

Does soft-conditionality increase the impact of cash transfers on desired outcomes? Evidence from a randomized control trial in Lesotho

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Background

- Over the past twenty years, a growing number of developing countries have launched social protection programs.
- Most of the programs in Latin America provide cash transfers conditional on meeting certain requirements.
- On the contrary, the majority of the cash transfer programs in African countries are unconditional.

Pros of conditionalities

- Pros and cons of Conditional Cash Transfers (CCT) as opposed to Unconditional Cash Transfers (UCT) (de Brauw and Hoddinott, 2011; Handa et al. 2009).
- Public perspective: to overcome asymmetric information.
- Private perspective: to rebalance decision making within households regarding the allocation of resources.

Cons of conditionalities

- Public perspective: increased administrative costs and complexity (Caldes et al. 2006).
- Private perspective: reduced effectiveness of the targeting if conditions too difficult to meet for poorest households.
- Human rights perspective: indefensible to attach conditions to the receipt of the cash transfers, especially because the purpose of the programs is to reduce or mitigate the effect of extreme poverty (Freeland, 2007).

Aim of the research

- Soft conditionality implemented through both labeling and messaging to evaluate the effects of a social cash transfer in Lesotho, the Child Grants Program (CGP).
- No explicit conditionality attached to transfers but clear message for CGP beneficiaries to spend the cash on the interest and needs of children (OPM, 2014).
- Evidence on selected outcomes: household total expenditure, food expenditure and food security, and school-related expenditure.
- Unpacking behavioral change (“substitution” effect) and income effects

Theoretical Background

- Under standard models of decision-making, soft conditionality should have no bearing on how the money is spent.
- A large body of empirical evidence reports relationships between income sources and resulting behavioral response (for surveys, Thaler, 1990; Fraker, 1990; Haveman and Wolfe, 1995).
- The behavioral economic literature suggests that labeling the additional source of income and messaging on the desired use of the additional income could matter if they facilitate mental accounting (Thaler, 1990).
- Social sanctioning may be an alternative explanation: the community may exert close scrutiny on how the cash transfers are used.

Empirical Papers

- Attanasio et al. (2014), de Brauw and Hoddinott (2011), Benhassine et al. (2015) find that conditionality contributes to amplify the effects of the CCTs on investments in human capital.
- Handa et al. (2009) evaluate the behavioral impact of conditionality and gender targeting on spending behavior in Progresa CCT and find that transfer income is not spent differently from general income: transfers exert only an income effect.
- Baird et al. (2011) compare a CCT and UCT in Malawi and find that CCT increases the effectiveness of the program at keeping adolescents in school but decreases its effectiveness at averting teen pregnancy and marriage.
- Akresh et al. (2013) in Burkina Faso find no significant difference between CCT and UCT.

Description of the program

- The Child Grant Programme is an unconditional CT implemented within the National Strategic Development Plan 2012-2017 in five districts.
- Initially the CGP provided a transfer of M360 (USD 36) every quarter to poor and vulnerable households selected through a combination of proxy means testing and community validation.
- As of April 2013 the payment was adjusted to take into account the family size (1-2 hh members: M360; 3-4 hh members: M600; 5+ hh members: M750).
- The transfer is equivalent to around 18% of the beneficiary average expenditure

Description of the program

- CGP was designed and implemented in two phases.
- Phase 1 (pilot): it started in October 2009 / April 2010 in three community councils, reaching about 1,250 households. In 2010 three additional councils were included, covering an additional 3,400 households.
- Phase 2: scale up was used to implement an impact evaluation through a randomized control trial design:
 - ① First, in each community council, public lotteries randomly selected half of all the electoral divisions (EDs) into the group of treatment.
 - ② Second, targeting of the eligible and non-eligible households was carried out according to a combination of proxy means testing (PMT) and community validation.
- Two data collections: between June and August 2011 (baseline), and between June and August 2013 (followup).

