REPUBLIC OF ZAMBIA

MINISTRY OF COMMUNITY DEVELOPMENT, MOTHER AND CHILD HEALTH

SOCIAL CASH TRANSFER PROGRAMME

IMPACT EVALUATION
(Randomized Control Trial)

36-Month Report for the Child Grant

DECEMBER 2014

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SOCIAL CASH TRANSFER

Contents

Contributors

The evaluation of the Child Grant Program is being conducted by American Institutes for Research (AIR) for the government of the Republic of Zambia, under contract to UNICEF and funded by UK aid from the UK government, Irish Aid, and the Government of Finland. The Principal Investigators for the overall evaluation are David Seidenfeld (AIR) and Sudhanshu Handa (University of North Carolina at Chapel Hill). The Zambia-based Principal Investigator is Gelson Tembo of Palm Associates and the University of Zambia. The overall team leaders of this report are David Seidenfeld (AIR) and Sudhanshu Handa (UNC), but many others made important contributions and are listed below by institutional affiliation and alphabetical order within institution:

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David Seidenfeld, Ph.D.

Acronyms

AIR	American Institutes for Research
ARI	Acute Respiratory Illness
CGP	Child Grant Social Cash Transfer Program
CWAC	Community Welfare Assistance Committee
DD	Differences-in-differences
FAO	Food and Agricultural Organization of the United Nations
LCMS	Living Conditions Monitoring Survey
MCDMCH	Ministry of Community Development, Mother and Child Health (MCDMCH)
MICS	Multiple Indicators Cluster Surveys
RCT	Randomized Controlled Trial
UNICEF	United Nations Children's Fund
ZDHS	Zambia Demographic and Health Survey
ZMW	Zambian Kwacha

Executive Summary

Background

This report provides the 36-month follow-up results for the Child Grant cash transfer program impact evaluation. In 2010, the government of the Republic of Zambia through the Ministry of Community Development, Mother and Child Health (MCDMCH) began implementing the Child Grant cash transfer program (CGP) in three districts: Kaputa, Kalabo, and Shangombo. American Institutes for Research (AIR) was contracted by UNICEF Zambia in 2010 to design and implement a randomized controlled trial (RCT) for a 3-year impact evaluation of the program and to conduct the necessary data collection, analysis, and reporting.[1] This report presents findings from the 36-month follow-up study, updating results from the 24-month impact report, including impacts on expenditures, poverty, food security, living conditions, children, and productivity.

Study Design

We implemented a randomized controlled trial (RCT) to estimate program impacts after 36 months. This study includes 2,469 households in 90 Community Welfare Assistance Committees (CWACs) that have been randomly assigned to treatment or control conditions. As shown in the baseline report, randomization created equivalent groups. We lost 2 percent of households to attrition after 36 months into the study; however, we maintained equivalent groups and find no differential attrition between treatment and control groups. By maintaining the integrity of the RCT design, we can attribute observed differences between treatment and control groups directly to the CGP with confidence.

The 36-month follow-up data collection occurred in September and October 2013, the early stage of Zambia's lean season, when people start to run out of food from their previous harvest. The timing of this round of data collection fell exactly 36 months after the baseline study. Zambia has three seasons: a rainy season from December through March, a cold dry season from April through August, and a hot dry season from September through November. Crops are planted in the rainy season and harvested from end of February into May. Food is least scarce toward the beginning of the cold dry season when crops are harvested. At baseline (2010), we hypothesized about where we expected to find program effects based on the logic model and ex-ante simulations to predict impacts using the baseline data. We compared these predictions from baseline with observed impacts 24 months later (American Institutes for Research, 2013. *Zambia's Child Grant Program: 24-month Impact Report.* Washington, DC: Author.). In this report we focus on differences between the 24- and 36-month impacts to see whether earlier observed findings persisted and whether new impacts emerge.

Operational Performance

Overall, we find that the Ministry has successfully implemented the cash transfer program. Beneficiaries report receiving the correct amount of money according to schedule, accessing the money without any cost and with relative ease, and not experiencing unethical solicitations. Nearly all recipients (97 percent) at the 36-month survey walk to access payments, and less than 1 percent of recipients report

[1] Palm Associates was contracted by AIR to assist with the baseline data collection.

that they have paid any money for travel. Almost all beneficiary households (98 percent) report that recipients usually pick up the payments themselves rather than relying on family members or friends. Eighty-eight percent of recipients are informed of payment delivery by either a CWAC member or a payment point staff member, a 9 percent increase from the 24-month survey. This increase indicates that formal and transparent notification mechanisms have improved, and recipients more strongly rely on CWAC and pay point staff for payment information.

Consumption Expenditures, Food Security, and Poverty

We find that the CGP continues to have an impact on consumption (ZMK 10 per capita per month) and that these impacts are similar to those after 24 months. For clothing consumption, there is a slightly smaller impact at 36 months than at 24 months, which is explained by the control group spending more than in previous periods while beneficiaries still consume the same amount as previously. Similarly, we find that the program still reduces poverty (headcount reduced by 4 percentage points, poverty gap and squared-poverty gap reduced by 8 percentage points), but at levels similar to those in the 24-month period. We investigate differences in impacts by household size and find that the program has similar effects regardless of household size. We would not expect the program impacts on consumption and poverty to change much between the 24- and 36-month periods because these indicators are dependent on the availability of money to spend, and the amount of money transferred to beneficiaries between 24 and 36 months did not change. We might see changes to these indicators if there was a large multiplier effect of the transfer within households, but we did not observe this phenomenon at 36 months; thus, beneficiary households' ability to consume did not change much. We also see large increases in the control group's status for most poverty and food security indicators over the 36 month period indicating that life in rural Zambia is improving for these very poor households. It also demonstrates that the program is powerful enough to have large impacts above and beyond the general improvement to control households during this time period.

One of the goals of the CGP is to improve the food security of beneficiary households and specifically increase the percentage of households eating two or more meals per day. The program has large impacts on consumption, with most of the expenditures going towards increased food consumption. We find that these additional expenditures on food translate to greater food security, a finding consistent with the results at 24 months. The CGP increases the percentage of households eating two or more meals per day by 6 percentage points, with almost everyone eating two or more meals per day (99 percent). Although the difference between the treatment and control groups is only 6 percentage points, a possible ceiling effect limits the measurement of the program's impact on this indicator because the indicator has effectively reached its limit.

Young Child Outcomes

The CGP continues to have a large and positive impact on infant and young child feeding for children 0–23 months old, with a program impact of 18 percentage points. However, this improved feeding has not yet been translated into significant increases in anthropometric scores, though there appears to be a suggestion of catch-up growth. That is, there is a somewhat stronger treatment effect among those

children who were stunted at baseline, though this impact is just outside conventional significance levels. There are also no significant impacts on young child morbidity or on the use of curative or preventive care services. In the case of preventive care, there is a treatment effect (5 points) among those children living within 3 kms of a health facility. We interpret these results in the face of improved overall economic security as an indication of the limits of a demand-side intervention in the context of extremely weak infrastructure and supply of services. Only 30 percent of study communities live within 3 kms of a health facility, and most facilities do not have basic drugs necessary for addressing childhood diarrhea.

Older Child Outcomes

The impact of the CGP on schooling is concentrated on young children who are entering school for the first time—among children 4–7 years of age the program increases school enrollment by 10 percentage points. That is, CGP recipients who were 1-4 years of age at baseline show impacts on enrolment, however, for older children there are no significant program impacts. As with access to health infrastructure, school supply is also a major concern in program districts. Only 13 percent of communities have a primary school and fewer have a secondary school.

Credit

Overall, borrowing has declined. Because borrowing is typically driven by emergency consumption needs, it is consistent with the theory that CGP households are in a more secure financial position, able to both pay down previous debt and curtail additional borrowing for consumption. We see a rather large and significant impact (7.3 percentage points) on the likelihood of not having an outstanding longer term loan (more than 6 months ago). Note that this impact is much larger among large households with 6 or more members (8.4 points) than small households with 5 or fewer members (4.7 points). There is no impact on the amount outstanding overall; however, there is an impact for large households that on average owe 45 ZMW less than control households. These results seem to be consistent with the idea that part of the transfer is being used to pay down old loans taken out by CGP households and thus strengthening the overall financial position of households.

Asset Ownership

The CGP continues to have a positive impact on the ownership of a wide variety of household assets at both the 24-month and the 36-month waves. In both waves, the results indicate that households receiving the transfer are more likely to own a bed, a mattress, a sofa, a radio, and a solar panel. For some of these assets, program impacts are twice as large as baseline values. For example, the proportion of beneficiary households that own a bed and a mattress at 36 months is about 48 percent, whereas it was only 20 percent at baseline. There is no difference between the 24- and 36-month results. This means that beneficiary households acquiring these assets did so before the 24-month wave with no additional purchases afterward. In general, this behavior is consistent with most of these assets being durable goods for general use within the household. We continue to see a positive impact on ownership of agricultural tools, but with no difference in impacts between 24 and 36 months.

The CGP at the 36-month survey has a positive impact on the ownership of a wide variety of livestock, both in the share of households with livestock and in the total number of animals; however, these impacts are similar to those observed at the 24-month survey. The only difference to note is that there is an 18 percentage point impact to the number of households that own chickens, which is 6 percentage points higher than in the 24-month period, though the impacts are not statistically different.

Housing Conditions

The results for housing conditions at 36 months are very similar to those reported in the 30-month wave. Many of these indicators are long-term purchases such as flooring and roof, so we would not expect a big change in a short period of time. More CGP households own a latrine (15 percentage point increase), have cement floors (3 percentage point increase), purchase lighting for their home instead of using an open fire (20 percentage point increase), and have access to clean water (9 percentage point increase).

