
Designing Cost-Effective (Conditional?) Cash Transfer Programs in Sub-Saharan Africa

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Outline

- Background & motivation
- The Zomba Cash Transfer Program (*ZCTP*)
 - Sampling and survey design
 - Research design and implementation
- Summary of results
- Lessons learned (so far)

Background and Motivation

- As of 2007, 24 countries around the world had some type of a Conditional Cash Transfer program (CCT) in place, with many others planning or piloting one (WB PRR, 2009):
 - ❑ CCTs can be an important component of social protection policy,
 - ❑ There is considerable evidence that they improved the lives of poor people.
 - ❑ As UPE becomes common in Africa, next step in promotion of primary education is likely to be CCTs.

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Background and Motivation

Four policy questions for the study:

1. What is the impact of CCT programs on schooling in SSA?
2. How should we “tweak” their design for **optimal** effect?
 - ❖ *Conditionality* (‘income’ vs. ‘price’ effects).
 - ❖ *Elasticity* of relevant outcomes to variation in transfer size
 - ❖ *Identity* of the recipient
3. Can they protect adolescent girls and young women from contracting HIV?

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Background and Motivation

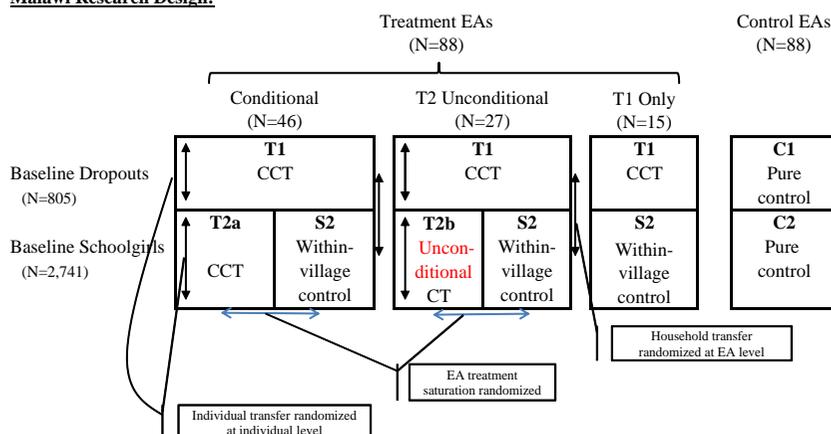
- Zomba Cash Transfer Program (*ZCTP*) is a *two-year* randomized intervention that provides cash transfers (and school fees) to young women to stay in or return to school.
- Program has multifaceted research design with contract variation in **four** dimensions:
 1. Household transfer randomized at village level, \$4-10.
 2. Individual transfer randomized at individual level, \$1-5.
 3. Schoolgirls in some villages receive unconditional transfers.
 4. Village-level saturation of treatment among schoolgirls randomized.

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Zomba Cash Transfer Research Design

Malawi Research Design:



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Zomba Cash Transfer Program Implementation

- For **CCT** recipients, attendance is checked monthly at each program school using a combination of physical checks and phone calls (*with random spot checks*).
 - Transfers for the first month are *free*.
 - For **CCT** recipients, the payment for the next month is withheld if attendance is below 75%. However, the girl remains in the program.
 - **CT** recipients receive their transfers by *only* showing up.
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Sampling and Survey Design

- *Why is the program set in Zomba, Malawi?*
 - 3,821 young women were sampled from 176 enumeration areas (EAs) in Zomba, a district in Southern Malawi.
 - EAs randomly drawn from three strata: urban, near rural, and far rural.
 - All households in each sampled EA were listed using two forms, then the sample selected from the pool of eligible young women.
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Sampling and Survey Design

