Empowering Adolescent Girls: Evidence from a Randomized Control Trial in Uganda

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These slides build on a working paper with the same title co-authored by Oriana Bandiera, Niklas Buehren, Robin Burgess, Markus Goldstein, Selim Gulesci, Imran Rasul and Munshi Sulaiman downloadable under:
http://www.homepages.ucl.ac.uk/~uctpimr/research/ELA.pdf

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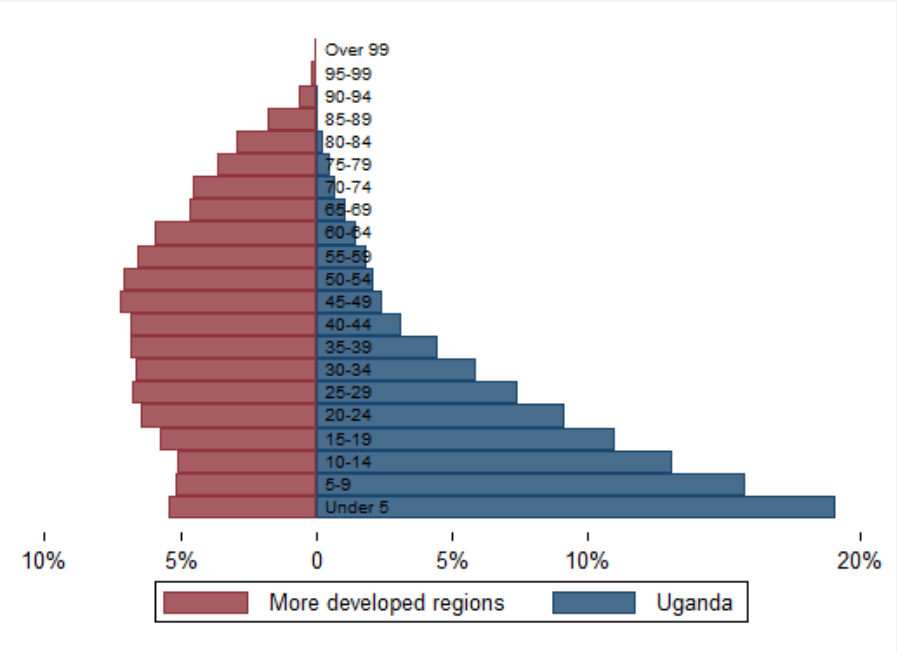
Why should we care? (I)

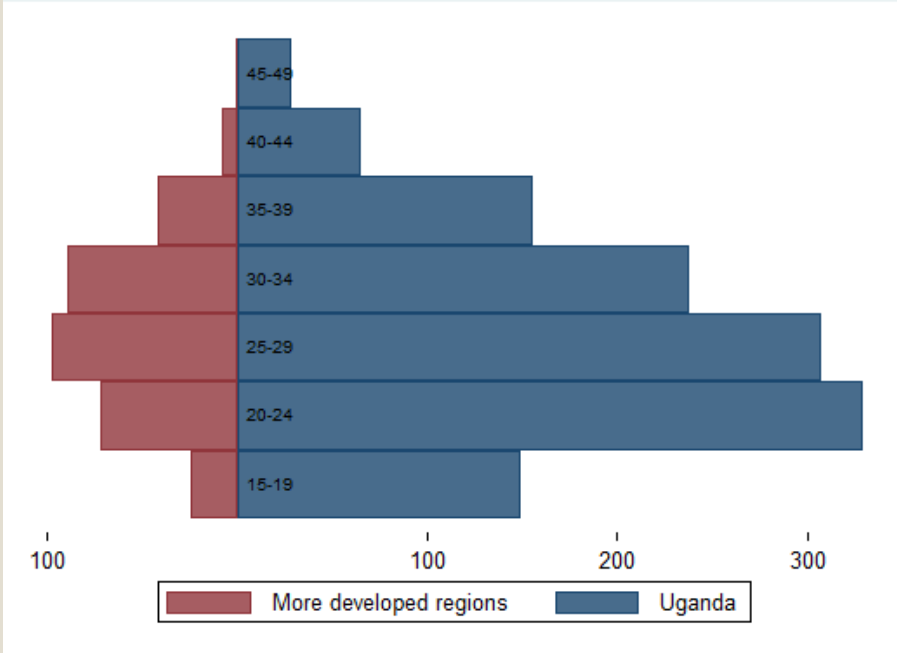
- One billion people on the planet are aged between 15 and 24 and reside in a developing country [World Bank 2009]
- Especially pronounced in Sub-Saharan Africa where 60% of the population is now aged below 25 [World Bank 2009]
- Uganda has the second lowest median age of all countries and the highest child dependency ratio [UN 2010]