Productive Impacts

Beneficiary households of the CGP continue to be significantly more likely to have a nonfarm enterprise. The share of beneficiary households operating a nonfarm enterprise increases by 12 percentage points relative to the control households, with no differential impacts between the 24- and 36-month waves. Monthly profits are also larger for beneficiaries than for control households, with no significant differences in program impacts between the two waves; however, the impact is not statistically significant at 36 months. In addition, the impacts are similar for both small and large households, although large households have a larger impact on the probability of running a nonfarm enterprise.

We do not assess agricultural production in the 36-month wave because it is the same agricultural harvest as in the 30-month report, which contains the relevant program effects on agricultural production.

In Conclusion

The CGP continues to play an important role in strengthening the financial position of households, allowing them to increase consumption and diet diversity, reduce their debt, and even make investments towards asset accumulation (tools, housing) and livelihood diversification (nonfarm enterprise, livestock). These increases suggest that households in the program are likely to be much more resilient to shocks and external sources of fluctuations in income. However, these important benefits to household economic security have not yet been fully translated into positive developmental impacts on young children, particularly in the health and nutrition domains. In nutrition, for example, feeding has improved significantly for young children, but anthropometric outcomes have not improved. On the other hand, there does seem to be an important program effect on the schooling of young children, whereby children ages 7–9 in treatment households are more likely to start school earlier than those in control households. This pattern of results highlights the limits of a demand-side intervention in areas where the supply of infrastructure is very weak.

I. Introduction

This report provides the 36-month follow-up results for the Child Grant cash transfer program impact evaluation. In 2010, the government of the Republic of Zambia, through the Ministry of Community Development, Mother and Child Health (MCDMCH), began implementing the Child Grant cash transfer program (CGP) in three districts: Kaputa, Kalabo, and Shangombo. American Institutes for Research (AIR) was contracted by UNICEF Zambia in 2010 to design and implement a randomized controlled trial (RCT) for a 3-year impact evaluation of the program and to conduct the necessary data collection, analysis, and reporting.[2] This report presents findings from the 36-month follow-up study and builds on results from the 24-month and 30-month impact reports including poverty, food security, health, education, and productivity.

Background

In 2010, Zambia's MCDMCH started the rollout of the CGP in three districts: Kalabo, Kaputa, and Shangombo. Zambia had been implementing cash transfer programs since 2004 in 12 other districts, trying different targeting models, including community-based targeting, proxy means testing, and categorical targeting by age (over 60 years old). The government decided to introduce a new model, the CGP, in three new districts that had never received any cash transfer program. This categorical model targets any household with a child under 5 years old. Recipient households receive 60 kwacha (ZMW) a month (equivalent to U.S. $12), an amount deemed sufficient by the MCDMCH to purchase one meal a day for everyone in the household for 1 month. The amount is the same regardless of household size. Payments are made every other month through a local pay point manager, and there are no conditions to receive the money.

Locations

The MCDMCH chose to start the CGP in three districts within Zambia that have the highest rates of extreme poverty and mortality among children under age 5, thus introducing an element of geographical targeting to the program. The three districts are Kaputa, located in Northern Province; Shangombo, located in Western Province; and Kalabo, also located in Western Province. All three districts are near the Zambian border with either the Democratic Republic of Congo (Kaputa) or Angola (Shangombo and Kalabo) and require a minimum of 2 days of travel by car from the capital, Lusaka. Because Shangombo and Kalabo are cut off from Lusaka by a flood plain that gets flooded in the rainy season, they can be reached only by boat during some months of the year. These districts represent some of the most remote locations in Zambia, making them a challenge for providing social services, and are some of the most underprivileged communities in Zambia.

Enrollment

Only households with children under age 3 are enrolled in the program, to ensure that every recipient household receives the transfers for at least 2 years. This means that the baseline sample included only households with a child under 3. The Ministry implements a continuous enrollment system in which

[2] Palm Associates was contracted by AIR to assist with the baseline data collection.

households are immediately enrolled after having a newborn baby. Thus, every household in the district with a child under age 5 will receive benefits for 2 years after the program is introduced to that area.

Objectives

According to the MCDMCH, the goal of the CGP is to reduce extreme poverty and the intergenerational transfer of poverty. The objectives of the program relate to five primary areas: income, education, health, food security, and livelihoods. Therefore, the impact evaluation will primarily focus on assessing change in these areas. The objectives of the program according to the CGP operations manual follow (in no specific order):

- Supplement and not replace household income
- Increase the number of children enrolled in and attending primary school
- Reduce the rate of mortality and morbidity of children under 5
- Reduce stunting and wasting among children under 5
- Increase the number of households having a second meal per day
- Increase the number of households owning assets such as livestock

II. Conceptual Framework

A conceptual framework for the evaluation was developed by the study team and presented in earlier evaluation reports. For ease of reference, this framework and associated explanation is provided in Annex 1. The 36-month survey was implemented at the same time of year as the baseline and 24-month surveys, and its main purpose, therefore, is to see whether earlier impacts stay the same, whether impacts begin to appear in other domains which require longer periods of time to respond to the program (such as child height), and whether income multiplier effects occur. Specifically, the program generated important impacts at 24 months on ownership of livestock and agricultural implements, engagement in nonfarm enterprise, and even agricultural production. If livestock or agricultural output is sold, or if nonfarm enterprise is profitable, they may lead to an increase in permanent income of households beyond that of the transfer, which in turn might lead to consumption impacts that are larger than those observed at 24 months. Alternatively, this extra income may be saved or used to pay down longstanding debt, thus strengthening the household's overall financial position and increasing its overall ability to respond to shock (i.e., resilience).

III. Study Design

The CGP impact evaluation relies on a design in which communities were randomized to treatment and control groups to estimate the effects of the program on recipients. Communities designated by Community Welfare Assistance Committees (CWACs) were randomly assigned to either the treatment condition to start the program in December 2010 or to the control condition. This study reports on the effects of the program after 36 months.

Benefits of Randomization

A well designed and well implemented randomized controlled trial (RCT) is one of the most powerful research design for drawing conclusions about the impacts of an intervention on specific outcomes. An RCT draws from a pool of comparable subjects and then randomly assigns some to a treatment group that receives the intervention and others to a control group that does not receive the intervention and against which comparisons can be made. An RCT permits us to directly attribute any observed differences between the treatment and control groups to the intervention; otherwise, other unobserved factors, such as motivation, could have influenced members of a group to move into a treatment or a control group.[3] Randomization helps ensure that both observed and unobserved characteristics that may affect the outcomes are similar between the treatment and control conditions of the sample. In a randomized experiment, treatment and control groups are expected to be comparable (with possible chance variation between groups) so that the average differences in outcome between the two groups at the end of the study can be attributed to the intervention. Our analysis of comparison and treatment groups finds that randomization created equivalent groups at baseline for the CGP evaluation (see the baseline report for a complete description of the randomization process and results).

Timing and Process of Data Collection

To ensure high-quality and valid data, we paid special attention to the process and timing of data collection, making sure that it was culturally appropriate, sensitive to Zambia's economic cycle, and consistently implemented. AIR contracted with Palm Associates, a Zambian research firm with years of experience conducting household surveys throughout Zambia, to help implement the CGP survey and enter the data. A team of Zambian enumerators experienced in household and community surveys and fluent in the local language where they worked were trained on the CGP instrument and then tested in the field before moving into their assigned communities for data collection.

One enumerator collected data in each household, interviewing the identified potential female recipient and documenting her answers. This oral interview process was necessary because many of the recipients are illiterate. In addition to interviewing the female head of household, the enumerator collected anthropometric measures (height and weight) for every child age 8 or under, using high-quality height boards and scales endorsed by UNICEF. Enumerators were trained in proper anthropometric measuring techniques and then supervised in the field by specialists from Zambia's National Food and

[3] Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research*. Hopewell, NJ: Houghton Mifflin.

Nutrition Commission. In addition to the household survey, two senior enumerators administered a community questionnaire in every CWAC to a group of community leaders, including CWAC committee members, teachers, village headmen, and local business owners.

The 36-month follow-up data collection occurred in September and October 2013, Zambia's early lean season, when people start to finish the food left from the previous harvest and hunger increases. The timing of this round of data collection occurred 36 months after the baseline study, ensuring that households are being compared in the same season as at baseline. Zambia has three seasons: a rainy season from December through March; a cold dry season from April through August; and a hot dry season from September through November. Crops are planted in the rainy season and harvested from late February into May. Food is most scarce toward the beginning of the rainy season (December/January) because this is the longest period without a food harvest. The CGP aims to support poor households during this period of hunger by providing enough money to purchase a meal a day. We believe that the biggest impacts of the program are likely to be observed during this lean season; thus, the study is designed with baseline and follow-up periods of data collection during this season while also avoiding the rains to enable accurate data collection.

Data Entry

Palm Associates entered the data as they came in from the field. Data were verified using double entry on separate computers, flagging inconsistent responses between the two entries, and referring to the original questionnaire to see the actual response.

Analysis Approach

This study is a longitudinal, randomized, controlled evaluation with repeated measures at the individual and household levels. We estimate program impacts on individuals and households using a differences-in-differences (DD) statistical model that compares change in outcomes between baseline and follow-up and between treatment and control groups (see Annex 1 for details on this method). The DD estimator is the most commonly used estimation technique for impacts of cash transfer models and has been used, for example, in Mexico's Progresa program[4] and Kenya's Cash Transfer for Orphans and Vulnerable Children.[5] We use cluster-robust standard errors to account for clustering of households within CWACs.[6] We also use inverse probability weights to account for the 2 percent attrition in the follow-up sample.[7] The CGP provides the same transfer size to a household, regardless of size. Therefore, we investigate differential impacts by household size for each outcome. We present impacts by household size only when they are different.

