Heterogenous Spillovers in Unconditional Cash Transfer

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Motivation

▶ Haushofer and Shapiro (2016): A cluster randomized controlled trial in rural Kenya to study the effect of unconditional cash transfers (UCT)

▶ Reported improvements in asset ownership, consumption, income, subjective well-being, and female empowerment for recipients compared to non-recipients in the same village

▶ Study depends on comparability of treated households in the same village (it does on average).

▶ Our question:
Does everyone experience the same amount of spillover?

Intervention

► Households eligible for study based on a thatched roof criteria

► GiveDirectly transfered cash amounting to $404 PPP

► Households are subsistence farmers making $85 PPP per month

► Data from pre-treatment and post-treatment surveys

Intervention
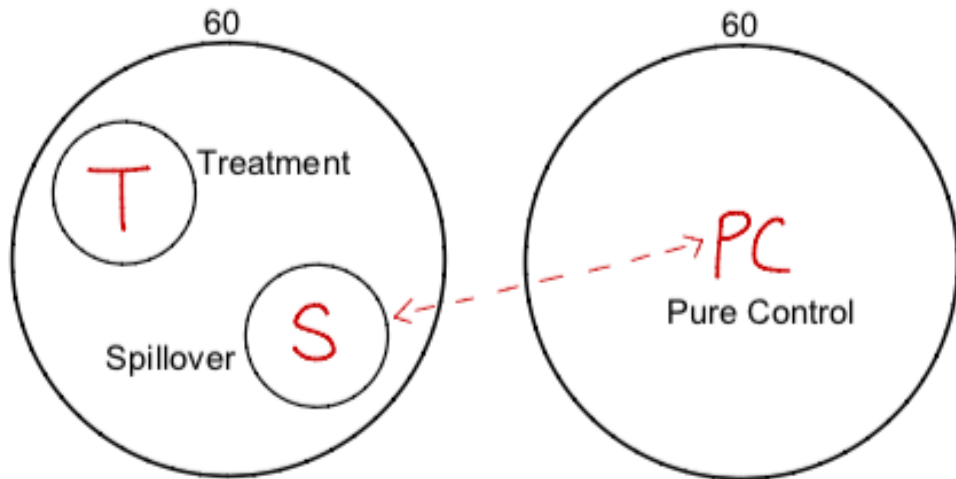
Identifying heterogeneity

▶ Heterogeneity in linear spillover effects:

$$Y_{i,v} = \beta_0 + \beta_1 S_v + \beta_2 D_{i,v} + \beta_3 S_v \times D_{i,v} + \varepsilon_{i,v}$$

▶ $Y_{i,v}$: Outcome variable of interest

▶ S_v: Indicator for living in a treatment village

▶ $D_{i,v}$: Measure of demographic distance of household i

Measuring Demographic Distance

▶ Absolute distance

$$D_{i,v} = \frac{|Y_{i,v,t=0} - \bar{Y}_{v,t=0}|}{\mathsf{SD}_v}$$

▶ Squared deviations from village averages

$$D_{i,v}^2 = \frac{(Y_{i,v,t=0} - \bar{Y}_{v,t=0})^2}{\mathsf{SD}_v}$$

Spillover Effects: Linear Estimates

Food security index	0.51***	-0.34***
	(0.16)	(0.13)

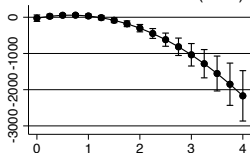|		
Female empowerment index	0.99***	-0.58***
	(0.15)	(0.12)

Table 2: Spillover effects by absolute distance from village means

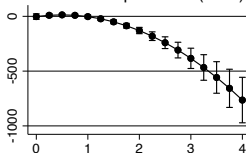|	Interaction	Treated village	Abs. distance	Control mean (Std. dev.)	Obs
Value of non-land assets (USD)	-167.11***	95.90*	203.30***	384.05	899
	(39.30)	(52.64)	(31.69)	(298.99)	
Non-durable expenditure (USD)	-51.67***	34.27***	52.68***	105.38	899
	(10.78)	(9.75)	(6.90)	(90.90)	
Total revenue, monthly (USD)	-68.47***	48.88***	98.17***	52.66	899
	(15.78)	(9.42)	(11.96)	(95.22)	
Food security index	0.51***	-0.34***	0.63***	-0.06	899
	(0.16)	(0.13)	(0.14)	(1.26)	
Health index	0.04	-0.08	-0.01	0.06	899
	(0.15)	(0.12)	(0.12)	(1.06)	
Education index	0.20	-0.09	0.04	-0.01	724
	(0.15)	(0.11)	(0.12)	(1.03)	
Psychological well-being index	0.02	-0.01	0.01	-0.19	1321
	(0.10)	(0.10)	(0.08)	(0.94)	
Female empowerment index	0.99***	-0.58***	-0.92***	-0.21	621
	(0.15)	(0.12)	(0.11)	(1.15)	
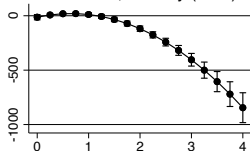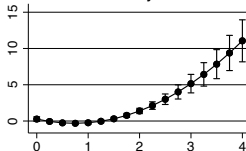
Notes: The unit of observation is the household for all outcome variables except for the psychological variables index, where it is the individual. The sample is restricted to co-habitating couples for the female empowerment index, and households with school-age children for the education index. All columns include village-level fixed effects, control for baseline outcomes, and cluster standard errors at the village level. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. level.
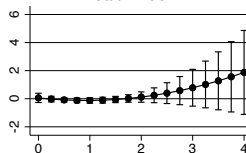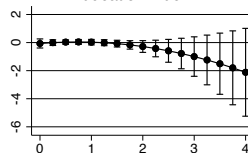
Spillover Effects: Quadratic Estimates

Conclusion

▶ Sizable spillovers for some outcomes within villages where some received cash transfers

▶ Spillovers are zero on average

▶ Spillovers vary by how demographically similar non-treated villagers are to the treated

▶ For those very dissimilar, suggestive evidence of *heterogenous* spillovers