Description of the program: messaging

- Beneficiary households were reminded at every payment date that the money was meant for the welfare of their children and to ensure they had enough food, adequate clothing and shoes.
- All the CGP recipients interviewed reported having received instructions at the pay point to spend the money on children (quantitative study).
- Evidence from a qualitative study (OPM 2014):
"We are told by the social workers that we must buy food, clothes and school needs for our children, not to buy household furniture. We are also told that there are people who monitor how the money is being spent (beneficiary in Mafeteng district)."

Empirical analysis: outline

- Difference-in-Difference approach:
 - ① comparison of program beneficiaries with a group of non beneficiaries serving as controls, all interviewed at baseline and follow up (only eligible hh):
 - ② focus on variables that are likely to be affected by labeling and messaging: household expenditure (total, food and non food), food security, school enrollment.
- Unpacking of substitution and income effect to test the strength of the programs soft conditionality:
 - ① Comparison of the marginal propensity to consume out of transfer income with the marginal propensity to consume out of general income.
 - ② Comparison of the expenditure elasticities from baseline (pre-program) with the ex-post actual response of households to the program.

Modest impact of CGP on expenditure...

	Total Expenditure		Food Expenditure		Non-Food Expenditure	
	(1)	(2)	(3)	(4)	(5)	(6)
Household level						
DID	75.795 (1.57)		64.186* (1.66)		14.56 (0.66)	
DID male		11.167 (0.18)		4.805 (0.1)		11.157 (0.4)
DID female		146.980** (2.76)		130.600*** (3.00)		17.180 (0.73)
Per capita						
DID	18.155* (1.68)		13.981* (1.67)		4.986 (0.90)	
DID male		14.766 (1.25)		6.192 (0.64)		5.139 (0.65)
DID female		20.865* (1.76)		22.510** (1.97)		4.319 (0.66)
Observations			2,701			

... though significantly higher for FHH

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	(1)	(2)	(3)	(4)	(5)	(6)
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Some impacts on food (in)security indicators...

	Food shortage	Average months extreme shortage	Smaller Meals Adults	Smaller Meals Children
DID	-0.046 (-1.43)	-1.765*** (-4.45)	-0.018 (-0.39)	-0.065 (-1.38)
DID male hh	-0.06 (-1.31)	-1.546*** (-2.93)	-0.006 (-0.10)	-0.035 (-0.59)
DID female hh	-0.029 (-0.70)	-1.989*** (-3.82)	-0.032 (-0.59)	-0.082 (-1.39)
	Fewer Meals Adults	Fewer Meals Children	Went to sleep hungry Adults	Went to sleep hungry Children
DID	-0.058 (-1.34)	-0.078* (-1.65)	-0.090** (-2.24)	-0.053 (-1.34)
DID male hh	-0.027 (-0.45)	-0.05 (-0.79)	-0.064 (-0.98)	0.034 (0.62)
DID female hh	-0.083* (-1.7)	-0.095 (-1.54)	-0.161*** (-3.08)	-0.150*** (-3.00)
Observations	2,705			

... still larger for FHH

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Observations	2,705			

Large and significant impacts on clothing for children

	Clothing and footwear							
	Total		Men		Women		Children	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DID	11.207*		-1.451		-1.876		13.064***	
	(1.92)		(-1.11)		(-1.22)		(4.82)	
DID male		10.235		-2.198		-1.49		15.075***
		(1.2)		(-0.96)		(-0.69)		(4.16)
DID female		11.909*		-0.635		-2.291		10.528**
		(1.87)		(-0.40)		(-1.04)		(2.90)
Observations					2,701			

Positive impacts on education expenditure, especially uniforms and shoes...

