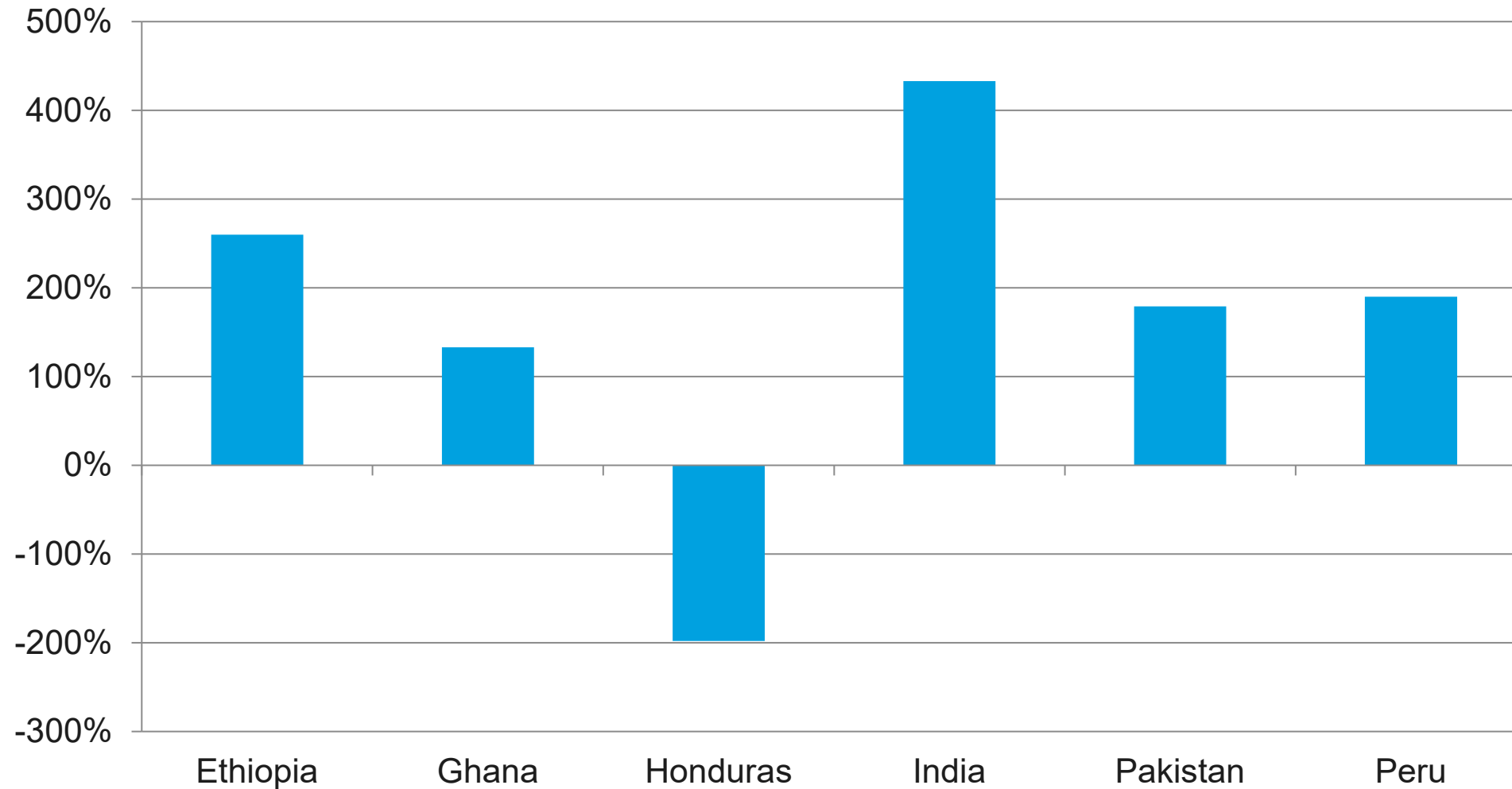
Panel C: Benefit/cost ratios

(11)	Total benefits/total costs ratio: (8)/(2) = (11) Increase in asset value in year 3	260%	133%	–198%	433%	179%	146%
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Same Numbers, shown visually

Total Benefits / Total Costs by Country



Comparing within a project: Graduating to Resilience (G2R)

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)
Consumption support (12 m)	•	•	•
VSLA, FFBS, more	•	•	•
Individual coaching	•		•
Group coaching		•	
Cash “Asset” Transfer	•	•	