[4] http://wbro.oxfordjournals.org/cgi/reprint/20/1/29

[5] Kenya CT-OVC Evaluation Team. (2012). The impact of the Kenya CT-OVC Program on human capital. *Journal of Development Effectiveness*, *4*(1), 38–49.

[6] http://www2.sas.com/proceedings/sugi23/Posters/p205.pdf

[7] Woolridge, J. W. (2010). *Econometric analysis of cross section and panel data*. Cambridge, MA: MIT Press.

IV. Attrition

Attrition within a sample occurs when households from the baseline sample are missing in the follow-up sample. Mobility, the dissolution of households, death, and divorce can cause attrition and make it difficult to locate a household for a second data collection. Attrition causes problems in conducting an evaluation because it not only decreases the sample size (leading to less precise estimates of program impact) but also introduces selection bias to the sample, which will lead to incorrect program impact estimates or change the characteristics of the sample and affect its generalizability.[8] There are two types of attrition: differential and overall. Differential attrition occurs when the treatment and control samples differ in the types of individuals who leave the sample. Differential attrition can create biased samples by eliminating the balance between the treatment and control groups achieved through randomization at baseline. Overall attrition is the total share of observations missing at follow-up from the original sample. Overall attrition can change the characteristics of the remaining sample and affect the ability of the study's findings to be generalized to populations outside the study. Ideally, both types of attrition should be small.

We investigate attrition at the 36-month follow-up by testing for similarities at baseline between (1) treatment and control groups for all nonmissing households (differential attrition) and (2) all households at baseline and the remaining households at the 36-month follow-up (overall attrition). Testing these groups on baseline characteristics can assess whether the benefits of randomization are preserved at follow-up. Fortunately, we do not find any significant differential attrition at the 36-month follow-up, meaning that we preserve the benefits of randomization. Additionally, less than 2 percent of the overall sample was lost to attrition during this survey, a vast improvement over the 24-month follow-up, when 9 percent of the original sample was not located. This recovery of households that attrited at 24 months was due to the drying up of Lake Cheshi in 2012 (see Overall Attrition, below).

Differential Attrition

We find no significant differences in baseline characteristics between the treatment and control households that remain in the study at the 36-month follow-up, meaning that there is no differential attrition and the benefits of randomization are preserved. Table 4.1 shows the household response rates at the 36-month follow-up by treatment status for each district. The response rates are balanced between the treatment and control groups. We test all the household, young child, and older child outcome measures and control variables for statistical differences at baseline between the treatment and control groups that remain in the 36-month follow-up analysis. None of the 43 indicators is statistically different, demonstrating that, on average, people missing from the 36-month follow-up sample looked the same at baseline regardless of whether they were from the treatment or control group. The similarity of the characteristics of people missing in the follow-up sample between treatment statuses allays the concern that attrition introduced selection bias. Thus, the study maintains strong internal validity created through randomization, enabling estimated impacts to be attributed to the cash

[8] What Works Clearinghouse (http://ies.ed.gov/ncee/wwc/documentsum.aspx?sid=19)

transfer program rather than to differences in the groups resulting from attrition. See Annex 3 for the results of the tests' mean differences on the 43 indicators.

Table 4.1: Household Response Rate by Study Arm at 36-Month Follow-Up for CGP (*N* = 2,518)

District	Treatment	Control	N
Kaputa	95.5	98.3	838
Kalabo	97.4	97.6	840
Shang'ombo	98.1	99.0	840
Overall	97.0	98.3	2518

Overall Attrition

Over 98 percent of the households from baseline remain in the 36-month follow-up sample, which is 7 percentage points higher than in the 24-month sample. Table 4.2 indicates that nearly half the missing households come from Kaputa. As was the case in the 24-month wave of data collection, most of the attrition in Kaputa occurred because Cheshi Lake is drying up, forcing households that relied on the lake for fishing and farming at baseline to move their homes as they follow the edge of the lake inward. Entire villages disbanded, with households spreading out to new areas and building new homes in remote swampy areas that are difficult to locate or reach by vehicle on land. Some households that relocated during the 24-month follow-up survey returned, so attrition was lower at the 36-month survey. This problem in Kaputa affected treatment and control households equally, demonstrated by the lack of differential attrition by treatment status.

Table 4.2: Overall Response Rate for CGP 36-Month Follow-Up: Household Response Rate by District

District	Response Rate (Percent)	Households at Baseline	Percent of Total Missing Households
Kaputa	97	838	44
Kalabo	98	784	36
Shang'ombo	99	840	20
Overall	98	2518	100

There are no statistically significant differences in 43 baseline characteristics between the remaining sample at the 36-month follow-up and the sample at baseline, indicating that samples did not change over time. See Annex 3 for all results comparing the baseline sample with those who remain in the 36-month follow-up.

V. Operational Performance

Zambia's MCDMCH had implemented the CGP cash transfer program for 3 years by the time AIR conducted the 36-month follow-up round of data collection. We used this opportunity to investigate the fidelity of program implementation from the beneficiaries' perspective. This section discusses the results of the implementation investigation. We focus on two primary areas: payments and program understanding. The first part investigates recipients' experience around five themes related to payments: access to payments, notifications of payments, payment problems, unjust solicitations for payments, and community perceptions surrounding payments. Next, we examine recipients' knowledge of the program's eligibility requirements.

Overall, the Ministry successfully implements the cash transfer program. Beneficiaries receive the right amount of money according to schedule, can access the money without any cost and with relative ease, and do not experience unethical solicitations; and there is no attached community stigma to receiving payments. Although recipients understand the eligibility criteria to enter the program, they have sometimes misunderstood the conditions required to remain in the program, with many thinking that they need to spend the money to feed or cloth their children. The analyses for this section only include responses from beneficiaries of the program at the 3-year follow-up. Thus, all of the data presented here are from people who have been receiving the cash transfers for 3 years. Data and analyses are presented through descriptive statistics due to the cross-sectional nature of the data. There are 1,085 households in the sample spread across 45 CWACs in the three CGP districts (Kaputa, Kalabo, and Shang'ombo).

Payments

Monitoring payments provides insights into program efficiency. Ineffective payment distribution may result in underutilization of funds, missed payments, and dissatisfaction in beneficiary households. High private costs for the recipients, such as expenses to access payment, solicitations or mistreatment by program staff, and community perception could negatively impact the program's effects. The potential problems in distribution could also add upfront costs to the Ministry, making program expansion within Zambia challenging. This study investigates recipient experiences around four themes related to payments: access to payments, notifications of payments, unjust solicitations for payments, and community perceptions of beneficiaries.

Access: Findings from the study suggest that recipient households incur little to no cost and an easy travel experience to access their cash. Almost all recipients (97 percent) walk to the payment point, with under 1 percent reporting that they paid any money for travel. There is no statistically significant change in travel time across the survey waves. Less than 7 percent of respondents report having to make two or more trips to collect a payment. From the responses, payment points are appropriately located, easily accessible, and reliable.

Notifications: Less than 3 percent of recipients missed a designated payment period, indicating that recipients are well informed about payment delivery. Eighty-eight percent of recipients are informed of payment delivery by either a CWAC member or a payment-point staff member. This is a 9 percent increase from the 24-month survey. This increase indicates formal and transparent notification mechanisms have improved, and recipients more strongly rely on CWAC and pay-point staff for payment information.

Solicitations: Solicitations were rarely reported. Ninety-nine percent of recipients report having never been solicited by payment-point staff, and 98 percent report having never been solicited by a community member. Among the 2 percent of solicited recipients, the likelihood of a recipient giving money to a solicitor is negligible (under 1 percent of those solicited). Recipients have experienced fewer overall solicitations, especially from community members, over the course of the program.

Payment Problems: Only 2 percent of recipients have contacted someone regarding a payment problem. Forty-eight percent of recipients list a CWAC member as one of three possible contacts for a payment problem. Payment point staff and community leaders were respectively the second and third most frequently cited as points of contact for payment problems.

Community Perception: Ninety-three percent of CGP recipients report that non-CGP beneficiaries are aware that recipients receive payments, and 95 percent of recipients note that others' knowledge of their participation is not problematic. Of the 5 percent of recipients who thought others' knowledge of their participation was problematic, 26 percent thought that nonparticipations would be jealous, 21 percent thought that they would be solicited for money, and 14 percent thought that they may not be able to get additional aid from family or friends if in financial distress. Less than 1 percent of recipients had been asked to take care of an additional person. The stigma-free community perception and lack of pressure to care for additional people make the program an attractive resource for recipients to expand their economic frontiers without being ostracized from the community or facing additional economic burdens.

Program Understanding

Recipients demonstrate a mixed understanding of the policies for the cash transfer program. This knowledge is important because it affects their expectations and behavior. Recipients were asked various questions regarding their understanding of the program with respect to eligibility requirements.

Eligibility: Eighty-two percent of recipients believe that they must obey certain rules to continue receiving payments; however, 65 percent of recipients were unable to identify a particular rule as an eligibility requirement. The most commonly cited continuing eligibility rules were maintaining adequate nutrition for children and having clean, appropriate clothing for children. In the 24-month survey, 90 percent of recipients reported that they need to follow certain rules to maintain eligibility, so the percentage of recipients who think they must obey rules for eligibility has decreased.