Why should we care? (II)

Female Population by Age, 2010



Age-Specific Fertility Rate, 1995-2010



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Why should we care? (III)

- Youths face severe economic challenges:
  - In Sub-Saharan Africa, 60% of the total unemployed are aged 15-24
  - Of these, on average, 72% of the youth population live on less than $2 per day
- This is compounded by health related challenges such as early marriage, pregnancy, STDs and HIV infection:
  - Girls in the 15 to 24 age band are almost eight times more likely than men to be HIV positive in Sub-Saharan Africa [UN 2010].

Why should we care? (IV)

- Interlinkage between economic and health issues: teen pregnancy and early marriage are likely to have a decisive impact on the ability of girls to accumulate human capital, and limit their future labor force participation in adulthood
- In this paper we evaluate an intervention that attempts to simultaneously tackle the economic and health challenges faced by adolescent girls in Uganda

The ELA Program

- Empowerment and Livelihood for Adolescents (ELA) was developed and is being implemented by BRAC
- Operates through clubs, a social space for 20-35 girls within a community who meet on a daily basis
- Club sessions are led by an adolescent leader and center around recreational activities, e.g. reading, singing, dancing and playing games, as well as training
- Two types of training:
  - Livelihood training (vocational & financial literacy courses)
  - Life Skill training (reproductive health, pregnancy, STDs, HIV/AIDS awareness, family planning, rape, etc.)

Research Design

- Randomized Control Trial
  - Implemented through 10 already existing BRAC branch offices in the area around Kampala-Jinja-Iganga-Busia
  - 150 potential program communities identified (15 in each branch area)
  - 100 communities randomly assigned to treatment and the remaining 50 communities kept as control
  - Following this, BRAC opened and operated one ELA club in each of the treatment communities

Data

- Survey Data
  - In each of the 150 sample communities, 40 potential participants were randomly chosen as survey respondents from a list of all resident adolescent girls
  - Baseline data collection commenced in 2008 prior to any program activities
  - Information was obtained both from the female adolescents as well as from their parents
  - Endline data collection was carried out two years after the intervention was initiated
  - These efforts produced a panel data set containing 4,888 adolescents

ELA Club Participation

	Treatment	Control	Difference
Have heard about club [yes=1]	.589	.398	.193***
	[.492]	[.490]	(.030)
Have ever participated in club activities, conditional on having heard about club [yes=1]	.206	.047	.156***
	[.405]	[.212]	(.016)
Continued participation, conditional on ever having participated [yes=1]	.630		
	[.483]		
Attend(ed) club meetings at least 3 times a week, conditional on ever having participated [yes=1]	.273		
	[.446]		
Attend(ed) club meetings 1 or 2 times a week, conditional on ever having participated [yes=1]	.494		
	[.500]		
Received life skills training, conditional on ever having participated [yes=1]	.847		
	[.360]		
Received livelihood skills training, conditional on ever having participated [yes=1]	.527		
	[.500]		
Received life and livelihood skills training , conditional on ever having participated [yes=1]	.509		
	[.500]		

