



January 2014

Empowering young women with cash transfers:
findings from a pilot study

Executive Summary

This report presents the findings from an evaluation of a pilot project to examine the effects of providing young women with direct cash transfers. The project was designed to achieve two goals: (1) to determine the operational feasibility of making direct transfers to young women; and (2) to fill a gap in the otherwise extensive literature on cash transfers, which is focused on adults. Very few programs have targeted young women even though cash transfers could be transformative for this demographic given decisions they face regarding education, marriage, and fertility. Although the project was small-scale and not designed to generate statistically robust evidence, it provides a basis on which subsequent investments can build.

1. With respect to operational feasibility, we find that:

- (a) Targeting girls within a narrow demographic range, though challenging, is both feasible and scalable
- (b) Girls can access mobile payments easily and securely. They maintain an even higher degree of privacy around transactions than adult recipients; report an overall positive user experience; and experience very low rates of adverse events

2. The impact evaluation, which used the gold-standard randomized control trial methodology, produced important insights about girls' (a) investment decisions, (b) bargaining power, and (c) mental health.

- (a) Data from the evaluation suggest that UCTs to girls stimulate investment in human capital (education and sexual health) without sacrificing physical capital investments made by older peers (livestock, housing, household items). We find 0.5 year more educational attainment after 1 year, equivalent to 50% of treated girls re-enrolling for the year, and significantly lower rates of STIs.
- (b) There is some evidence of permanent enhancement in girls' standing, as they report being less likely to submit to requests made by older relatives and spouses. Other indicators of household bargaining are more mixed and require further investigation.
- (c) Both survey data and qualitative feedback suggest that cash transfers have a positive impact on mental health of recipients; mechanisms include reduced bullying and household tension.

These findings suggest that cash transfers are indeed a powerful tool for advancing the girl effect. Additional investments can capitalize on this work to build out the evidence base on cash transfers for young women. In particular, it will be crucial to validate these results at scale and to optimize the design of cash transfers for young women specifically.

I. Objectives/Context

Direct cash transfers are among the most proven approaches to poverty reduction, having substantially outperformed a number of more traditional approaches in recent empirical testing. Yet most of these programs and studies target adults. In contrast, we know relatively little about the impacts of cash transfers on the demographic group which arguably faces the most critical investment choices: young women. During their teenage years women make life-altering decisions about schooling, marriage and fertility. Timely cash transfers thus have the potential to provide girls access to investment opportunities (e.g., schooling, healthcare) that would otherwise be out of reach, as well as increasing their relative bargaining power within the household and in other relationships.

Starting in 2012, GiveDirectly initiated a project to understand the impacts of cash transfers on girls specifically. As a first step towards this goal, we designed a pilot project to transfer capital to girls in western Kenya and measure the impacts of these transfers. The pilot was designed at a small scale with the expectation that it would not produce statistically robust evidence, but would provide directional learnings to guide future investment and experimentation. The pilot was designed as a Randomized Controlled Trial (RCT), however, which is widely considered to be the “gold-standard” methodology for ensuring unbiased estimates of impact. Innovations for Poverty Action (IPA), a specialized research group based at Yale University, led the data collection and evaluation component of the project.

II. Project milestones

Over the course of the project cycle, which ran from May 2012 to January 2014, IPA and GiveDirectly successfully achieved the following milestones:

IPA:

- Identified and surveyed 160 girls, age 18-19 at baseline and 140 girls at endline ¹
- Randomly assigned girls living in 18 villages to control group, 9 villages to \$1,000 treatment group, and 9 villages \$500 treatment group

GiveDirectly:

- Enrolled 77 girls in the GiveDirectly program, including provision of a mobile phone, and successfully initiated transfers to 76 girls via M-Pesa ²
- Moved 96% of committed funds to girls by end of grant cycle
- Conducted 300+ follow-up surveys with girls who received cash
- Conducted in-depth qualitative interviews with 25% of sample

¹ 13% attrition in the sample due to migration out of district

² 3 girls from baseline study were eliminated after being discovered to be ineligible; 1 enrolled recipient failed to register and could not be contacted

III. Process outcomes

In the process of achieving the above milestones GD addressed several novel operational challenges:

- Identification of girls within a narrow demographic range: Young girls in the 18-19 age range represent an unusual demographic target group. GD teams used local village elders and community members to assist with the identification of “young women” in rural villages and then zeroed in on individuals within the desired age range³. The success of this strategy indicates that targeting this demographic is both feasible and scalable.
- Low percentage of girls with government identification documents for M-Pesa registration⁴: GD staff provided recipients with instructions on how to procure IDs and where possible, requested M-Pesa agents to accept an interim, government-issued “waiting card” for payment collection.

GiveDirectly closely monitors the user experience of all recipients as part of its standard process. Follow-up data for this cohort suggest that girls within the treatment group were able to access their payments securely and with ease. The table below presents key process metrics, alongside data from GiveDirectly’s standard UCT program, which provides \$1,000 cash grants to adult heads of household in rural Kenya. Overall, girls report a positive and largely similar user experience to that of the average adult recipient, underscoring their viability as a target group.

| Metrics | GD average (adult recipients) | Girls |
|--|-------------------------------|------------|
| Distance traveled to collect transfer (one-way) | 55 minutes | 49 minutes |
| Money spent collecting transfer (total) | \$2.90 | \$2.20 |
| % of respondents reported having trouble collecting transfer | 1.6% | 4.3% |
| % of respondents report community not aware when they collected payments | 83.7% | 97.6% |
| % of recipients who paid a bribe | 0.5% | 5.3% |

GiveDirectly received qualitative feedback from a number of girls that they went out of their way to visit agents at times and in locations where they would avoid community members. This is reflected in the higher % of girls reporting that their M-Pesa transactions are private. We see a slightly higher proportion of girls reporting bribe payments to local officials (average amount paid is ~\$5), as compared to adults. In all cases where bribes were reported, GD staff immediately phoned the relevant local administrative authorities (sub-district chiefs), who intervened to resolve the issue.