	Education - total		Education per pupil 6-12		Education per pupil 13-19	
DID	15.941**		5.729**		6.46	
	(2.01)		(2.81)		(0.74)	
DID male		21.027**		6.127*		27.203**
		(2.16)		(1.89)		(2.19)
DID female		10.01		5.316**		-11.78
		(0.96)		(2.14)		(-1.01)
	Schol fees for the year		Exam fees		Maintenance	
DID	5.102		1.163		0.550**	
	(1.25)		(0.89)		(2.13)	
DID male		10.312*		2.059		0.287
		(1.78)		(1.25)		(1.24)
DID female		-0.907		0.088		0.838*
		(-0.16)		(0.05)		(1.84)
	Textbooks		Stationery		Uniform and school shoes	
DID	-0.119		1.045		6.554***	
	(-0.09)		(1.5)		(3.23)	
DID male		0.488		1.712*		7.091***
		(0.24)		(1.73)		(2.97)
DID female		-0.857		0.324		5.993**
		(-0.63)		(0.34)		(2.01)
Observations			2,701			

... Mostly for MHH

	Education - total	Education per pupil 6-12	Education per pupil 13-19
DID	15.941** (2.01)	5.729** (2.81)	6.46 (0.74)
DID male	21.027** (2.16)	6.127* (1.89)	27.203** (2.19)
DID female	10.01 (0.96)	5.316** (2.14)	-11.78 (-1.01)
	Schol fees for the year	Exam fees	Maintenance
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DID male	10.312* (1.78)	2.059 (1.25)	0.287 (1.24)
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	Textbooks	Stationery	Uniform and school shoes
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DID male	0.488 (0.24)	1.712* (1.73)	7.091*** (2.97)
DID female	-0.857 (-0.63)	0.324 (0.34)	5.993** (2.01)
Observations		2,701	

Soft-conditionality: income vs. substitution effects

- If messaging/labelling play a role, program transfers will exert an income and substitution effect on household spending behavior and on schooling, while general income only exerts an income effect on such behavior.
- If the substitution effect is big, then the marginal propensity to consume (MPC) out of transfer income will be larger than the MPC out of general income.
- On the contrary, if the substitution effect is small or zero the two MPC will be statistically equal (Breunig and Dasgupta, 2005; Handa et al., 2009).

Soft-conditionality: empirical approach

- We estimate the following equation

$$Y_{i,t} = \beta_0 + \beta_1 CGPvalue_{i,t} + \beta_2 income_{i,t} + \beta_3 d2013_i + \sum \beta X_i + \mu_{i,t} \quad (1)$$

- Y represents the logarithm of annual household expenditure of the i -th household (either total expenditure or expenditure on each of the other items) or food security.
- $CGPvalue$ is the logarithm of annual transfers from administrative data.
- $income$ is the logarithm of monetary income (not including cash transfers).

Soft-conditionality: test of marginal propensities to consume

- To determine if the impact of a CGP maloti is different from a monetary income maloti, we test the following null and alternative hypothesis:

$$H_0 : \beta_1 = \beta_2 \quad (2)$$

$$H_1 : \beta_1 \neq \beta_2 \quad (3)$$

- Soft conditionality plays a role if, for outcome variables related to the conditionality, β_1 is significantly greater than β_2 .
- Our equations for expenditure items are estimated in double logarithmic form: our hypothesis test translates into a test of the equality of elasticities of transfers and general income.

No impact of soft conditions on total, food and non-food expenditure: $\beta_1 = \beta_2$

	OLS regression			Fixed-effect regressions		
	CGP transfers (log)	HH income (log)	P-value for difference	CGP transfers (log)	HH income (log)	P-value for difference
Total expenditure	0.007 (1.07)	0.034*** (9.29)	0.0002***	0.016** (2.28)	0.032*** (6.42)	0.055*
Total expenditure - MHH	0.004 (0.57)	0.033*** (5.85)	0.0021***	0.006 (0.66)	0.026** (2.76)	0.112
Total expenditure - FHH	0.011* (1.70)	0.035*** (6.58)	0.0051***	0.030*** (3.98)	0.036*** (5.16)	0.564
Food expenditure	-0.001 (-0.09)	0.032*** (8.35)	0.000***	0.014* (1.89)	0.020*** (3.5)	0.435
Food expenditure - MHH	-0.008 (-0.99)	0.040*** (6.37)	0.000***	0.001 (0.13)	0.020 (1.59)	0.211
Food expenditure - FHH	0.009 (1.35)	0.028*** (4.99)	0.019**	0.026*** (3.43)	0.023** (2.85)	0.721
Non-food expenditure	0.030*** (2.95)	0.043*** (6.77)	0.321	0.020* (1.78)	0.057*** (7.14)	0.013*
Non-food expenditure - MHH	0.038*** (3.73)	0.036*** (4.24)	0.853	0.013 (0.95)	0.036** (2.98)	0.203
Non-food expenditure - FHH	0.022 (1.58)	0.050*** (5.01)	0.1382	0.043*** (3.56)	0.068*** (5.78)	0.136
Observations		2,701			2,701	