- Eligibility into the program was defined as follows:
 - Eligible *dropouts*: unmarried girls, 13-22, out of school for less than 3 years (not many who fit this criterion), *and*
 - Eligible *schoolgirls*: unmarried girls, 13-22, who can return to Standard 7-Form 4, enrolled in school at the time of their first interview.
 - *Why were these criteria used?*
 - Otherwise, there was ***no targeting*** of any kind.
 - The survey designed for the impact evaluation consists of two parts:
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Sampling and Survey Design

- Part I is administered to the HH head, and collects information on the following:
 - household roster,
 - dwelling characteristics,
 - household assets and durables,
 - consumption (food and non-food),
 - household access to safety nets & credit, and
 - shocks (economic, health, and otherwise) experienced by the household
 - mortality
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Sampling and Survey Design

- Part II is administered to the *core respondent*, who provides further information about her:
 - family background,
 - Education, labor market participation, time allocation
 - health and fertility,
 - dating patterns, detailed sexual behavior at the partnership level,
 - knowledge of HIV/AIDS,
 - social networks,
 - own consumption of girl-specific goods (soaps, mobile phone airtime, clothing, braids, handbags, etc.).

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Impact on schooling outcomes

- The program led to large increases in school enrolment and attendance.
 - These gains were similar in the conditional (CCT) and unconditional (UCT) treatment groups.
- The program also seems to be leading to large improvements in cognitive skills in the *entire sample*, as well as math and reading comprehension skills among *baseline dropouts*.

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Impacts on marriage and pregnancy

- The program led to large declines in the likelihood of being married or pregnant after one year.
 - The gains in the probability of being married or pregnant were significantly larger among the UCT. CCT did not experience any gains compared with the control group.
 - A likely explanation for this finding is that the condition to attend school regularly is **costly** for the adolescent girl.
 - Mental health is most improved among UCT, followed by CCT.
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Impacts on sexual behavior

- Program delayed the onset of sexual activity among baseline dropouts *and* decreased the number of lifetime sexual partners among the entire sample.
 - However, the reduction in risky sexual behaviors among those sexually active in both rounds was limited only to *baseline schoolgirls*.
 - Finally, gifts received from sexual partners declined with increased transfers to the girl – consistent with the decline in sexual activity and age mixing.
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Impacts on HIV and HSV-2

- The program decreased the prevalence of each of HIV and HSV-2 by more than 60% among *baseline schoolgirls*.
 - The program seems to have stopped the progression of these STIs in their tracks.
 - The program had **no** effect on those who had already dropped out of school at baseline.
 - Program effect on HIV and HSV-2 is concentrated on the group that experienced **no effect** on marriage, pregnancy, or the onset of sexual activity.
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Conclusions

- We see significant impacts on schooling.
 - **Elasticity** of schooling with respect to transfers is **small**.
 - The (per dollar) increase in enrolment attained from the lowest monthly transfer amount of \$5 is **an order of magnitude larger** than that attained from transferring an additional \$10.
 - We **don't** yet find any evidence that the **conditional transfers are more effective** in improving schooling.
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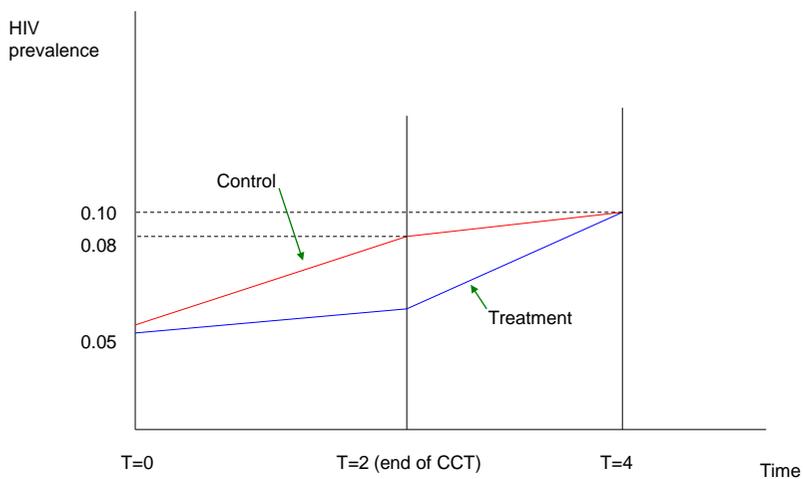
Conclusions (*continued*)