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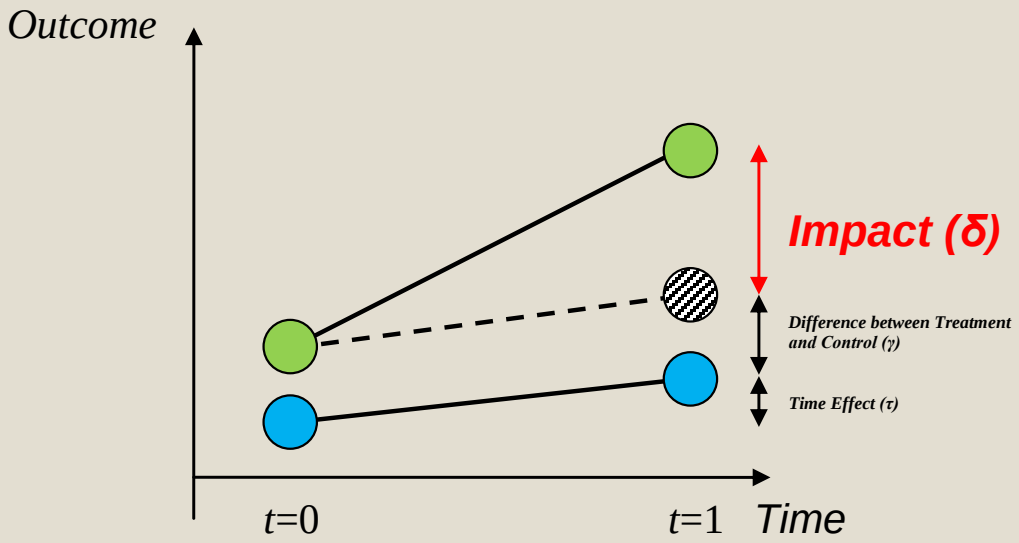
Estimation

- Impact Assessment
  - Randomized treatment allows for identification of impact
  - Focus on intention-to-treat (ITT) estimates, using the community treatment status to estimate:

$$y_{ijt} = a + time_t\tau + treat_j\gamma + (time_t \times treat_j)\delta + \varepsilon_{ijt}$$



Impact on Income Generating Activities

Outcome	Baseline Levels	ITT Estimates		
		OLS, Level	Tobit [Pr(y*>0)]	Tobit [E[y*|y*>0]
Engaged in any IGA [yes=1]	.124	.040*		
	[.330]	(.021)		
Self-employment [yes=1]	.070	.050***		
	[.255]	(.015)		
Wage employment [yes=1]	.057	-.013		
	[.231]	(.013)		
Individual total income past year from self-employment [in UGX]	19,312	-503	.042***	54,503***
	[185,563]	(11,620)	(.011)	(17,838)
Individual total income past year from wage employment [in UGX]	22,376	-8,837	-.004	-18,341
	[244,837]	(8,896)	(.007)	(23,021)
Expenditure on goods in the last month [in UGX]	12,327	4,238***	.078***	3,155***
	[18,904]	(1,515)	(.026)	(895)
Currently enrolled [yes=1]	.716	-.013		
	[.451]	(.025)		
If dropped out, plan to start/go back to school [yes=1]	.515	.081		
	[.500]	(.051)		

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Impact on Risky Behaviors

Outcome	Baseline Levels	ITT Estimates
HIV knowledge [0-6 score]	3.83	.462***
	[1.23]	(.109)
Pregnancy knowledge [yes=1]	.739	.067**
	[.439]	(.030)
Has child(ren) [yes=1]	.104	-.027**
	[.305]	(.013)
If sexually active, always uses condom [yes=1]	.457	.125**
	[.499]	(.055)
If sexually active, uses often or sometimes condom [yes=1]	.262	-.112**
	[.440]	(.053)
If sexually active, uses other contraceptives [yes=1]	.183	.054
	[.387]	(.060)
Suffered from STD [yes=1]	.140	-.003
	[.347]	(.026)
If suffered from STD, went to health center [yes=1]	.714	.044
	[.454]	(.113)
Had sex unwillingly [yes=1]	.212	-.161***
	[.409]	(.041)

