

1 Introduction

2 Design

The main specification replicates Haushofer and Shapiro (2016) and is estimated between treatment households and households in treatment villages who did not receive the cash transfer. $T_{h,v}$ is an indicator for assignment to receive cash. $W_{h,v}$ is the pre-treatment level of the outcome variable $Y_{h,v}$. α_v are village fixed effects. $\varepsilon_{h,v}$ is the idiosyncratic error term. Standard errors are clustered at the household level.

$$Y_{h,v} = \alpha_v + \beta_0 T_{h,v} + \beta_1 W_{h,v} + \varepsilon_{h,v}$$

The current study examines heterogeneous treatment effects by interacting $T_{h,v}$ with a pre-treatment characteristic $X_{h,v}$. α_v are village fixed effects. $\eta_{h,v}$ is the idiosyncratic error term. Standard errors are clustered at the household level.

$$Y_{h,v} = \alpha_v + \gamma_0 T_{h,v} + \gamma_1 X_{h,v} + \gamma_2 (T_{h,v} \times X_{h,v}) + \eta_{h,v}$$

Dummy variables for marital status and having received secondary education were used the pre-treatment characteristic $X_{h,v}$. Result for each variable is reported in Table 2 and 3, respectively.

Table 1: Treatment effects

	Control mean (SD)	Treatment effect	Female recipient	Monthly transfer	Large transfer	Obs.
Value of non-land assets (USD)	494.80 (415.32)	301.51*** (27.25)	-79.46 (50.38)	-91.85** (45.92)	279.18*** (49.09)	940
Non-durable expenditure (USD)	157.61 (82.18)	35.66*** (5.85)	-2.00 (10.28)	-4.20 (10.71)	21.25** (10.49)	940
Total revenue, monthly (USD)	48.98 (90.52)	16.15*** (5.88)	5.41 (10.61)	16.33 (11.07)	-2.44 (8.87)	940
Food security index	0.00 (1.00)	0.26*** (0.06)	0.06 (0.09)	0.26** (0.11)	0.18* (0.10)	940
Health index	-0.00 (1.00)	-0.03 (0.06)	0.10 (0.09)	0.01 (0.10)	-0.09 (0.09)	940
Education index	0.00 (1.00)	0.08 (0.06)	0.06 (0.09)	-0.05 (0.10)	0.05 (0.09)	823
Psychological well-being index	-0.00 (1.00)	0.26*** (0.05)	0.14* (0.08)	0.01 (0.08)	0.26*** (0.08)	1474
Female empowerment index	-0.00 (1.00)	-0.01 (0.07)	0.17* (0.10)	0.05 (0.12)	0.22** (0.11)	698

Notes: OLS estimates of treatment effects. Outcome variables are listed on the left. Higher values correspond to “positive” outcomes. For each outcome variable, we report the coefficients of interest and their standard errors in parentheses. FWER-corrected p -values are shown in brackets. Column (1) reports the mean and standard deviation of the spillover group, column (2) the basic treatment effect, i.e. comparing treatment households to control households within villages. Column (3) reports the relative treatment effect of transferring to the female compared to the male; column (4) the relative effect of monthly compared to lump-sum transfers; and column (5) that of large compared to small transfers. 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. The comparison of monthly to lump-sum transfers excludes large transfer recipient households, and that for male vs. female recipients excludes single-headed households. All columns include village-level fixed effects, control for baseline outcomes, and cluster standard errors at the household level. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. level.

3 Results

3.1 Heterogenous treatment effects: Secondary education

Table 2: Heterogeneous treatment effects – Secondary education

	Control mean (SD)	Interaction	Treatment	Received secondary edu.	Obs.
Value of non-land assets (USD)	494.80 (415.32)	-28.64 (58.12)	319.74*** (44.59)	28.57 (37.24)	940
Non-durable expenditure (USD)	157.61 (82.18)	4.15 (12.60)	32.46*** (9.93)	14.36* (7.47)	940
Total revenue, monthly (USD)	48.98 (90.52)	-6.47 (11.82)	19.90** (8.30)	17.32** (7.03)	940
Food security index	0.00 (1.00)	-0.01 (0.15)	0.26** (0.12)	0.11 (0.10)	940
Health index	-0.00 (1.00)	0.32** (0.14)	-0.25** (0.12)	-0.00 (0.11)	940
Education index	0.00 (1.00)	-0.03 (0.13)	0.10 (0.10)	0.07 (0.09)	823
Psychological well-being index	-0.00 (1.00)	0.04 (0.12)	0.23** (0.10)	0.13 (0.08)	1474
Female empowerment index	-0.00 (1.00)	0.42** (0.17)	-0.31** (0.15)	-0.04 (0.12)	698

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 household level. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. level.

In this exercise, the household-level dummy variable $X_{h,v}$ is equal to one when the heads of the households have received secondary education. For the individual-level Psychological well-being index, $X_{h,v}$ is set to one when the respondents have received the secondary education.

Households with above secondary level educated husband or wife show significant improvements in both health index and female empowerment index, relative to those households without secondary education.

We find no significant heterogeneous effects on education level from the treatment households, except for health index and female empowerment index.

3.2 Heterogenous treatment effects: Marital status

Table 3: Heterogeneous treatment effects – Marital status

	Control mean (SD)	Interaction	Treatment	Married	Obs.
Value of non-land assets (USD)	494.80 (415.32)	-45.47 (63.51)	337.87*** (54.92)	68.23 (44.67)	940
Non-durable expenditure (USD)	157.61 (82.18)	12.53 (13.58)	25.89** (11.90)	22.87*** (8.24)	940
Total revenue, monthly (USD)	48.98 (90.52)	22.10 (14.04)	-1.19 (12.11)	0.66 (10.41)	940
Food security index	0.00 (1.00)	0.50*** (0.17)	-0.14 (0.15)	0.04 (0.12)	940
Health index	-0.00 (1.00)	0.24 (0.19)	-0.22 (0.18)	-0.03 (0.14)	940
Education index	0.00 (1.00)	0.11 (0.19)	-0.01 (0.17)	-0.07 (0.14)	823
Psychological well-being index	-0.00 (1.00)	0.48*** (0.15)	-0.15 (0.14)	-0.22** (0.11)	1474
Female empowerment index	-0.00 (1.00)	0.03 (0.33)	-0.03 (0.32)	0.15 (0.24)	698

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 household level. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. level.