- The evidence using the novel design features of the study suggests that programs may be designed to be more effective by:
 - Setting transfer sizes low,
 - Transferring some of the funds directly to young girls,
 - Possibly foregoing the “conditionality”
 - Our findings **also** suggest that young program beneficiaries delayed marriage, fertility, and onset of sexual activity.
 - Are we just delaying the **inevitable**?
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Hypothetical HIV incidence by treatment status



Offer Letters

Conditional Transfers

- The Zomba Cash Transfer Program (ZCTP) with funding from the World Bank would like to offer you, _____, a cash transfer to help you and your family with the burdens of school attendance for the 2009 school year. By accepting this offer, in return for going to school you will be given:
- You are receiving this money in order to help you return to school or stay in school. In order to receive this money you **MUST** attend school at least **80% of the days for which your school is in session.**

Unconditional transfers

- The Zomba Cash Transfer Program (ZCTP), with funding from the World Bank, would like to offer you, _____, a cash transfer to help you and your family. By accepting this offer you will be given:
- This monthly transfer amounts specified above are given to you as a result of a lottery. You **are not required to do anything** more to receive this money. You will receive this money for 10 months between February and November, 2009.

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One-year impact on school enrolment

	All	Dropouts	All Schoolgirls	Conditional Schoolgirls	Unconditional Schoolgirls
Post-Treatment Dummy	0.115 (7.49)**	0.442 (12.76)**	0.046 (2.82)**	0.038 (2.05)*	0.061 (3.19)**
Round 2 Dummy	0.333 (14.14)**	0.172 (8.71)**	-0.108 (8.48)**	-0.108 (8.47)**	-0.108 (8.46)**
Dropout at Baseline	-0.473 (17.92)**				
Observations	5918	1608	4310	3778	3350
# unique individuals	2959	804	2155	1889	1675
R-squared	0.26	0.51	0.09	0.1	0.1
Mean of Outcome in Control:	0.774	0	1	1	1

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One-year impact on school enrolment

Table 3: Dependent Variable Enrolled in School

	All	Dropouts	All School Girls	Conditional	Unconditional	All School Girls
Post-Treatment Indicator	0.121*** (0.000)	0.442*** (0.000)	0.046*** (0.005)	0.038** (0.039)	0.061*** (0.001)	0.061*** (0.001)
Round 2 Indicator	-0.061*** (0.000)	0.172*** (0.000)	-0.108*** (0.000)	-0.108*** (0.000)	-0.108*** (0.000)	-0.108*** (0.000)
=1 if Conditional Girl						-0.023 (0.241)
Baseline Mean of Outcome in Control	0.826*** (0.000)	-0.000 (1.000)	1.000*** (0.000)	1.000*** (0.000)	1.000*** (0.000)	1.000*** (0.000)
Number of observations	5,922	1,608	4,314	3,782	3,354	4,314
Number of individuals	2,961	804	2,157	1,891	1,677	2,157

Note: All regressions use individual fixed effects with standard errors clustered at the EA level, and are weighted to make results representative of all study EAs.