³ The age criterion was selected such that GD could enroll the youngest possible women who were still eligible to register with M-Pesa

⁴ 13% of girls had ID documents at the time of enrollment

IV. Key themes on impact

Here, we present key themes that emerge from a randomized evaluation of the cash transfer pilot to young women. We compare outcomes in treatment and control groups at endline, while controlling for baseline values. As a point of comparison, we also reference the randomized trial that was conducted from 2011 – 2013 to evaluate GiveDirectly’s cash transfer program for adult households in rural Kenya.

(1) The target group faces important choices and challenging life circumstances

Young girls in rural Kenya must contend with a number of high-stakes decisions. At baseline (average age 18.6), **53%** of survey respondents were already married and **44%** had at least 1 child, suggesting that girls in this age range are clearly negotiating the boundaries of marriage and childbearing.⁵

In terms of education, **24%** of girls were enrolled in school at baseline, the majority having discontinued their education due to lack of funds (59%) or pregnancy/marriage (23%). While the study does not provide data on the age at which respondents dropped out of school, according to the 2003 Kenya DHS the largest decrease in attendance occurs between 16 and 20, underscoring the critical age window that the study’s target group lies within.

Baseline measures also reveal that young women are exposed to significant economic insecurity and unfavorable power balances within the household. At baseline **100%** of girls lived in non-permanent home, as this was a poverty indicator that the study relied upon to target poor households. Most girls reported living in households where the main source of income is either small family farms or casual labor. **86%** of girls reported household members skipping or cutting meals in the last month and **79%** reported having no occupation. Less than half (**44%**) reported having any decision-making power (whether sole or joint with spouse) about their own schooling, and **69%** of girls said they would eventually submit to a request of an older member of their household even though they did not want to do it.

(2) Both girls and adult recipients make responsible investments in housing, food, and livestock, while girls additionally prioritize health and education

Data from a large number of cash transfer studies in diverse settings suggest that poor households make wise decisions when empowered to allocate their own resources. Findings from this RCT indicate that girls who receive cash transfers invest their money in diverse ways, some of which line up with adult spending and others which deviate. We hypothesize that the latter may be the result of circumstances and decision points that are particular to the demographic and represent unique investment opportunities.

⁵ 2003 Kenya DHS survey indicates median age for first marriage is 19.7 across Kenya

Asset ownership: Like adult recipients, young women who receive transfers are more likely to live in permanently built houses and to own a cow and other household items like mattresses and clothes. In their qualitative feedback many girls speak about the value that these investments create in their day-to-day lives:

- “I used to stay in a house which was leaking and it was a big problem being that I had a young child but now I...tap water from the roof so it has reduced the load of me going to fetch water from the river and I am not being rained on“
- “I used not to have anything like furniture but I have bought cupboard and have furniture. When visitors come to me I feel proud that my house is well furnished.”

Food security: Girls who receive cash, like adult recipients, are less prone to food insecurity and report eating 2 meals per day more often than the control group. When speaking with GiveDirectly staff one recipient said, “Before when the transfers had not come, I used to have a lot of stress due to lack of money, and I was very thin. But now I have put on weight.” Girls who receive transfers report increased household spending on meat, vegetables, and decreased spending on cereals.

| Metrics | Mean (T) | Mean (C) | Coeff. on T variable | P-value |
|---|----------|----------|----------------------|----------|
| Assets | | | | |
| Home has permanent roof (non-organic) | 31.9% | 11.3% | 0.21 | 0.02 ** |
| Household owns a cow | 34.8% | 18.3% | 0.16 | 0.12 |
| Food security | | | | |
| Regularly eats 2 meals per day | 75.4% | 53.5% | 0.22 | 0.06 * |
| Adults skipped or cut size of meals in last month | 72.5% | 69.0% | 0.03 | 0.75 |
| Number of times eat protein in last week | 1.5 | 1.5 | 0.03 | 0.95 |
| Consumption (amount spent on item in last week in KSH) | | | | |
| Vegetables | 143.3 | 129.4 | 9.93 | 0.76 |
| Cereals | 348.8 | 367.3 | -32.05 | 0.65 |
| Meat | 121.8 | 80.9 | 29.48 | 0.48 |
| Clothing | 396.4 | 173.5 | 223.88 | 0.01 *** |
| Kerosene | 186.2 | 189.9 | -3.80 | 0.92 |
| Firewood | 18.0 | 8.3 | 9.76 | 0.34 |

The RCT on adult recipients did not show significant impacts on health or education; we see divergent results when looking at outcomes for young women. These positive outcomes may reflect the critical window in which girls find themselves and their use of cash to negotiate important decisions points.

Education: We see an increase in highest level of education attained for girls who receive cash transfers and a higher % reporting that they are currently enrolled in school. In qualitative

interviews, recipients describe the effects of being able invest in their own education and that of their family members:

- “The money helped me to pay fees and I was not being sent home like before and am glad that am still going to school.”
- “My life is better than before because the money helped me to pay fees for my child and my sister; being the first born I was responsible for her education.”
- “I am now in a teacher's training college and I will fulfil my dream of becoming a teacher.”