But elasticity of transfer income is higher than general income for children clothing

	OLS regression			Fixed-effect regressions		
	CGP transfers (log)	HH income (log)	P-value for difference	CGP transfers (log)	HH income (log)	P-value for difference
Clothing adult males	0 (0.03)	0.021** (2.46)	0.1034	0.006 (0.59)	0.027** (2.41)	0.234
Clothing adult males - MHH	0.003 (0.19)	0.031** (1.99)	0.2016	0.001 (0.07)	0.046** (2.09)	0.199
Clothing adult males - FHH	-0.007 (-0.62)	0.012* (1.99)	0.1662	0.027** (2.36)	0.007 (0.9)	0.152
Clothing adult females	-0.004 (-0.36)	0.022*** (3.02)	0.083	-0.019* (-1.8)	0.007 (0.8)	0.113
Clothing adult females -MHH	0.005 (0.38)	0.017 (1.54)	0.515	-0.024 (-1.44)	-0.003 (-0.23)	0.395
Clothing adult females - FHH	-0.012 (-0.68)	0.027** (2.75)	0.085*	-0.021 (-1.26)	0.003 (0.17)	0.354
Clothing children	0.174*** (6.94)	0.064*** (4.32)	0.001***	0.188*** (6.05)	0.069*** (3.02)	0.002***
Clothing children - MHH	0.202*** (6.25)	0.091*** (3.45)	0.010***	0.193*** (5.42)	0.106** (2.75)	0.065*
Clothing children - FHH	0.142*** (4.28)	0.035* (1.93)	0.010***	0.206*** (5.14)	0.023 (0.86)	0.000***
Observations		2,701			2,701	

Similar strong results for expenditures on education:

$$\beta_1 > \beta_2$$

	OLS regression			Fixed-effect regressions		
	CGP transfers (log)	HH income (log)	P-value for difference	CGP transfers (log)	HH income (log)	P-value for difference
Exp. in Education	0.127*** (5.99)	0.082*** (4.82)	0.082*	0.174*** (6.43)	0.096*** (3.71)	0.024**
Exp. in Education - MHH	0.111*** (3.44)	0.033 (1.25)	0.068*	0.167*** (3.68)	0.028 (0.57)	0.064*
Exp. in Education - FHH	0.154*** (5.09)	0.134*** (5.24)	0.643	0.214*** (6.64)	0.092** (2.46)	0.013**
Exp. Uniform/shoes	0.162*** (8.09)	0.091*** (4.81)	0.010***	0.224*** (8.88)	0.092*** (3.39)	0.001***
Exp. Uniform/shoes - MHH	0.139*** (4.70)	0.040* (1.68)	0.009***	0.239*** (5.7)	0.041 (0.92)	0.002**
Exp. Uniform/shoes - FHH	0.190*** (5.93)	0.126*** (4.58)	0.100*	0.234*** (6.68)	0.086** (2.05)	0.013**
Observations		2,701			2,701	

Behavioural change: ex-ante expected vs. ex-post actual response

- We unpack how the CGP has affected behavior by using standard demand theory to predict how the program ought to impact spending in favor of children, based on pre-program expenditure elasticities.
- We derive theoretically consistent expenditure elasticities from baseline and use these to predict household responses to the program.
- Rationale: if the ex-ante expected behavior lines up with the ex-post actual response of households to the program, no behavioral change is taking place and the soft-conditionality does not play any role.
- On the contrary, if the ex-post actual response of households to the program it is greater than the ex-ante expected one, behavioral changes are taking place.