*Denotes significance at the 10% level, ** at the 5% level and *** at the 1% level

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One-year impact on marital status

Table 5: Dependent Variable is Never Married

	All	Dropouts	All School Girls	Conditional	Unconditional	All School Girls
Post-Treatment Indicator	0.026** (0.033)	0.113*** (0.000)	0.010 (0.330)	-0.000 (0.973)	0.031*** (0.010)	0.031*** (0.009)
Round 2 Indicator	-0.085*** (0.000)	-0.277*** (0.000)	-0.047*** (0.000)	-0.047*** (0.000)	-0.047*** (0.000)	-0.047*** (0.000)
=1 if Conditional Girl						-0.031** (0.026)
Baseline Mean of Outcome in Control	1.000*** (0.000)	1.000*** (0.000)	1.000*** (0.000)	1.000*** (0.000)	1.000*** (0.000)	1.000*** (0.000)
Number of observations	5,922	1,608	4,314	3,782	3,354	4,314
Number of individuals	2,961	804	2,157	1,891	1,677	2,157

Note: All regressions use individual fixed effects with standard errors clustered at the EA level, and are weighted to make results representative of all study EAs.

*Denotes significance at the 10% level, ** at the 5% level and *** at the 1% level

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Transfers to parents conditional on her actions can be a heavy burden for a young girl!

Table 6: Impact of household and individual amounts on mental health

	1	2	3	4	5	6
	Mental Disorders			GHQ 0/12		
	Baseline Dropouts	Baseline Schoolgirls		Baseline Dropouts	Baseline Schoolgirls	
		CCT	UCT		CCT	UCT
Treatment	-0.069 (0.063)	-0.132** (0.054)	-0.125** (0.062)	-0.511 (0.365)	-0.891*** (0.292)	-0.653** (0.315)
Individual amount over minimum	0.000 (0.020)	-0.011 (0.018)	-0.023 (0.021)	0.073 (0.124)	0.028 (0.084)	-0.140 (0.122)
Household amount over minimum	0.024** (0.011)	0.031*** (0.009)	0.010 (0.014)	0.125** (0.057)	0.166*** (0.049)	0.021 (0.102)
Constant	0.484*** (0.111)	0.377*** (0.076)	0.378*** (0.077)	3.426*** (0.625)	2.895*** (0.481)	2.482*** (0.478)
Observations	804	1888	1673	804	1888	1673
Mean in control	0.451	0.374	0.374	2.926	2.526	2.526

*** p<0.01, ** p<0.05, * p<0.1

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One-year impact on *sexual activity* (extensive margin)

	Never had sex			Number of partners		
	ALL	DO	SG	ALL	DO	SG
Treatment	0.022 (0.016)	0.049** (0.022)	0.017 (0.018)	-0.056** (0.024)	-0.117** (0.046)	-0.043* (0.025)
Year 2	-0.106*** (0.010)	-0.128*** (0.017)	-0.104*** (0.011)	0.175*** (0.015)	0.428*** (0.031)	0.169*** (0.015)
Baseline Dropout	-0.010 (0.013)			0.226*** (0.023)		
Individual Transfer Amount						
Household Transfer Amount						
Constant	0.707*** (0.004)	0.297*** (0.006)	0.792*** (0.004)	0.418*** (0.006)	1.138*** (0.011)	0.269*** (0.006)
Number of observations	5,912	1,606	4,306	5,907	1,604	4,303

note: *** p<0.01, ** p<0.05, * p<0.1

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One-year impact on *sexual activity* (*intensive margin*)

	Have sex weekly			Partner is older		
	ALL	DO	SG	ALL	DO	SG
Treatment	-0.152**	-0.064	-0.212**	-0.058	0.001	-0.098
	(0.067)	(0.084)	(0.089)	(0.046)	(0.066)	(0.060)
Year 2	0.207***	0.314***	0.234***	0.059	0.036	0.077
	(0.045)	(0.051)	(0.049)	(0.041)	(0.035)	(0.047)
Baseline Dropout	0.141**			0.000		
	(0.056)			(0.043)		
Individual Transfer Amount						
Household Transfer Amount						
Constant	0.186***	0.233***	0.152***	0.797***	0.809***	0.788***
	(0.016)	(0.020)	(0.022)	(0.011)	(0.015)	(0.015)
Number of observations	1,036	551	485	1,038	552	486

note: *** p<0.01, ** p<0.05, * p<0.1

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One-year impact on *gift exchange* (*intensive margin*)