VI. Expenditure, Consumption Smoothing, Poverty, and Food Security

The focus of the 36-month report is on understanding the effects of the program after 36 months of implementation and whether impacts differ from those after 24 months. In this chapter, we present impact estimates on total and food monthly consumption (per capita expenditure) of the CGP. We find that the CGP continues to have an impact on consumption, but that these impacts are at the same level as in the 24-month period. For clothing consumption, there is a slightly smaller impact at 36 months than at 24 months, which is explained by the control group consuming more than in previous periods and beneficiaries still consuming the same amount as previously. Similarly, we find that the program still reduces poverty, but at levels similar to those in the 24-month period. We investigate differences in impacts by household size and find that the program has similar effects regardless of household size.

Tables in this report follow a format that provides information about impacts at 36 months and 24 months, differences in impacts between these periods, and baseline statistics. Our explanation of the first table, Table 6.1, can be applied to all similar tables that follow. Table 6.1 reports results for total consumption as well as eight categories of consumption. Column (1) in this table shows the impact of the CGP between baseline and 36 months. Column (2) shows the impact at 24 months; therefore, the impacts reported in this column will be similar to those presented in the previous report.[9] Column (3) tests the difference between the 24- and 36-month impacts. Column (4) shows the baseline mean value of the indicator mentioned at the beginning of each row, and columns (5) and (6) show the mean values for the treatment and control groups at 36 months. These are important in assessing the absolute levels of consumption for the two groups, because the impact estimates in columns (1) through (3) only indicate differences in levels. Our analysis of impacts will first focus on statistical differences between 24- and 36-month impacts (column 3). In other words, we want to see whether there have been any changes in the pattern of impacts that were reported at 24 months. If there are differences, we will then explore the direction of the change in impact using columns 1 and 2. We restrict our attention to statistical significance at 5 percent confidence because of the large sample size in this study.

Column (3) of Table 6.1 shows only one significant deviation from impacts reported at 24 months, and that is in clothing consumption. The impact at 36 months is ZK0.3 lower than it was at 24 months, but is still significant at 36 months between the treatment and control groups. Otherwise, the impacts observed for consumption at 24 months persist after 36 months of implementing the program. Table 6.2 repeats the analysis, using consumption measured in shares rather than absolute levels. The benefit of this approach is that it illustrates the relative importance of each item in the overall consumption basket of the household. Focusing on column 3, we see no significant differences between the 24- and 36-month waves. Consequently, there does not appear to be a multiplier effect of the program at 36 months. However, it is possible that 12 months is not enough time to see additional growth to

[9] The point estimates of impacts will not be identical to those in the 24-month report because of adjustments for attrition and because the previous report used households that reported information on both survey rounds only, whereas here we use all households if they appear in any survey round. There are no qualitative differences between the 24-month impacts reported here and those reported in the 24-month evaluation report.

consumption beyond what was observed at the 24 month. Also, Zambia experienced 7 percent inflation between the 24 and 36 month waves, but the transfer size did not change, so any increase in the impact on consumption from the program might have been countered by the reduced real value of the transfer.

Table 6.1: CGP Impacts on Per-Capita Monthly Expenditures (in ZMW)

Dependent Variable	36-Month Impact	24-Month Impact	Diff 36M-24M	Baseline Mean	36M Treated Mean	36M Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Total	**10.44**	**14.44**	-4.00	40.48	64.30	51.79
	(4.45)	(4.82)	(-1.67)			
Food	**7.56**	**11.15**	-3.59	30.06	48.25	39.10
	(3.86)	(4.68)	(-1.67)			
Clothing	**0.54**	**0.84**	**-0.30**	1.27	2.13	1.62
	(3.43)	(5.80)	(-2.22)			
Education	0.22	0.10	0.12	0.44	1.02	0.71
	(1.64)	(0.40)	(0.45)			
Health	**0.60**	**1.02**	-0.42	2.25	3.84	3.13
	(2.17)	(4.23)	(-1.36)			
Domestic	0.49	0.45	0.04	5.18	6.07	5.34
	(0.90)	(0.78)	(0.09)			
Transport/Communication	**1.14**	**0.87**	0.27	0.75	2.00	0.87
	(3.60)	(2.54)	(0.64)			
Other	-0.09	0.00	-0.09	0.11	0.55	0.60
	(-0.67)	(0.04)	(-0.72)			
Alcohol, Tobacco	0.02	0.03	-0.01	0.40	0.43	0.41
	(0.14)	(0.22)	(-0.07)			
N		7,272		2,517	1,220	1,238

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.

Table 6.2: CGP Impacts on Expenditure Shares

Dependent Variable	36-Month Impact	24-Month Impact	Diff 36M-24M	Baseline Mean	36M Treated Mean	36M Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Food	0.001	0.008	-0.007	0.720	0.750	0.747
	(0.063)	(0.599)	(-0.633)			
Clothing	0.004	**0.008**	-0.004	0.034	0.035	0.033
	(1.467)	(2.986)	(-1.413)			
Education	0.002	0.001	0.001	0.014	0.017	0.014
	(0.713)	(0.191)	(0.518)			
Health	0.003	0.005	-0.002	0.056	0.060	0.058
	(0.840)	(1.388)	(-0.578)			
Domestic	-0.014	**-0.026**	0.012	0.155	0.103	0.117
	(-1.128)	(-2.012)	(1.541)			
Transport/Communication	**0.009**	0.006	0.002	0.011	0.019	0.012
	(2.573)	(1.668)	(0.618)			
Other	-0.003	0.001	-0.004	0.002	0.009	0.012
	(-1.437)	(1.515)	(-1.915)			
Alcohol, Tobacco	-0.002	-0.002	0.000	0.008	0.007	0.007
	(-0.692)	(-0.940)	(0.222)			
N		7,270		2,515	1,220	1,238

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.

Figures 6.1 and 6.2 provide another approach to understanding the impact of the CGP on overall consumption as well as consumption over the 36 months of the study. These figures show the level of total and food consumption across the four survey rounds by study arm. Focusing first on overall consumption, we note four important features of the data. First, the relative increase in consumption at 24 months among treatment households is very large compared with those in the control group—these are the large impacts reported in the 24-month report. Second, during the harvest season, consumption among both groups goes up, but much more so in the control households. We then see both groups declining slightly at 36 months compared with 30 months, as expected, but the treatment group declines less than the control group. Thus, treatment households are able to smooth their consumption over the agricultural season as a result of the program. Third, the overall level of consumption in treatment is higher at 24 and 36 months (planting seasons) than the level in control during 30 months (harvest season). In other words, the program manages to get households to a level of consumption where they prefer to invest in assets and reduced credit instead of further increasing consumption. This level of consumption for treatment households during the lean season, where preferences for the

marginal ZMW shift to investment and savings, is higher than the level of consumption among control households during their peak consumption period during the harvest season. Last, the control group's consumption increased by over 11 ZMW per capita during the three years of the study, indicating that the lifestyle of rural Zambians living in these areas improved during these periods and yet the program still demonstrated large impacts above and beyond the improved condition of the general community.

Figure 6.1

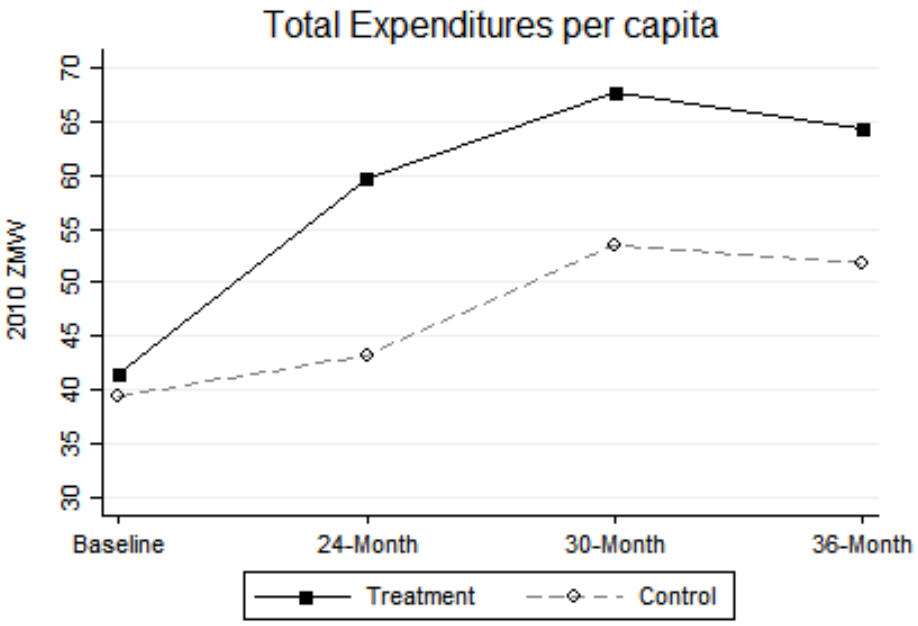
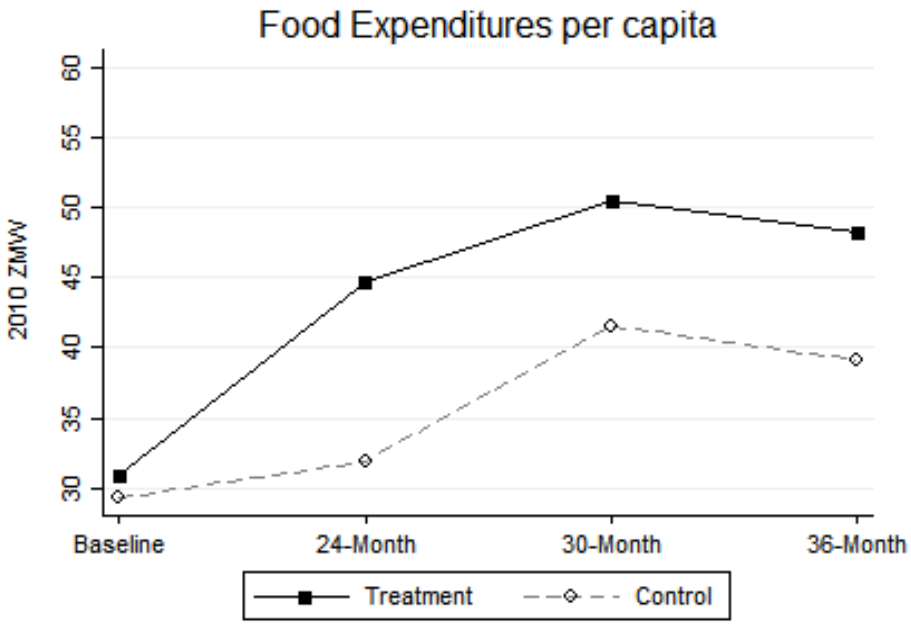


Figure 6.2



Poverty

We also investigate the poverty impacts of the program at 36 months. We follow the procedure described in the 24-month evaluation report of using per capita household consumption as our welfare measure and applying the national poverty lines to this measure. Because we implement the exact same consumption module as the LCMS, we are able to accurately measure monetary welfare in the same manner as done by the Central Statistics Office.

