

Heterogenous Spillovers in Unconditional Cash Transfer

Abraham, Bechhofer, and Kim

December 5, 2018

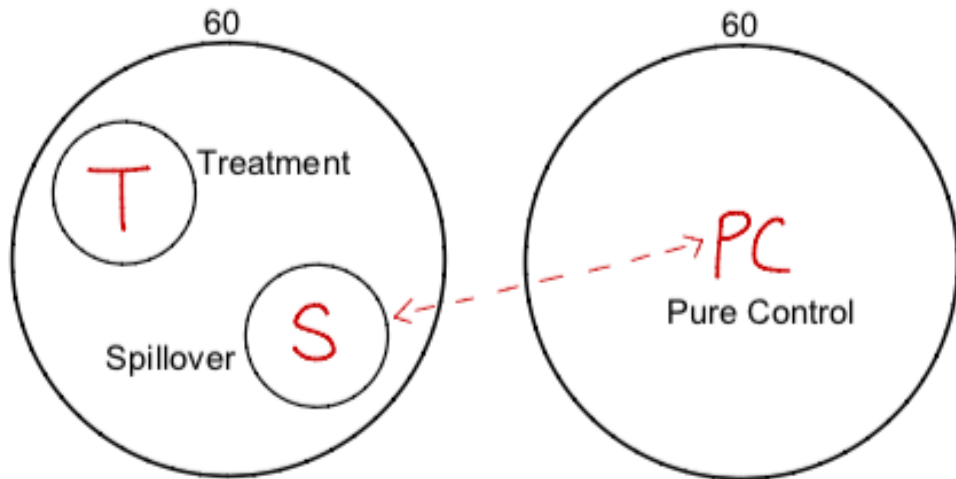
Motivation

- ▶ 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 transferred 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

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

- ▶ Squared deviations from village averages

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

Spillover Effects: Linear Estimates

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

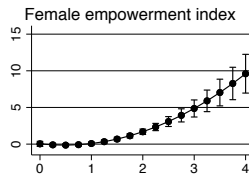
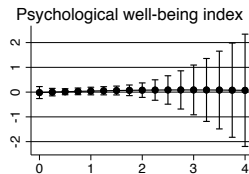
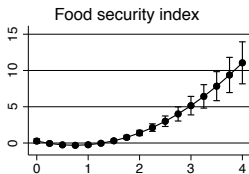
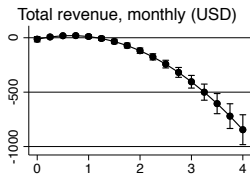
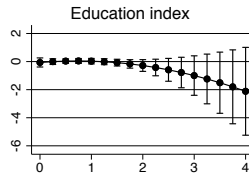
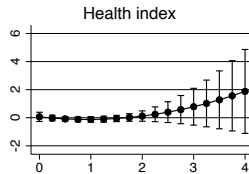
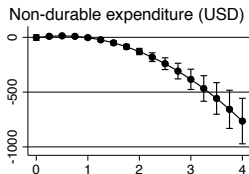
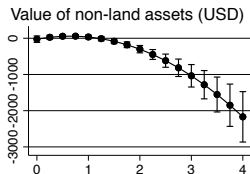
Female empowerment index 0.99*** -0.58***
(0.15) (0.12)

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)	-107.11*** (39.30)	95.96*** (32.64)	203.30*** (31.69)	384.05 (298.69)	899
Non-durable expenditure (USD)	-51.67*** (10.78)	34.27*** (9.75)	52.68*** (6.90)	165.38 (90.90)	899
Total revenue, monthly (USD)	-68.47*** (15.78)	48.88*** (9.42)	98.17*** (11.95)	52.66 (95.22)	899
Food security index	0.51*** (0.16)	-0.34*** (0.13)	-0.03** (0.14)	-0.06 (1.26)	899
Health index	0.04 (0.15)	-0.08 (0.12)	-0.01 (0.12)	0.06 (1.06)	899
Education index	0.29 (0.15)	-0.09 (0.11)	0.04 (0.12)	-0.01 (1.03)	724
Psychological well-being index	0.08 (0.10)	-0.01 (0.10)	0.01 (0.08)	-0.19 (0.94)	1321
Female empowerment index	0.99*** (0.15)	-0.58*** (0.12)	-0.92*** (0.11)	-0.21 (1.15)	621

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-habiting 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. *, **, and *** denote significance at 10 pct., 5 pct., and 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