Participants are organized in groups of ~25 households

Value of consumption support in total over time, on average: **UGX 1M-1.2M (US\$280-320)**

Value of “asset” transfer: UGX1.1M (US\$300), ~7 months into the program

Coaching: first weekly, then two-weekly sessions (changed after 6 months, only in individual coaching arm NOT in group coaching arm)



G2R: Costs per participant by Treatment Arm

	T1	T2	T3
	<u>Asset,</u> <u>ind. coaching</u>	<u>Asset,</u> <u>group</u> <u>coaching</u>	<u>No asset,</u> <u>ind. coaching</u>
<u>COSTS</u>			
(1) Direct cash transfers	609	609	307
(2) Consumption support	307	307	307
(3) Asset transfer	302	302	0
(4) Other direct costs during implementation	589	391	589
(5) Coaching and trainer salaries	395	198	395
(6) Sum of transfers (1) + other direct costs (5)	1,198	1,000	896
(7) Refinement year*	312	312	312
(8) All else: management, M&E etc.	1,309	1,129	1,319
(9) Total** [(6)+(7)+(8)]	2,819	2,441	2,527

Year-3 benefit per participant household (\$)

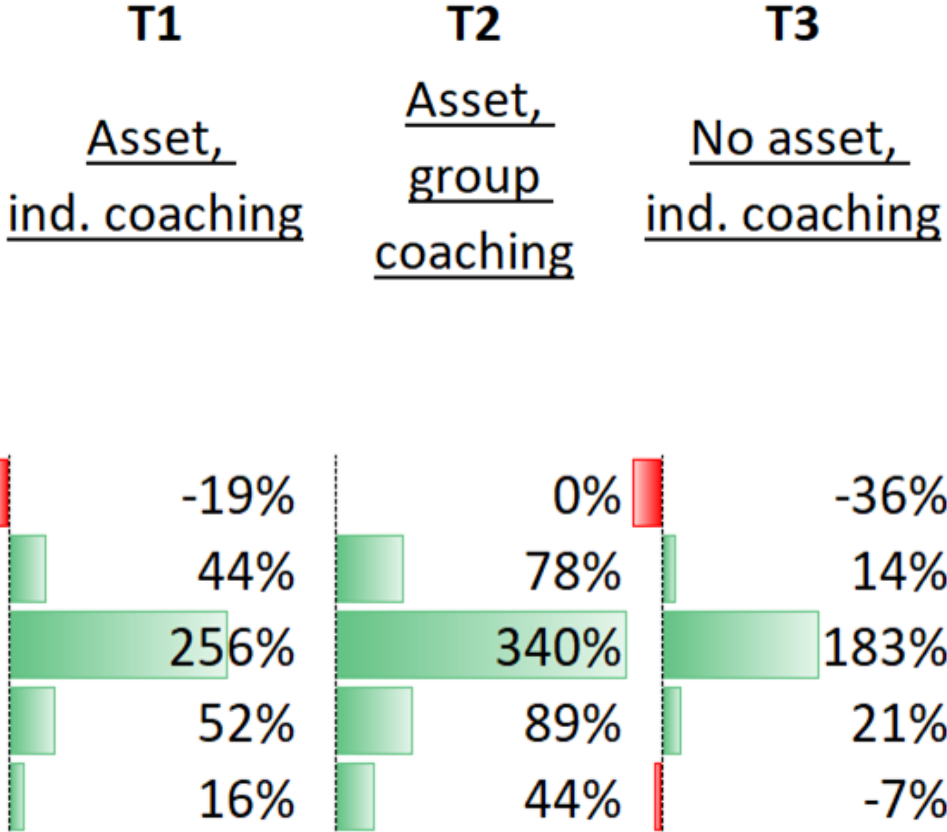
	T1	T2	T3
	<u>Asset,</u> <u>ind. coaching</u>	<u>Asset,</u> <u>group</u> <u>coaching</u>	<u>No asset,</u> <u>ind. coaching</u>
<u>BENEFITS</u>			
Year 3 direct consumption benefit per year	426	457	303
Year 3 spillover attribution	78	84	56
Year 3 direct + spillover	504	541	359

Assumptions about future impacts matter a lot

COST-BENEFIT

Return on Investment given NPVs above

- I 5 years of 100% impact, 0% after
- II 10 years of 100% impact, 0% after
- III 100% persistence
- IV 90% persistence
- V 80% persistence



Thank you



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INNOVATIONS FOR
POVERTY ACTION