Table 6.3 is structured in the same way as the previous tables and allows us to capture changes in poverty impacts between 24- and 36-month survey rounds. Column 3 shows that in fact there is no significant change in the impact of the CGP across the two rounds. As before, impacts of the CGP are largest for the poverty gap and squared poverty gap because these indicators account for the distribution of welfare among the very poorest, and most CGP recipients are quite far from the poverty line. The result in Column 3 of no further impacts on poverty at 36 months is consistent with our consumption-based measure of well-being.

Table 6.3: Impact of CGP on Poverty Indicators

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Headcount	**-0.041**	**-0.058**	0.017	0.944	0.864	0.928
	(-2.545)	(-3.126)	(0.912)			
Poverty Gap	**-0.084**	**-0.108**	0.023	0.603	0.397	0.503
	(-4.661)	(-4.469)	(1.329)			
Sq. Poverty Gap	**-0.076**	**-0.106**	0.030	0.426	0.214	0.310
	(-3.921)	(-4.134)	(1.858)			
Headcount	0.001	**-0.020**	**0.021**	0.984	0.958	0.973
	(0.208)	(-2.106)	(2.519)			
Poverty Gap	**-0.071**	**-0.089**	0.018	0.719	0.556	0.648
	(-4.720)	(-4.637)	(1.162)			
Sq. Poverty Gap	**-0.076**	**-0.101**	0.024	0.565	0.371	0.468
	(-4.500)	(-4.426)	(1.539)			
N		7,272		2,515	1,221	1,238

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.

Figure 6.3:

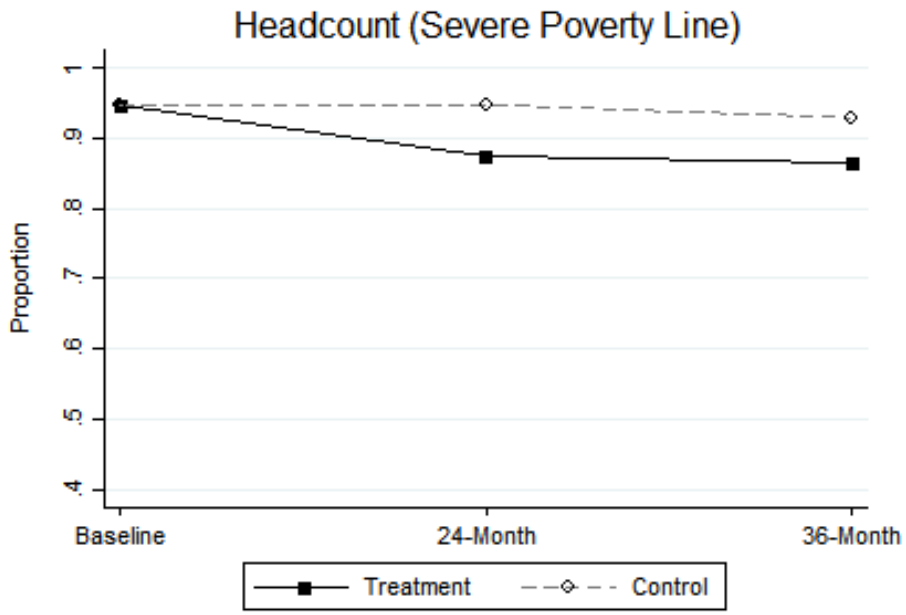


Figure 6.4

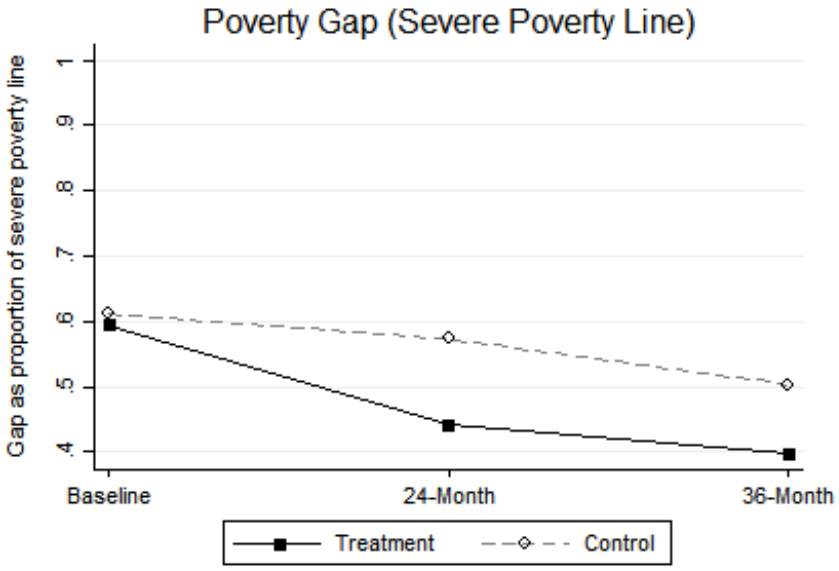
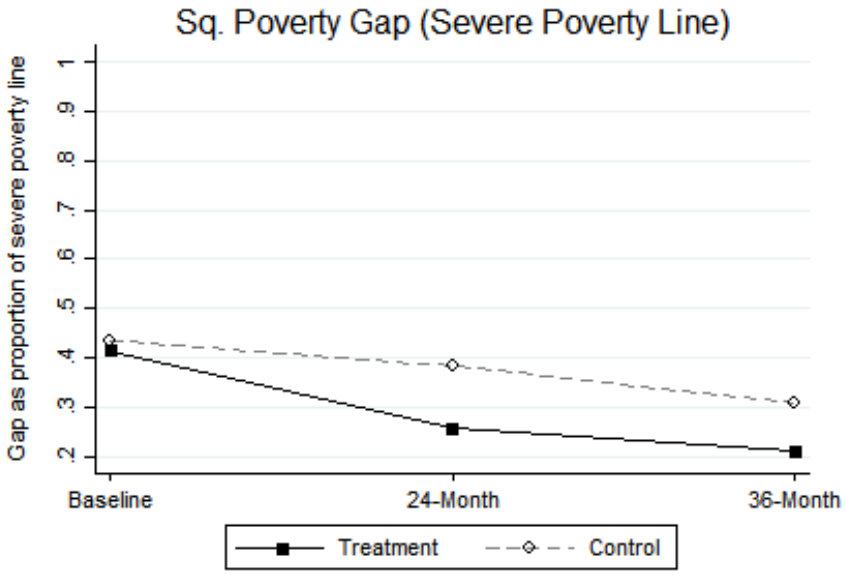


Figure 6.5



Food Security

One of the goals of the CGP is to improve the food security of beneficiary households and specifically increase the percentage of households eating two or more meals per day. As stated earlier, the program has large impacts on consumption, with most of the expenditures going toward food consumption. We find that these additional expenditures on food translate to greater food security, a finding consistent with the results at 24 months. Table 6.4 shows the impacts of the program on several food security indicators. Column (3) shows that impacts at 36 months are similar to 24 months for the main food security indicators, including number of meals per day, the Food and Nutrition Technical Assistance Project (FANTA) food security score,[10] and the proportion of households that are not severely food insecure[11]. The CGP increases the percentage of households eating two or more meals per day by 6 percentage points, with almost everyone eating two or more meals per day (99 percent). Although the difference between the treatment and control groups is only 6 percentage points, a possible ceiling effect limits the measurement of the program's impact on this indicator because the indicator has almost topped out and reached its limit. Figure 6.6 shows the percentage of households eating more than one meal a day. Of note, the control households are also improving over time, perhaps a result of the bumper harvests and improved economy in Zambia over the last few years. Fortunately, other indicators, such as the FANTA food security score, provide greater depth to the program's impact. We find that the program reduces a household's food insecurity score by 2.3 points, a reduction of 20 percent from the control group's score. The program increases the number of households that are not

[10] FANTA is a measure of a household's food insecurity, with greater values indicating more food insecurity. The score from 0-24 (higher indicating less food security), was created from adding the frequency which the household lacks access to food, in both quantity and type. Coates, J., Swindale, A., & Bilinsky, P. (2007). Household food insecurity access scale for measurement of food access. Washington DC: Food & Nutrition Technical Assistance Project (FANTA). Available at www.fantaproject.org

[11] Households that cut back on meal size or number of meals often, and/or experiences any of the three most severe conditions (running out of food, going to bed hungry, or going a whole day and night without eating), even as infrequently as rarely.

severely food insecure by 27 percentage points (58 percent in the treatment group versus 29 percent in the control group). The CGP also has a strong impact of 11 percentage points on the number of households that eat meat or fish five or more times in a week, a result not present at 24 months.