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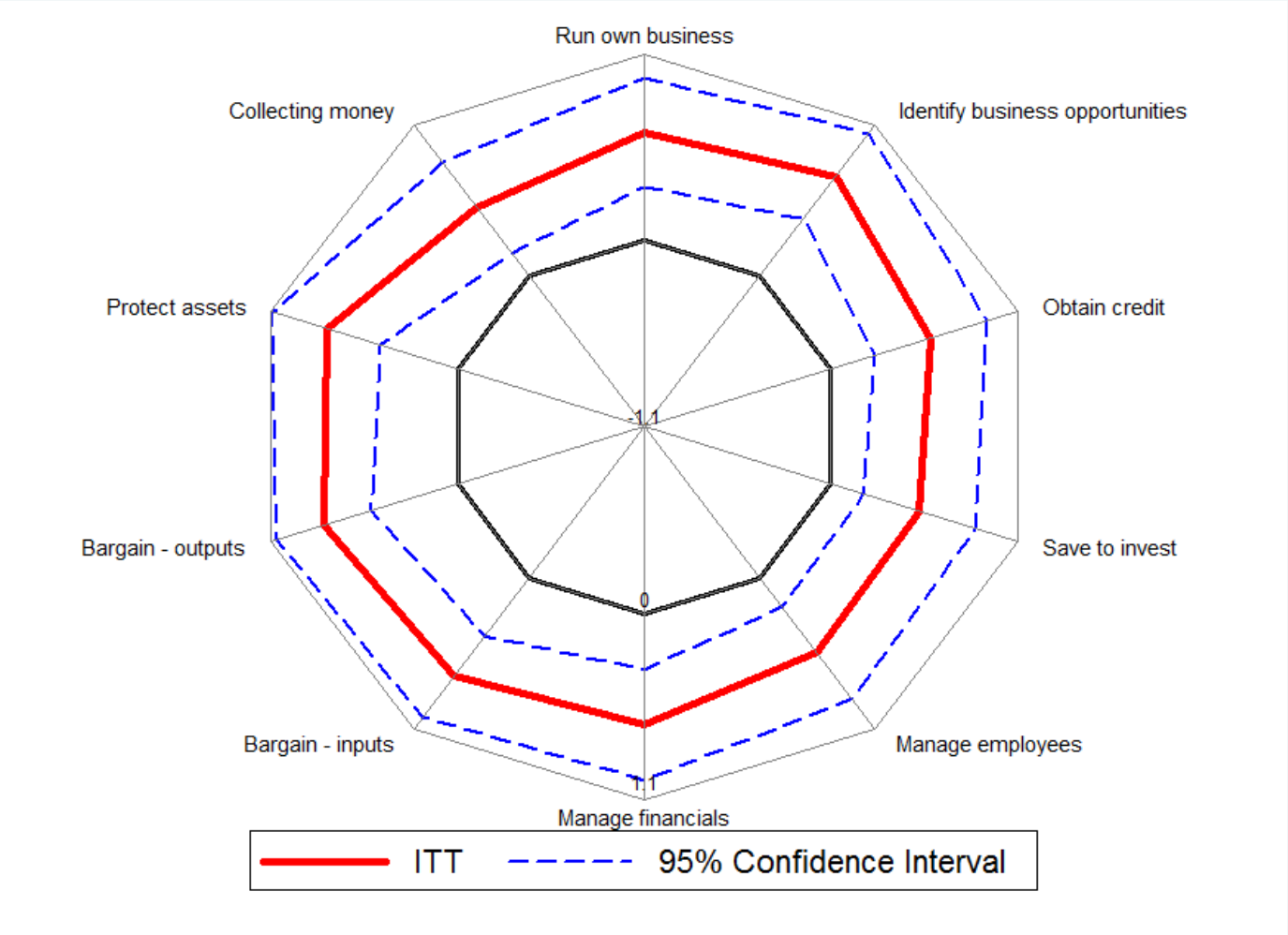
Impact on Entrepreneurship Skills