Health outcomes: Girls who receive cash transfers tend to have better health outcomes, namely a significantly lower incidence of STIs, as well as general illness. Not surprisingly, they visit health facilities (for reasons of injury or illness) less frequently than girls in the control group but do report a larger number of antenatal visits on average. One girl told a GD staff member: “I was able to give birth in a hospital unlike the case of my first born child whom I gave birth to at home.” Finally, female under-5 mortality in households of girls who receive cash transfers is lower (though not the case for males). Improved nutrition may be a possible mechanism driving this difference, but the finding requires further investigation.

Reproductive behavior: Girls in the treatment group report using contraception on average less than the control group, but are also less likely to have been pregnant in the last 12 months. Common reasons cited for non-usage of contraception are lack of sexual activity, desire to become pregnant, recent birth, and simply not wanting to. Additional investigation into the reason for lack of uptake would help to elucidate whether cash transfers can have more of an impact on decision-making.

| Metrics | Mean (T) | Mean (C) | Coeff. on T variable | P-value |
|---|----------|----------|----------------------|----------|
| Education | | | | |
| Highest level attained (in grade levels) | 10.71 | 9.65 | 0.45 | 0.02 ** |
| Currently attending school | 28.99% | 19.72% | 0.02 | 0.69 |
| % of children in household (own or relative's) attending school | 56.6% | 49.7% | 0.02 | 0.82 |
| Health | | | | |
| Sick or injured in last 6 months | 76.8% | 83.1% | -0.07 | 0.35 |
| STI in last 6 months | 1.4% | 14.1% | -0.13 | 0.01 *** |
| Visited health facility due to sickness/injury in last 6 months | 69.6% | 83.1% | -0.08 | 0.29 |
| If pregnant in last 12 months, no. visits to health center in last 6 months | 3.6 | 3.3 | 0.19 | 0.79 |
| No. under 5 deaths in last year (male) | 0.2 | 0.2 | 0.03 | 0.87 |
| No. under 5 deaths in last year (female) | 0.0 | 0.2 | -0.18 | 0.02 ** |
| Reproductive behavior | | | | |
| Using contraception | 36.2% | 40.8% | -0.02 | 0.76 |
| Pregnant in last 12 months | 40.6% | 46.5% | -0.04 | 0.64 |
| Currently pregnant | 13.0% | 11.3% | 0.02 | 0.73 |

(3) We see some positive shifts in household bargaining power for girls, but require more data to fully understand intra-household dynamics

Qualitative interviews with cash transfer recipients reveal complex decision-making processes with other household actors that involve varying degrees of autonomy and submissiveness. We see indications of greater bargaining power in that girls who receive cash are less likely to submit to unwanted requests from relatives and have relatively more say in decisions on food expenditure. However, we also see less participation in decision-making on schooling and less independent travel in the treatment group. Given the particular importance of this outcome for the target demographic, we recommend further study of decision-making dynamics within households.

Another way for young women to increase their power and access to decision-making at home may be through increased income generation. Results indicate that girls in the treatment group are, on average, more likely to be working and for a larger portion of the year. Qualitative feedback from recipients underscores a feeling of greater empowerment and satisfaction on these dimensions; comments include:

- “I have also started my business because my husband is a drunkard and did not support my family and the business has enabled me to do that.”

- “The transfers helped me to enroll in a tailoring course and I have also bought my own tailoring machine.”

| Metrics | Mean (T) | Mean (C) | Coeff. on T variable | p-value |
|---|----------|----------|----------------------|---------|
| Household bargaining power | | | | |
| Partake in decision-making on own schooling | 36.2% | 40.8% | -0.04 | 0.69 |
| Partake in decision-making on food spending | 42.6% | 29.6% | 0.12 | 0.23 |
| Travel outside of village unaccompanied often | 8.7% | 18.3% | -0.10 | 0.12 |
| Submit to request made by spouse even if do not want to | 16.2% | 18.6% | -0.07 | 0.54 |
| Submit to request made by older relative even if do not want to | 13.2% | 30.0% | -0.15 | 0.03 ** |
| Income generation | | | | |
| Engaged in income generating activity (e.g. occupation) | 31.9% | 21.1% | 0.08 | 0.45 |
| No. months worked in last 12 months | 2.3 | 1.4 | 0.54 | 0.46 |

(4) Survey data, bolstered by qualitative findings, suggest a positive effect of cash transfers on the mental health of young women

Girls that receive cash show better mental health outcomes on 3 out of 4 metrics, including feeling more in control of their life and feeling like things are moving in a positive direction.

| Metrics | Mean (T) | Mean (C) | Coeff. on T variable | p-value |
|---|----------|----------|----------------------|---------|
| Mental health (1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often) | | | | |
| Unable to control important things in life | 3.4 | 3.5 | -0.18 | 0.29 |
| Confident about ability to handle personal problems | 3.5 | 3.5 | -0.07 | 0.77 |
| Feel things are going your way | 3.5 | 3.2 | 0.32 | 0.19 |
| Difficulties piling up so high cannot overcome them | 3.7 | 3.8 | -0.18 | 0.54 |

Qualitative interviews with recipients reveal that a significant number of girls have suffered from bullying and ridicule in the community, often due to their marginalized status. The ability to improve their homes, buy proper clothes, and make other purchases is cited as an important source of comfort and stress relief for these girls. Reduced household tension due to greater availability of resources is also a possible mechanism for improved mental health outcomes. Feedback from recipients includes:

- “Whenever there is a function in the community the community members come to me so that I can help them with my furniture and this makes me feel good.”
- “The money has taken me to another level so I feel that am like other people.”
- “The land that we were living in was small because ... [of] misunderstandings between the co wives. The money enabled my parents to buy our own land where ... we have peace.”