Figure 6.6

We still find large impacts on beneficiaries' perceptions of food security and poverty, but these results are smaller than at 24 months. Twenty-two percentage points more CGP households (72 percent) as compared with control households do not consider themselves very poor. This result is roughly 8 percentage points lower than at 24 months, but still quite large and significant. There are still approximately five times more CGP households (32 percent) than control households (7 percent) that report being better off now than they were 12 months ago, but the impact is 16 percentage points lower than at 24 months. These reduced impacts on self-perceptions of poverty at 36 months compared with 24 months are driven entirely by smaller households. Table 6.5 shows the food security results for smaller households. We see in column 3 the differences in impacts between 24 months and 36 months regarding perceptions of poverty (considering themselves poor and being better off than 12 months ago). None of these differences exist for larger households (greater than 5 people at baseline). Similarly, the impact on the number of households eating meat or fish at least five times a week does not exist for smaller households (but does for larger ones). These results are consistent with the 24- month report, in which we observed a distinct pattern of larger households reporting larger positive impacts of the CGP on their self-assessed welfare. Thus, it seems that the program has a bigger long- term effect on some food security indicators for larger households than smaller ones, but on average the program continues to have large impacts on food security for all households.

Table 6.4: Impact of CGP on Food Security (Percent of Households)

Dependent Variable	36-Month Impact	24-Month Impact	Diff 36M-24M	Baseline Mean	36M Treated Mean	36M Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Eats more than one meal a day	**0.055** (3.47)	**0.058** (5.12)	-0.003 (-0.40)	0.789	0.989	0.955
Ate meat/fish 5+ times last month	**0.108** (2.22)	0.033 (0.64)	0.074 (1.22)	0.316	0.352	0.239
Ate vegetables 5+ times last week	0.050 (0.99)	0.005 (0.09)	0.045 (0.97)	0.623	0.849	0.811
Does not consider itself very poor	**0.216** (4.591)	**0.293** (5.889)	**-0.076** (-2.34)	0.413	0.719	0.443
Food security scale	**2.256** (3.360)	**2.310** (3.899)	-0.054 (-0.12)	-15.145	-8.873	-11.540
Is not severely food insecure	**0.266** (4.064)	**0.222** (3.985)	0.045 (0.888)	0.099	0.579	0.289
Better off than 12 months ago	**0.296** (7.403)	**0.459** (10.84)	**-0.163** (-3.50)	0.095	0.323	0.070
N		7,263		2,517	1,217	1,236

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.

Table 6.5: Impact of CGP on Food Security—Small Households

Dependent Variable	36-Month Impact	24-Month Impact	Diff 36M-24M	Baseline Mean	36M Treated Mean	36M Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Eats more than one meal a day	**0.064** (3.097)	**0.062** (4.300)	0.002 (0.127)	0.769	0.990	0.943
Ate meat/fish 5+ times last month	0.095 (1.777)	0.035 (0.608)	0.060 (0.995)	0.301	0.351	0.229
Ate vegetables 5+ times last week	0.060 (0.988)	-0.002 (-0.03)	0.062 (0.999)	0.613	0.846	0.818
Does not consider itself very poor	**0.204** (3.413)	**0.314** (4.909)	**-0.109** (-2.42)	0.387	0.702	0.425
Food security scale	**2.424** (3.046)	**2.435** (3.215)	-0.011 (-0.02)	-15.074	-8.896	-11.808
Is not severely food insecure	**0.212** (2.881)	**0.221** (3.313)	-0.009 (-0.15)	0.114	0.540	0.290
Better off than 12 months ago	**0.232** (4.280)	**0.448** (8.365)	-**0.216** (-3.81)	0.093	0.325	0.089
N		3,685		1,279	604	637

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.

VII. Young Child Outcomes

As in prior reports, we have calculated program impacts on a series of young child indictors covering health, use of services, nutritional status, and early childhood development. These are second-round effects in that they are not affected directly by the cash transfer but require a series of behavioral responses by the household induced by the income effect of the cash transfer in order to change. For example, nutritional status is affected by caregiving behaviors, caloric intake, and sanitation. For the CGP to affect nutritional status, it must induce a change in feeding practices or the disease environment of the household. Indeed, our ex-ante predictions using baseline data suggested that infant and young child feeding (IYCF) had the strongest direct link with household income and thus was likely to be where we would find program impacts.

The CGP continues to have little impact on morbidity or use of health services. Indeed at 24 months we reported a 4 point decline in prevalence of diarrhea, but this no longer persists at 36-months (Table 7.1). However we observe large declines in the prevalence of diarrhea, fever, and cough in both the treatment and control groups between baseline and the 36 month wave. It appears that the health condition of young children improved for both groups, limiting the opportunity for the program to impact these areas beyond the general trend in the area. The 36-month impact estimate for treatment of diarrhea is quite large at 12 percentage points but not statistically significant (Table 7.2). The lack of impact on use of health facility contrasts with the positive impacts on health spending that we observed. The Health Facility Survey we conducted at baseline highlighted the extremely weak health services available in these communities. For example, only 6 percent of the facilities have electricity, less than 10 percent have clean water, and one-quarter have a laboratory for testing. There is no full-time medical doctor at any facility, and 10 percent of facilities have a registered nurse. Drug availability is also quite low, with oral rehydration salts (ORS) available in only 45 percent of facilities.

Table 7.1: CGP Impacts on Young Child Health and Morbidity

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Diarrhea	-0.007	**-0.037**	0.030	0.189	0.041	0.035
	(-0.39)	(-2.39)	(1.96)			
Fever	0.004	-0.013	0.017	0.234	0.087	0.082
	(0.110)	(-0.43)	(0.70)			
ARI (cough)	-0.027	-0.030	0.002	0.205	0.019	0.031
	(-1.30)	(-1.67)	(0.14)			
Preventive	-0.008	-0.036	0.028	0.781	0.777	0.749
care at clinic	(-0.21)	(-0.92)	(0.76)			
N		10,632		4,106	1,655	1,591

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.

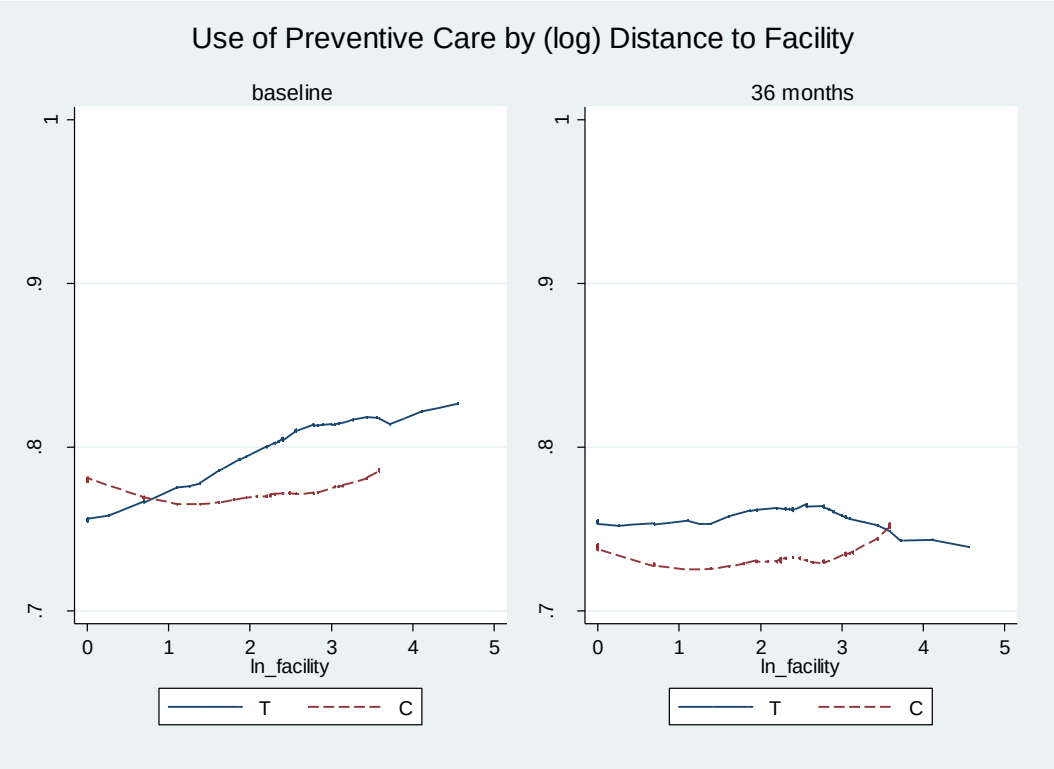
Table 7.2: CGP Impacts on Curative Care if Illness Reported

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Sought treatment for diarrhea	0.116 (1.30)	0.016 (0.23)	0.100 (-0.01)	0.754	0.836	0.714
Sought treatment for fever	0.008 (0.10)	0.018 (0.25)	-0.010 (-0.11)	0.728	0.785	0.777
Sought treatment for ARI	0.151 (0.81)	-0.125 (-1.88)	0.276 (1.43)	0.354	0.065	0.020
N		1,153		845	31	49

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.