	Monthly Gift Amount (in USD)			
	ALL	DO	SG	SG
Treatment	-0.966	-1.410	-0.669	2.486
	(0.803)	(1.185)	(1.251)	(2.898)
Year 2	2.941***	2.255**	2.805***	2.805***
	(0.678)	(0.889)	(0.721)	(0.723)
Baseline Dropout	-0.858			
	(0.916)			
Individual Transfer Amount				-1.093*
				(0.566)
Household Transfer Amount				-0.257
				(0.369)
Constant	3.448***	4.300***	2.852***	2.852***
	(0.206)	(0.312)	(0.302)	(0.314)
Number of observations	1,025	544	481	481

note: *** p<0.01, ** p<0.05, * p<0.1

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HIV prevalence declined 60% among baseline schoolgirls

	ALL		Baseline Dropouts		Baseline schoolgirls	
Treatment effect	-0.012	-0.013	0.022	0.027	-0.018*	-0.020**
	(0.009)	(0.008)	(0.028)	(0.029)	(0.009)	(0.009)
Baseline dropout	0.070***	0.050***				
	(0.014)	(0.014)				
Constant	0.027***	0.116***	0.082***	0.254***	0.030***	0.087
	(0.008)	(0.036)	(0.017)	(0.057)	(0.008)	(0.053)
N	1,711	1,701	418	413	1,293	1,288
Baseline controls	NO	YES	NO	YES	NO	YES
note: *** p<0.01, ** p<0.05, * p<0.1						

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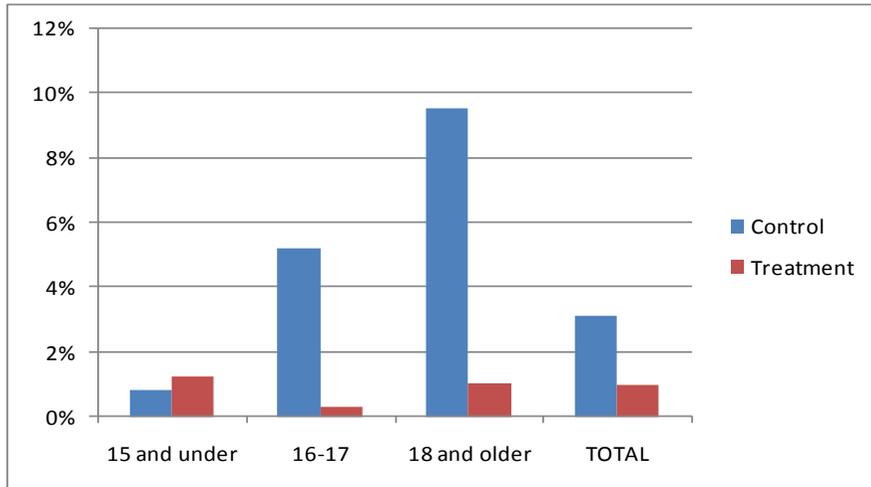
HSV-2 prevalence declined 67% among baseline schoolgirls

	ALL		Baseline Dropouts		Baseline schoolgirls	
Treatment effect	-0.019**	-0.017*	-0.006	0.006	-0.021***	-0.021***
	(0.009)	(0.009)	(0.028)	(0.031)	(0.008)	(0.008)
Baseline dropout	0.068***	0.052***				
	(0.014)	(0.015)				
Constant	0.030***	0.072***	0.092***	0.160***	0.031***	0.059*
	(0.007)	(0.028)	(0.022)	(0.056)	(0.007)	(0.032)
N	1,707	1,707	419	414	1,288	1,283
Baseline controls	NO	YES	NO	YES	NO	YES
note: *** p<0.01, ** p<0.05, * p<0.1						

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HSV-2 Prevalence by age and treatment status among *baseline schoolgirls*



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