(5) Adverse events amongst recipients are extremely infrequent and in line with adult recipient data, though further qualitative investigation would help to explain cases of harm

Though 100% of girls who received transfers reported that the money improved their lives, one concern about giving cash directly to young women is that an influx of resources will create greater vulnerability to violence or exploitation. To address this concern, GiveDirectly collected detailed follow-up data on these metrics and found that reported rates of violence, crime, and household conflict associated with the transfers represented ~1% of cases, which is roughly equivalent to the average across adult recipients.

The RCT data show fewer reports of threats and lower frequency of arguments with friends and spouses in the treatment group, though slightly higher rates of forced sex and physical harm. The latter merits further qualitative investigation to unpack the nature and cause of these adverse events.

| Metrics | Mean (T) | Mean (C) | Coeff. on T variable | p-value |
|--|----------|----------|----------------------|---------|
| Violence/harm | | | | |
| Forced to have sex in last month | 2.9% | 1.4% | 0.01 | 0.55 |
| Physically harmed in last month | 7.2% | 5.6% | 0.03 | 0.54 |
| Received threats of harm in last month | 5.8% | 9.9% | -0.04 | 0.44 |
| No. times requested money in last month | | | | |
| Male relative | 0.1 | 0.1 | 0.02 | 0.71 |
| Female relative | 0.3 | 0.4 | -0.16 | 0.37 |
| Spouse | 0.3 | 0.6 | -0.46 | 0.16 |
| Friend | 0.2 | 0.3 | -0.10 | 0.43 |
| No. arguments in last month with... | | | | |
| Male relative | 0.2 | 0.0 | 0.39 | 0.14 |
| Female relative | 0.2 | 0.2 | 0.07 | 0.56 |
| Husband | 0.7 | 1.3 | -0.17 | 0.83 |
| Friend | 0.1 | 0.2 | -0.02 | 0.79 |

(6) We see differential impacts on certain dimensions for \$500 vs. \$1,000 recipients, but further investigation is required given the small sample sizes

This RCT investigates the question of how the size of a cash transfer affects recipient outcomes by randomly assigning half of the treatment group to receive \$500 and the other half \$1,000.

We see positive impacts in both groups on household assets, food security, health and education, with the following distinctions:

- Girls who receive \$1,000 are more likely to invest in housing and livestock than those who receive \$500; they are also more likely to report engaging in income generating activities
- Girls in the \$500 group show larger increases in education attainment and food security (eating 2 meals per day) than those in the \$1,000 group
- Both treatment groups show a similar reduction in STIs; however, girls in the \$1,000 group also shows a reduction in general illness/injury over the last 6 months when compared to control group
- Girls in the \$1,000 group report larger improvements in household bargaining (contribution to decision-making on food spending and schooling and resistance to unwanted requests from spouse)

Given the small sample size, more data is required to fully understand the differential impact of transfer size and the trade-offs that young women face when assessing different spending decisions

V. Implications and next steps

As the most thoroughly tested and empirically validated approach to reducing poverty and empowering the poor, cash transfers represent the most obvious approach to empowering young women to invest during their teenage years. The results from this pilot support this view. While the study was not designed to produce statistically robust evidence, its findings are directionally consistent with the view that:

- a) Young women face binding financial constraints that play a determinative role in shaping their lives.
- b) Targeting cash transfers to young women using new digital technologies is *feasible* and spurs them to make long-term investments in education and their bodies.
- c) While both girls and adults use cash transfers sensibly, girls invest money differently, including by investing more in their health and education. There is thus a plausible a priori case for transfers to girls specifically, as opposed to the general population, irrespective of the potential for other less tangible empowerment effects.

To capitalize on the insights from this small-scale pilot it will be crucial to validate them at larger scales, producing both statistically robust evidence of impact and also operationally convincing evidence of scalability. There is also enormous scope for further experimentation and learning to optimize the *design* of transfers to young women. For example, the current pilot does not even begin to address basic questions like whether it is more effective to send money to women over a longer or shorter period of time, or to give them the choice; whether it

is possible to reach girls through proxies with easier access to the formal financial sector; and whether the framing and messaging surrounding transfers affects their use and impact. We see these as high-priority questions to address going forward.