We explored whether use of services was affected by distance (kms) to the nearest facility and found that program impacts on curative care do not vary by distance to facility. However, impacts for preventive care do depend on distance to the facility. The statistical model to estimate heterogeneous treatment effects by distance to facility is somewhat complex, so rather than showing the statistical model itself we generated predicted probabilities of seeking preventive care by treatment status based on the model and show graphically how these vary by distance (measured in logs to adjust for outliers). At baseline children in control locations living closer to a health facility (within 3 kms) are more likely to have sought preventive care (see left panel of Figure 7.1) relative to children in treatment locations. By 36 months, however, this relationship is reversed (see right panel), with children in treatment locations living within 3 kms (1 on the log scale depicted in the *x*-axis) of a clinic now more likely to seek preventive care. The implied difference-in-differences impact estimate for children within 3 kms of a clinic is around 5 percentage points. This pattern of impact indicates that distance to facility and the cash transfer are complementary.

Figure 7.1



Next we analyze the impact of the CGP on a series of Early Childhood Development (ECD) indicators that are based on the MICS4 ECD module. There were some positive impacts on 'support for learning' and ownership of books at 24-months, but these have disappeared at 36-months, though we note that the proportion of children with a book is only 1.5 percent. It is unclear why this effect disappeared. It is one of the few indicators that gets worse for both the treatment and control group over the study period, a period where both groups increased consumption, perhaps indicating a shortage of books to acquire in the area.

Table 7.3: CGP Impacts on Early Child Development Indicators

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Support for learning	-0.010 (-0.21)	**0.115** (2.17)	**-0.125** (-2.27)	0.431	0.214	0.248
Learning materials: playthings	-0.011 (-0.18)	-0.026 (-0.45)	0.014 (0.25)	0.623	0.878	0.856
Learning materials: books	0.003 (0.60)	**0.013** (2.59)	-0.010 (-1.33)	0.015	0.010	0.006
N		9,587		2,733	1,906	1,898

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.

We next turn to program impacts on the anthropometric indicators of height-for-age, weight-for-age, and weight-for-height, all measured using *z* scores. Aside from the actual mean score, we also look at program impacts on the probability of being less than or equal to two standard deviations below median on each indicator as the probability of mortality is known to increase substantially beyond that threshold. Our analysis shows that in fact the program continues to have no impact on child nutritional status though the point estimate for weight-for-height is large and just outside the statistically significant range (Table 7.4). These results are consistent with a systematic review of the impact of cash transfers on child nutrition, which shows no consistent evidence of positive impacts. However, the program continues to have an important and positive impact on infant and young child feeding (IYCF) for children less than 24 months of age; children in treatment households are 18 points more likely to have had the minimum required number of feedings[12], and there is no change in this impact from 24-months (see last row of Table 7.4); this result is consistent with the strong positive impacts on food consumption and food security that we observe at both 24 and 36 months.

[12] Infants 6–8 months old who ate 2 or more times the day prior to the survey; breastfed children 9–23 months who ate 3 or more meals the day prior to the survey; and non-breastfed children 9-23 months who at 4 or more meals the day prior to the survey.

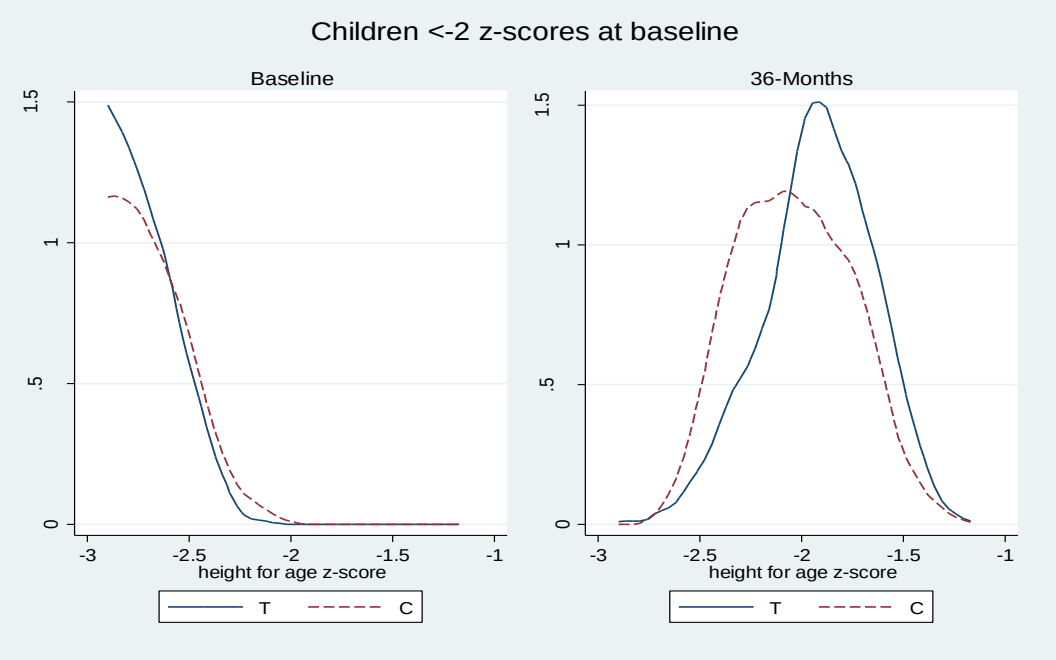
Table 7.4: CGP Impacts on Anthropometrics (<60 months)

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Weight-for-height z-score	0.042 (0.566)	0.089 (1.588)	-0.047 (-0.71)	-0.172	-0.125	-0.111
Height-for-age z-score	-0.116 (-1.25)	-0.045 (-0.68)	-0.071 (-0.89)	-1.355	-1.393	-1.331
Weight-for-height z-score	-0.047 (-0.79)	0.045 (0.918)	-0.092 (-1.64)	-0.825	-0.900	-0.836
Wasted	-0.000 (-0.03)	0.000 (0.044)	-0.001 (-0.06)	0.054	0.049	0.049
Stunted	0.050 (1.852)	0.012 (0.466)	0.037 (1.507)	0.320	0.355	0.327
Underweight	0.016 (0.813)	-0.007 (-0.44)	0.022 (1.181)	0.142	0.148	0.131
IYCF*	**0.183** (2.88)	**0.180** (2.99)	0.003 (0.06)	0.307	0.545	0.362
N		10,138		3,788	1,619	1,583

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.
*0–23 months only.

We performed additional analyses to see if the impacts on nutritional status varied by sex or age (less than 24 months) of the child and found no evidence of impacts on these subgroups. However, we did find some evidence that children who were stunted at baseline were more likely to display 'catch-up' growth if they were in the program. This pattern of impact on height-for-age is displayed in Figure 7.2. In the lefthand panel is the distribution of children with *z*-score less than -2 at baseline by study arm and the righthand panel shows these exact same children at 36-months (this is a longitudinal analysis following the exact same children in both waves). The distribution of *z*-scores has clearly shifted to the right among treatment children, and is further to the right than for children in control households; however, the mean difference, though large and positive, is just outside conventional levels of statistical significance.

Figure 7.2


Children <-2 z-scores at baseline
Baseline
36-Months
0
.5
1
1.5
-3
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height for age z-score
T
C

VIII. Children Over 5 Years Old

As in the 24- and 30-month reports, we present evidence on impacts of the CGP on younger (under age 5) and older (6–17) children. Though the program is focused on improving outcomes for younger children, since the grant is given to families and is not explicitly tied to any particular child, it is quite possible that older children could benefit from the grant and, indeed, at 24-months we saw large positive impacts of the program on material well-being among older children, and impacts on primary age schooling at 30 months. We therefore continue to investigate possible impacts on older kids at 36 months.

Material Well-Being

The proportion of children in treatment households who have all materials needs (66 percent) continues to be significantly higher than those in control households (39 percent), and the impact estimate is 30 percentage points at 36 months. *All material needs* are defined as a pair of shoes, a blanket, and a change of clothes—this is the UNGASS recommended indicator for OVC material needs. Table 8.1, however, shows that there has been significant catch-up among the control group on this indicator, so that the 36-month impact estimate is actually 9 percentage points lower than it was at 24-months; the catch-up appears to come from increased shoes and change of clothes among children in control households. Additionally, the treatment households have hit a ceiling for blanket and two sets of clothing with almost everyone (97 percent) having these items, leaving little room for improvement.