Testing for behavioural changes

- We estimated the following specification (Working-Leser functional form):

$$w_i = \alpha + \beta_1 X + \beta_2 \ln(EXP) + \beta_3 CGP + \epsilon_i \quad (4)$$

- Where w_i is the budget share for commodity i .
- The marginal effect on the budget share of a change in total household expenditure is given by

$$\frac{\partial w_i}{\partial \ln(EXP)} = \beta_2 \quad (5)$$

- while the total elasticity expenditure can be derived using

$$E_i = 1 + \frac{\frac{\partial w_i}{\partial \ln(EXP)}}{w_i} = 1 + \frac{\beta_2}{w_i} \quad (6)$$

Table 1: Ex-ante predictions vs ex-post estimates of program impacts

Panel A. All sample	Food	Clothing			Education		Health	Fuel	Housing
	Adults male	Adults female	Children	Total	Uniform				
Pooled Elasticity	1.020	1.628	1.730	1.532	1.121	1.176	1.426	0.746	0.970
% change in total EXP	17	17	17	17	17	17	17	17	17
% change of spending	17.332	27.676	29.404	26.037	19.057	19.990	24.248	12.679	16.488
mean spending at baseline	476.883	0.958	2.016	4.025	25.752	8.225	13.748	107.188	75.124
Ex-ante predicted impact	82.652	0.265	0.593	1.048	4.91	1.644	3.334	13.591	12.387
Actual DiD impact estimate	64.186	-1.451	-1.876	13.064	15.94	6.554	-0.121	-0.365	-9.977
Panel B. MHH	Food	Clothing			Education		Health	Fuel	Housing
	Adults male	Adults female	Children	Total	Uniform				
Pooled Elasticity	1.031	1.706	1.561	1.495	1.012	0.371	1.390	0.726	0.937
% change in total EXP	17	17	17	17	17	17	17	17	17
% change of spending	17.535	29.001	26.535	25.410	17.212	6.309	23.638	12.337	15.931
mean spending at baseline	487.974	1.291	2.179	5.503	25.929	8.767	14.469	107.654	77.160
Ex-ante predicted impact	85.567	0.374	0.578	1.398	4.463	0.553	3.420	13.282	12.292
Actual DiD impact estimate	4.805	-2.198	-1.49	15.075	21.027	7.091	-0.369	-6.623	-8.109
Panel C. FHH	Food	Clothing			Education		Health	Fuel	Housing
	Adults male	Adults female	Children	Total	Uniform				
Pooled Elasticity	1.01	1.51	1.96	1.51	1.32	3.04	1.44	0.75	1.00
% change in total EXP	17	17	17	17	17	17	17	17	17
% change of spending	17.127	25.736	33.362	25.643	22.358	51.726	24.409	12.820	17.001
mean spending at baseline	466.149	0.636	1.859	2.594	25.581	7.699	13.050	106.737	73.153
Ex-ante predicted impact	79.836	0.164	0.620	0.665	5.719	3.982	3.185	13.684	12.437
Actual DiD impact estimate	130.6	-0.635	-2.291	10.528	10.009	5.993	0.086	6.29	-12.345

Conclusions

- We find that soft-conditionality did play a role on outcomes most directly associated with the labeling of the program (a child grant) as well as with the program messaging:
 - 1 The MPC out of transfer is positive and significantly larger than the MPC out of general income for expenses on clothing and footwear for children and expenditure on education, especially on school uniforms and shoes.
 - 2 The ex-post actual program effects are higher than the ex-ante expected ones for clothing for children, education and expenditure for school uniforms and shoes.

Conclusions

- Two main policy implications:
 - 1 Social programs can incentivize the achievement of the desired goals of the program through labeling and messaging, without necessarily imposing any explicit conditionality.
 - 2 Programs adopting a soft-conditionality approach should carefully consider how to tailor the communication strategy to reflect the full array of program objectives.

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