APPENDIX A: Analysis of outcome variables for treatment vs. control comparison

| Metrics | Mean (T) | Mean (C) | Coeff. on treatment variable | P-value |
|---|----------|----------|------------------------------|----------|
| Assets | | | | |
| Home has permanent roof (non-organic) | 31.9% | 11.3% | 0.21 | 0.02 ** |
| Home has permanent wall (non-organic) | 8.7% | 5.6% | 0.03 | 0.60 |
| Home has permanent floor (non-organic) | 10.1% | 1.4% | 0.09 | 0.08 * |
| Number of room attachments | 1.9 | 1.9 | 0.07 | 0.57 |
| Household owns a cow | 34.8% | 18.3% | 0.16 | 0.12 |
| Number of beds/mattresses | 1.1 | 1.1 | 0.10 | 0.42 |
| Number of stoves | 0.2 | 0.1 | 0.09 | 0.07 * |
| Number of clocks/watches | 0.2 | 0.2 | 0.02 | 0.79 |
| Number of bicycles | 0.5 | 0.4 | 0.15 | 0.19 |
| Food security | | | | |
| Regularly eats 2 meals per day | 75.4% | 53.5% | 0.22 | 0.06 * |
| Adults skipped or cut size of meals in last month | 72.5% | 69.0% | 0.03 | 0.75 |
| Number of times eat protein in last week | 1.5 | 1.5 | 0.03 | 0.95 |
| Consumption (amount spent on item in last week in KSH) | | | | |
| Vegetables | 143.3 | 129.4 | 9.93 | 0.76 |
| Cereals | 348.8 | 367.3 | -32.05 | 0.65 |
| Meat | 121.8 | 80.9 | 29.48 | 0.48 |
| Clothing | 396.4 | 173.5 | 223.88 | 0.01 *** |
| Kerosene | 186.2 | 189.9 | -3.80 | 0.92 |
| Firewood | 18.0 | 8.3 | 9.76 | 0.34 |
| Education | | | | |
| Highest level attained (in grade levels) | 10.71 | 9.65 | 0.45 | 0.02 ** |
| Currently attending school | 28.99% | 19.72% | 0.02 | 0.69 |
| % discontinued due to lack of fees | 47.8% | 39.4% | 0.15 | 0.21 |
| Number of years of additional schooling desired | 3.4 | 3.3 | 0.20 | 0.77 |
| % envision themselves in school/university in 6 months | 20.3% | 18.6% | -0.04 | 0.57 |
| % envision themselves in school/university in 1 year | 33.3% | 21.4% | 0.04 | 0.57 |
| % envision themselves in school/university in 3 years | 23.9% | 18.2% | 0.02 | 0.65 |
| % of children in household (own or relative's) attending school | 56.6% | 49.7% | 0.02 | 0.82 |

| Metrics | Mean (T) | Mean (C) | Coeff. on treatment variable | P-value |
|---|----------|----------|------------------------------|----------|
| Health | | | | |
| Sick or injured in last 6 months | 76.8% | 83.1% | -0.07 | 0.35 |
| STI in last 6 months | 1.4% | 14.1% | -0.13 | 0.01 *** |
| Visited health facility due to sickness/injury in last 6 months | 69.6% | 83.1% | -0.08 | 0.29 |
| If pregnant in last 12 mnths visits to health center in last 6 mnths | 3.6 | 3.3 | 0.19 | 0.79 |
| No. under 5 deaths in last yr (M) | 0.2 | 0.2 | 0.03 | 0.87 |
| No. under 5 deaths in last yr (F) | 0.0 | 0.2 | -0.18 | 0.02 ** |
| Reproductive behavior | | | | |
| Using contraception | 36.2% | 40.8% | -0.02 | 0.76 |
| Pregnant in last 12 months | 40.6% | 46.5% | -0.04 | 0.64 |
| Circumcised | 1.4% | 0.0% | 0.01 | 0.33 |
| Currently pregnant | 13.0% | 11.3% | 0.02 | 0.73 |
| % envision getting married or having children in 6 months | 5.8% | 2.9% | 0.03 | 0.50 |
| % envision getting married or having children in 1 year | 0.0% | 1.4% | 0.01 | 0.30 |
| % envision getting married or having children in 3 years | 0.0% | 1.5% | -0.02 | 0.31 |
| Household bargaining power | | | | |
| Partake in decision-making on own schooling | 36.2% | 40.8% | -0.04 | 0.69 |
| Partake in decision-making on food spending | 42.6% | 29.6% | 0.12 | 0.23 |
| Partake in decision-making on children's schooling | 29.4% | 30.0% | -0.03 | 0.69 |
| Travel outside of village unaccompanied often | 8.7% | 18.3% | -0.10 | 0.12 |
| Submit to request made by spouse even if do not want to | 16.2% | 18.6% | -0.07 | 0.54 |
| Submit to request made by older relative even if do not want to | 13.2% | 30.0% | -0.15 | 0.03 ** |
| Decide to keep 200 KSH for herself if given (vs. sharing or giving to someone else) | 65.2% | 47.9% | 0.17 | 0.16 |
| Contribution to household income generation | | | | |
| Engaged in income generating activity (e.g. occupation) | 31.9% | 21.1% | 0.08 | 0.45 |
| No. months worked in last 12 months | 2.3 | 1.4 | 0.54 | 0.46 |
| Contributing half or more of household income | 20.6% | 7.1% | 0.13 | 0.13 |
| Hours worked per day | 6.6 | 6.4 | -1.8 | 0.35 |
| Wages received per day | 440.5 | 300.7 | 64.96 | 0.71 |