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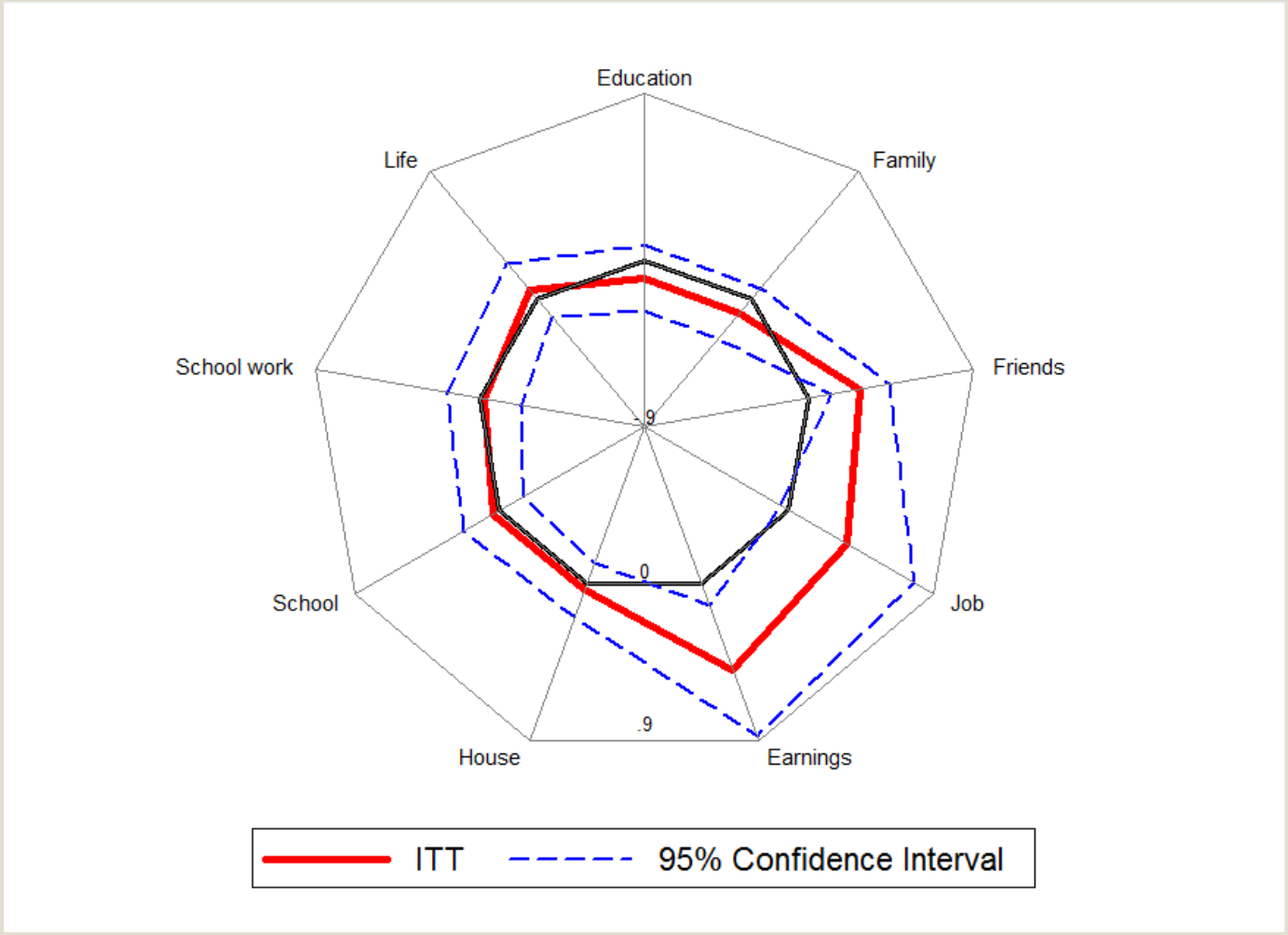
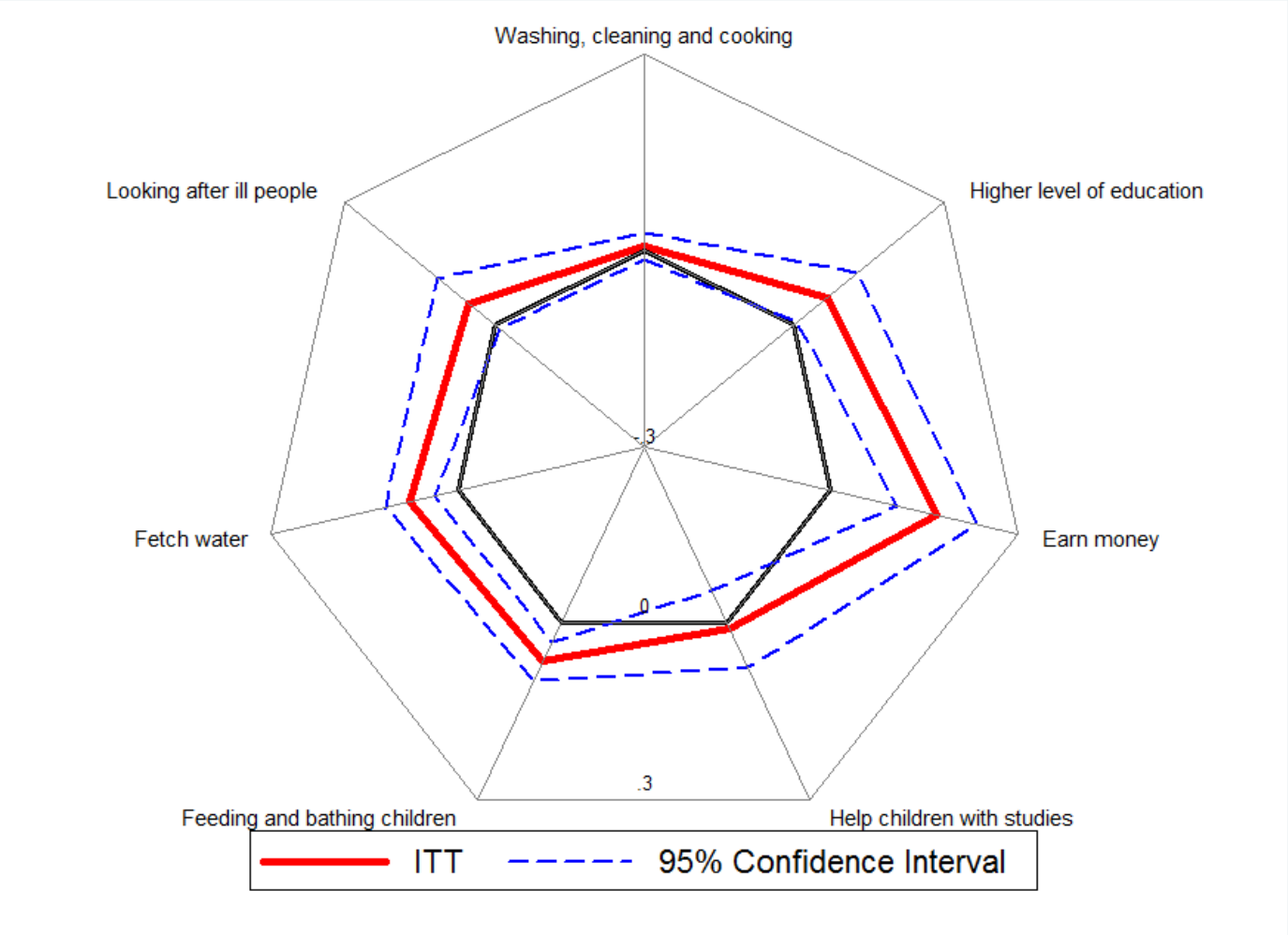
Impact on Satisfaction