| Metrics | Mean (T) | Mean (C) | Coeff. on treatment variable | P-value |
|--|----------|----------|------------------------------|----------|
| Mental health (1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often) | | | | |
| Unable to control important things in life | 3.4 | 3.5 | -0.18 | 0.29 |
| Confident about ability to handle personal problems | 3.5 | 3.5 | -0.07 | 0.77 |
| Feel things are going your way | 3.5 | 3.2 | 0.32 | 0.19 |
| Difficulties piling up so high cannot overcome them | 3.7 | 3.8 | -0.18 | 0.54 |
| Violence/threat | | | | |
| Forced to have sex in last month | 2.9% | 1.4% | 0.01 | 0.55 |
| Physically harmed in last month | 7.2% | 5.6% | 0.03 | 0.54 |
| Received threats of harm in last month | 5.8% | 9.9% | -0.04 | 0.44 |
| No. times requested money in last month | | | | |
| Male relative | 0.1 | 0.1 | 0.02 | 0.71 |
| Female relative | 0.3 | 0.4 | -0.16 | 0.37 |
| Spouse | 0.3 | 0.6 | -0.46 | 0.16 |
| Friend | 0.2 | 0.3 | -0.10 | 0.43 |
| No. arguments in last month with... | | | | |
| Male relative | 0.2 | 0.0 | 0.39 | 0.14 |
| Female relative | 0.2 | 0.2 | 0.07 | 0.56 |
| Husband | 0.7 | 1.3 | -0.17 | 0.83 |
| Friend | 0.1 | 0.2 | -0.02 | 0.79 |
| Preference on cash transfers | | | | |
| Prefer 10,000 KSH in lump-sum | 55.1% | 63.4% | -0.09 | 0.32 |
| Financial inclusion | | | | |
| Has a savings account | 5.8% | 1.4% | 0.04 | 0.25 |
| Knows how to open savings account | 30.8% | 20.0% | 0.11 | 0.26 |
| Has M-Pesa account | 95.7% | 35.2% | 0.63 | 0.00 *** |

APPENDIX B: Analysis of outcome variables for \$500 treatment vs. control comparison

| Metrics | Mean (T) | Mean (C) | Coeff. on treatment variable | P-value |
|---|----------|----------|------------------------------|----------|
| Assets | | | | |
| Home has permanent roof (non-organic) | 28.9% | 11.3% | 0.18 | 0.08 * |
| Home has permanent wall (non-organic) | 5.3% | 5.6% | -0.00 | 0.94 |
| Home has permanent floor (non-organic) | 10.5% | 1.4% | 0.09 | 0.19 |
| Number of room attachments | 1.9 | 1.9 | 0.06 | 0.72 |
| Household owns a cow | 23.7% | 18.3% | 0.05 | 0.61 |
| Number of beds/mattresses | 1.2 | 1.1 | 0.11 | 0.59 |
| Number of stoves | 0.1 | 0.1 | 0.04 | 0.41 |
| Number of clocks/watches | 0.3 | 0.2 | 0.02 | 0.77 |
| Number of bicycles | 0.6 | 0.4 | 0.17 | 0.27 |
| Food security | | | | |
| Regularly eats 2 meals per day | 86.8% | 53.5% | 0.35 | 0.00 *** |
| Adults skipped or cut size of meals in last month | 81.6 | 69.0% | 0.15 | 0.17 |
| Number of times eat protein in last week | 1.2 | 1.5 | -0.03 | 0.58 |
| Consumption (amount spent on item in last week in KSH) | | | | |
| Vegetables | 116.1 | 129.4 | -25.48 | 0.43 |
| Cereals | 336.3 | 367.3 | -38.11 | 0.67 |
| Meat | 98.9 | 80.9 | 19.92 | 0.70 |
| Clothing | 385.5 | 173.5 | 228.87 | 0.04 ** |
| Kerosene | 199.2 | 189.9 | 4.30 | 0.94 |
| Firewood | 14.7 | 8.3 | 6.56 | 0.58 |
| Education | | | | |
| Highest level attained (in grade levels) | 10.9 | 9.6 | 0.50 | 0.03 ** |
| Currently attending school | 34.2% | 19.7% | 0.04 | 0.45 |
| % discontinued due to lack of fees | 42.1% | 39.4% | 0.11 | 0.46 |
| Number of years of additional schooling desired | 3.9 | 3.3 | 0.59 | 0.46 |
| % envision themselves in school/university in 6 months | 26.3% | 18.6% | -0.03 | 0.80 |
| % envision themselves in school/university in 1 year | 42.1% | 21.4% | 0.10 | 0.31 |
| % envision themselves in school/university in 3 years | 27.8% | 18.2% | 0.05 | 0.42 |
| % of children in household (own or relative's) attending school | 62.2% | 49.7% | 0.05 | 0.67 |

| Metrics | Mean (T) | Mean (C) | Coeff. on treatment variable | P-value |
|---|----------|----------|------------------------------|---------|
| Health | | | | |
| Sick or injured in last 6 months | 84.2% | 83.1% | 0.01 | 0.92 |
| STI in last 6 months | 2.6% | 14.1% | -0.11 | 0.04 ** |
| Visited health facility due to sickness/injury in last 6 months | 76.3% | 83.1% | -0.00 | 0.99 |
| If pregnant in last 12 mnths visits to health center in last 6 mnths | 4.0 | 3.3 | 1.00 | 0.23 |
| No. under 5 deaths in last yr (M) | 0.1 | 0.2 | -0.14 | -0.14 |
| No. under 5 deaths in last yr (F) | 0.1 | 0.2 | -0.17 | 0.04 ** |
| Reproductive behavior | | | | |
| Using contraception | 34.2% | 40.8% | -0.05 | 0.58 |
| Pregnant in last 12 months | 39.5% | 46.5% | -0.02 | 0.86 |
| Circumcised | 2.6% | 0.0% | 0.03 | 0.34 |
| Currently pregnant | 10.5% | 11.3% | -0.01 | 0.77 |
| % envision getting married or having children in 6 months | 5.3% | 2.9% | 0.03 | 0.63 |
| % envision getting married or having children in 1 year | 0.0% | 1.4% | -0.01 | 0.31 |
| % envision getting married or having children in 3 years | 0.0% | 1.5% | -0.02 | 0.32 |
| Household bargaining power | | | | |
| Partake in decision-making on own schooling | 28.9% | 40.8% | -0.06 | 0.49 |
| Partake in decision-making on food spending | 37.8% | 29.6% | 0.08 | 0.54 |
| Partake in decision-making on children's schooling | 27.0% | 30.0% | -0.02 | 0.87 |
| Travel outside of village unaccompanied often | 13.2% | 18.3% | -0.05 | 0.50 |
| Submit to request made by spouse even if do not want to | 18.9% | 18.6% | -0.07 | 0.61 |
| Submit to request made by older relative even if do not want to | 18.9% | 30.0% | -0.09 | 0.20 |
| Decide to keep 200 KSH for herself if given (vs. sharing or giving to someone else) | 71.1% | 47.9% | 0.23 | 0.11 |
| Contribution to household income generation | | | | |
| Engaged in income generating activity (e.g. occupation) | 21.1% | 21.1% | -0.01 | 0.93 |
| No. months worked in last 12 months | 1.5 | 1.4 | -0.05 | 0.95 |
| Contributing half or more of hh income | 15.8% | 7.1% | 0.09 | 0.42 |
| Hours worked per day | 4.2 | 6.4 | -4.18 | 0.08 * |
| Wages received per day | 737.5 | 300.7 | 67.2 | 0.80 |