Impact on Empowerment



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Impact on Aspirations

Outcome	Baseline Levels	ITT Estimates
Own marriage: Anticipated age at marriage (measured at follow-up only)	25.1	.943***
	[2.96]	(.157)
Suitable age for marriage for a female	24.0	.733**
	[3.09]	(.287)
Suitable age for marriage for a male	27.9	.910***
	[3.71]	(.306)
Suitable age for women to have the first baby	24.0	.443
	[3.16]	(.305)
Preferred number of children	4.22	-.368***
	[1.55]	(.119)
Preferred age at which daughter(s) get married	25.0	.587***
	[2.82]	(.207)
Preferred age at which son(s) get married	28.5	.034
	[3.24]	(.228)

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Cost-Benefit Analysis

- Summing across all program costs over the evaluation period, the intervention costs $365,690 in year 1 and $232,240 in year 2 (as some of the set-up costs are sunk and do not recur)
- Consequently, the overall cost per eligible girl is $17.9 in the second year of program operation (based on an average of 130 eligible girls per community at baseline)
- Estimates show an increase of $32.1 for earnings conditional on earnings being strictly positive which more than offsets the per girl program cost
- The impact on risky behaviors such as unprotected sex, teen pregnancy and the changes in empowerment, aspirations and beliefs are much more difficult to monetize but add to these estimated benefits

Conclusion

- Girls in treated communities are more likely to engage in self-employment and have higher earnings (with no effect on girls' current investment in human capital)
- Also, girls in treated communities are less likely to engage in unprotected sex, less likely to have sex unwillingly, and less likely to have had a child
- These findings suggest interventions that simultaneously provide skills and knowledge related to risky behaviors and income generation, can have beneficial, quantitatively large and sustained impacts on adolescent girls along both dimensions

Thank you!

Any questions?