| Metrics | Mean (T) | Mean (C) | Coeff. on treatment variable | P-value |
|--|----------|----------|------------------------------|----------|
| Mental health (1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often) | | | | |
| Unable to control important things in life | 3.3 | 3.5 | -0.19 | 0.24 |
| Confident about ability to handle personal problems | 3.3 | 3.5 | -0.21 | 0.43 |
| Feel things are going your way | 3.4 | 3.2 | 0.21 | 0.37 |
| Difficulties piling up so high cannot overcome them | 3.4 | 3.8 | -0.40 | 0.21 |
| Violence/threat | | | | |
| Forced to have sex in last month | 2.6% | 1.4% | 0.01 | 0.69 |
| Physically harmed in last month | 7.9% | 5.6% | 0.03 | 0.64 |
| Received threats of harm in last month | 7.9% | 9.9% | -0.03 | 0.71 |
| No. times requested money in last month | | | | |
| Male relative | 0.2 | 0.1 | 0.04 | 0.51 |
| Female relative | 0.3 | 0.4 | 0.02 | 0.92 |
| Husband | 0.2 | 0.6 | -0.63 | 0.06 * |
| Friend | 0.4 | 0.3 | 0.04 | 0.83 |
| No. arguments in last month with... | | | | |
| Male relative | 0.2 | 0.0 | 0.34 | 0.30 |
| Female relative | 0.1 | 0.2 | 0.15 | 0.44 |
| Husband | 0.5 | 1.2 | -0.41 | 0.63 |
| Friend | 0.2 | 0.2 | 0.07 | 0.60 |
| Questions on cash | | | | |
| Prefer 10,000 KSH in lump-sum | 57.9% | 63.3% | -0.07 | 0.57 |
| Financial inclusion | | | | |
| Has a savings account | 0.0% | 1.4% | -0.01 | 0.33 |
| Knows how to open savings account | 28.9% | 20.0% | 0.11 | 0.23 |
| Has M-Pesa account | 97.4% | 35.2% | 0.64 | 0.00 *** |

APPENDIX C: Analysis of outcome variables for \$1,000 treatment vs. control comparison

| Metrics | Mean (T) | Mean (C) | Coeff. on treatment variable | P-value |
|---|----------|----------|------------------------------|---------|
| Assets | | | | |
| Home has permanent roof (non-organic) | 35.5% | 11.3% | 0.24 | 0.09 * |
| Home has permanent wall (non-organic) | 12.9% | 5.6% | 0.07 | 0.43 |
| Home has permanent floor (non-organic) | 9.7% | 1.4% | 0.08 | 0.22 |
| Number of room attachments | 2.0 | 1.9 | 0.09 | 0.63 |
| Household owns a cow | 48.4% | 18.3% | 0.30 | 0.06 * |
| Number of beds/mattresses | 1.2 | 1.1 | 0.09 | 0.40 |
| Number of stoves | 0.2 | 0.1 | 0.15 | 0.07 * |
| Number of clocks/watches | 0.2 | 0.2 | -0.00 | 0.98 |
| Number of bicycles | 0.5 | 0.4 | 0.12 | 0.38 |
| Food security | | | | |
| Regularly eats 2 meals per day | 61.3% | 53.5% | 0.06 | 0.67 |
| Adults skipped or cut size of meals in last month | 61.3% | 69.0% | -0.10 | 0.41 |
| Number of times eat protein in last week | 1.9 | 1.5 | 0.52 | 0.43 |
| Consumption (amount spent on item in last week in KSH) | | | | |
| Vegetables | 176.8 | 129.4 | 51.75 | 0.21 |
| Cereals | 364.2 | 367.3 | -34.26 | 0.65 |
| Meat | 149.8 | 80.9 | 53.95 | 0.42 |
| Clothing | 409.7 | 173.5 | 230.68 | 0.08 * |
| Kerosene | 170.3 | 189.9 | -15.49 | 0.55 |
| Firewood | 21.9 | 8.3 | 11.70 | 0.45 |
| Education | | | | |
| Highest level attained (in grade levels) | 10.5 | 9.6 | 0.34 | 0.08 * |
| Currently attending school | 22.6% | 19.7% | -0.01 | 0.86 |
| % discontinued due to lack of fees | 54.8% | 39.4% | 0.20 | 0.12 |
| Number of years of additional schooling desired | 2.8 | 3.3 | -0.27 | 0.71 |
| % envision themselves in school/university in 6 months | 12.9% | 18.6% | -0.06 | 0.49 |
| % envision themselves in school/university in 1 year | 22.6% | 21.4% | -0.02 | 0.73 |
| % envision themselves in school/university in 3 years | 19.4% | 18.2% | -0.01 | 0.91 |
| % of children in household (own or relative's) attending school | 49.3% | 49.7% | -0.01 | 0.84 |

| Metrics | Mean (T) | Mean (C) | Coeff. on treatment variable | P-value |
|---|----------|----------|------------------------------|-----------|
| Health | | | | |
| Sick or injured in last 6 months | 67.7% | 83.1% | -0.18 | 0.10 * |
| STI in last 6 months | 0.0% | 14.1% | -0.14 | 0.00 *** |
| Visited health facility due to sickness/injury in last 6 months | 61.3% | 83.1% | -0.17 | 0.13 |
| If pregnant in last 12 mnths visits to health center in last 6 mnths | 3.2 | 3.3 | -0.69 | 0.36 |
| No. under 5 deaths in last yr (M) | 0.4 | 0.2 | 0.22 | 0.43 |
| No. under 5 deaths in last yr (F) | 0.0 | 0.2 | -0.18 | 0.01 *** |
| Reproductive behavior | | | | |
| Using contraception | 38.7% | 40.8% | -0.00 | 0.99 |
| Pregnant in last 12 months | 41.9% | 46.5% | -0.05 | 0.54 |
| Circumcised | 0.0% | 0.0% | | |
| Currently pregnant | 16.1% | 11.3% | 0.04 | 0.60 |
| % envision getting married or having children in 6 months | 6.5% | 2.9% | 0.04 | 0.61 |
| % envision getting married or having children in 1 year | 0.0% | 1.4% | -0.01 | 0.31 |
| % envision getting married or having children in 3 years | 0.0% | 1.5% | -0.02 | 0.32 |
| Household bargaining power | | | | |
| Partake in decision-making on own schooling | 45.2% | 40.8% | 0.01 | 0.94 |
| Partake in decision-making on food spending | 48.4% | 29.6% | 0.17 | 0.14 |
| Partake in decision-making on children's schooling | 32.3% | 30.0% | -0.06 | 0.60 |
| Travel outside of village unaccompanied often | 3.2% | 18.3% | -0.15 | 0.02 ** |
| Submit to request made by spouse even if do not want to | 6.5% | 30.0% | -0.22 | -0.00 *** |
| Submit to request made by older relative even if do not want to | 12.9% | 18.6% | -0.08 | 0.55 |
| Decide to keep 200 KSH for herself if given (vs. sharing or giving to someone else) | 58.1% | 47.9% | 0.11 | 0.39 |
| Contribution to household income generation | | | | |
| Engaged in income generating activity (e.g. occupation) | 45.2% | 21.1% | 0.21 | 0.28 |
| No. months worked in last 12 months | 3.2 | 1.4 | 1.43 | 0.23 |
| Contributing half or more of hh income | 26.7% | 7.1% | 0.17 | 0.12 |
| Hours worked per day | 8.2 | 6.4 | -0.56 | 0.79 |
| Wages received per day | 257.7 | 300.7 | 20.76 | 0.91 |

| Metrics | Mean (T) | Mean (C) | Coeff. on treatment variable | P-value |
|--|----------|----------|------------------------------|----------|
| Mental health (1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often) | | | | |
| Unable to control important things in life | 3.5 | 3.5 | -0.12 | 0.64 |
| Confident about ability to handle personal problems | 3.6 | 3.5 | 0.10 | 0.77 |
| Feel things are going your way | 3.6 | 3.2 | 0.45 | 0.22 |
| Difficulties piling up so high cannot overcome them | 3.9 | 3.8 | 0.10 | 0.76 |
| Violence/threat | | | | |
| Forced to have sex in last month | 3.2% | 1.4% | 0.02 | 0.59 |
| Physically harmed in last month | 6.5% | 5.6% | 0.02 | 0.69 |
| Received threats of harm in last month | 3.2% | 9.9% | -0.06 | 0.22 |
| No. times requested money in last month | | | | |
| Male relative | 0.0 | 0.1 | 0.01 | 0.91 |
| Female relative | 0.2 | 0.4 | -0.31 | 0.04 ** |
| Husband | 0.5 | 0.6 | -0.41 | 0.33 |
| Friend | 0.1 | 0.3 | -0.28 | 0.01 *** |
| No. arguments in last month with... | | | | |
| Male relative | 0.2 | 0.0 | 0.46 | 0.26 |
| Female relative | 0.2 | 0.2 | -0.00 | 0.99 |
| Husband | 1.0 | 1.3 | 0.10 | 0.92 |
| Friend | 0.0 | 0.2 | -0.15 | 0.04 ** |
| Questions on cash | | | | |
| Prefer 10,000 KSH in lump-sum | 51.6% | 63.4% | -0.13 | 0.24 |
| Financial inclusion | | | | |
| Has a savings account | 12.9% | 1.4% | 0.11 | 0.11 |
| Knows how to open savings account | 33.3% | 20.0% | 0.12 | 0.49 |
| Has M-Pesa account | 93.5% | 35.2% | 0.64 | 0.00 *** |