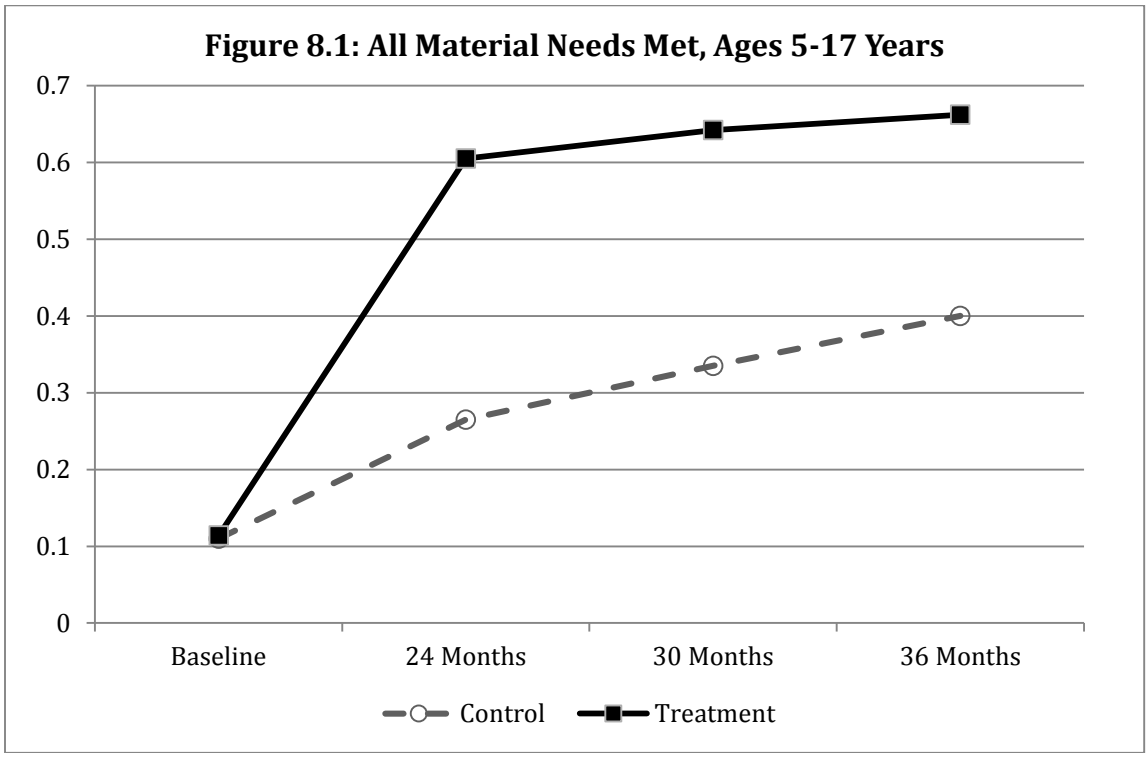
Table 8.1: Comparison of CGP Impacts on Basic Needs Met by Wave, Ages 5–17

Dependent Variable	36-Month Impact	24-Month Impact	Diff 36M-24M	Baseline Mean	36M Treated Mean	36M Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
All needs met	**0.297** (5.066)	**0.387** (5.609)	**-0.090** (-2.04)	0.108	0.658	0.386
Child has shoes	**0.279** (5.082)	**0.353** (5.189)	-0.074 (-1.69)	0.142	0.673	0.405
Child has a blanket	**0.145** (5.045)	**0.149** (5.867)	-0.003 (-0.79)	0.557	0.979	0.866
Child has two sets of clothing	0.044 (1.766)	**0.083** (4.821)	**-0.039** (-2.46)	0.636	0.970	0.947
N		15,613		4,720	2,963	3,050

NOTE: Estimations use difference-in-difference modeling among panel households. Robust t-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for gender, age, household size, recipient age, education and marital status, districts, household demographic composition and a vector of cluster-level prices.

Figure 8.1 illustrates graphically the evolution of this indicator across the survey waves to help interpret these impact estimates. The proportion of children with all material needs met jumped from 11 to 61 percent after 24 months, and then increased in subsequent rounds but at a much slower rate.

Meanwhile, this indicator has continued to increase steadily among control households, and at a higher rate in the last two survey rounds, though it still remains significantly lower than among treatment households. There are no differential effects by gender.



Education

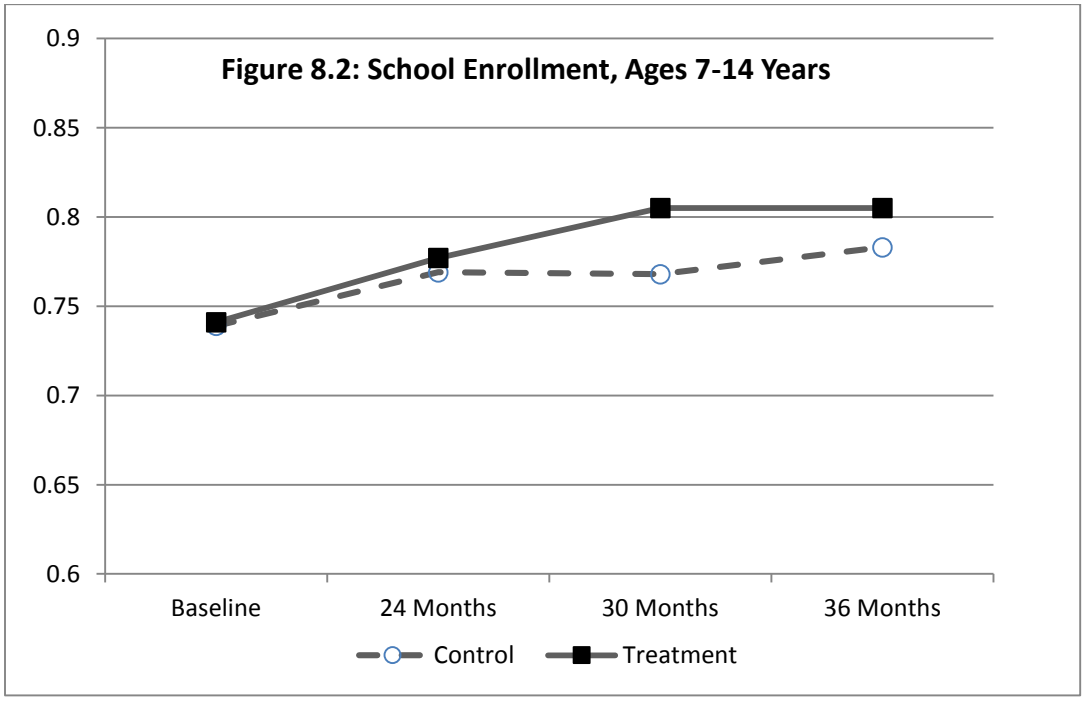
At the 36-month follow-up, we do not find any impacts on education outcomes for primary-age children (7–14 years old), which is similar to the 24-month impacts but in contrast to what we found at 30-months. Specifically, at 30-months we found a small (4 percentage point) statistically significant impact of the CGP on enrollment for this age group, which has now disappeared. Figure 8.2 shows the evolution of school enrollment over the study waves. There is a clear jump in school enrollment in the treatment group between 24 and 30 months that is not observed in the control group, and which explains the significant impact reported at 30 months. This level of enrollment is maintained in the treatment group while there is 'catch-up' in the control group between 30 and 36 months, which eliminates the difference in enrollment observed at 30 months between the two groups. This trend in enrollment is especially pronounced among younger children ages 7–9 (Figure 8.3), and in fact the overall results reported in the table are driven by this younger age group. Further analysis of the data shows that the surge in enrollment in the control group between 30 and 36 months is from children who have never been to school (new entrants to the system). One possible reason for their delayed enrollment is that the school year starts in January, during the lean season when families have the least amount of food and resources. Control households might not have sufficient food or resources (clothing and books) to send their children to school in January, but are able to later in the year after harvest, when resources are relatively more abundant. Since the 30- and 36-month surveys report on school outcomes for the same academic year, these results suggest that the program encourages new entrants to the system to enroll at the beginning of the year. This may be because the program allows families to meet the fixed costs of starting school (uniforms, shoes, and supplies); indeed the significant impacts of the CGP on

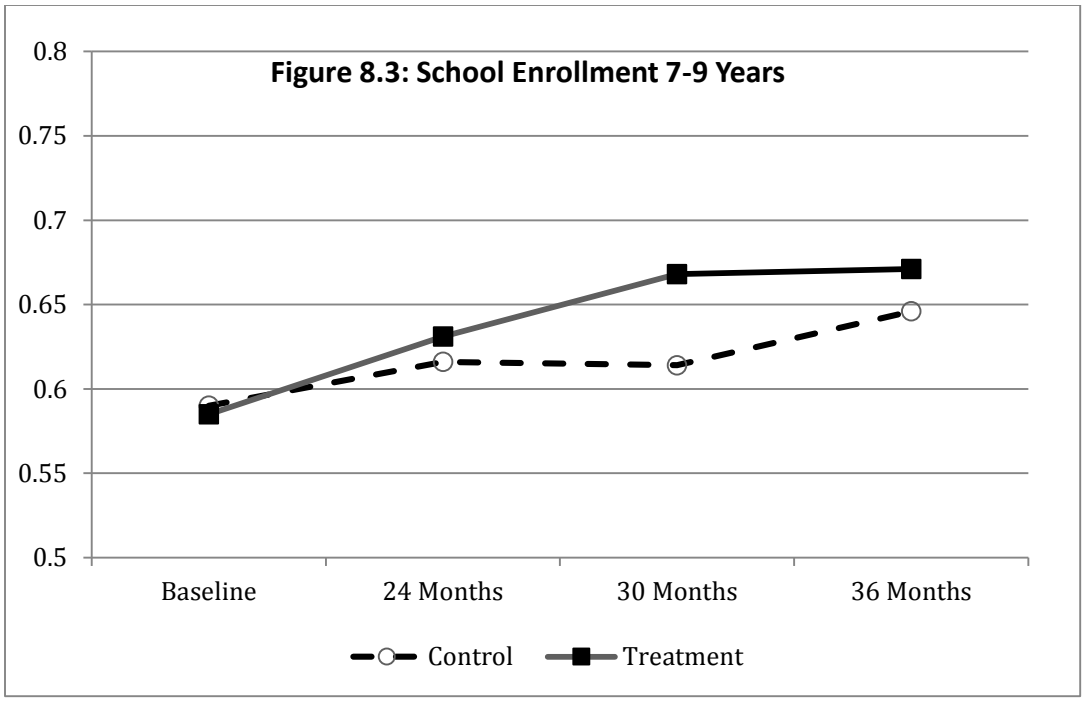
material well-being reported above would appear to be consistent with this hypothesis. Annex 6 shows impact estimates for children ages 4–7 who are just entering the school system, and these show significant impacts at 24 and 30 months of 9 and 10 points, respectively, and overall higher enrollment rates (by 6 points) at 36 months but no significant impact at 36 months.

Table 8.2: Comparison of CGP Impacts on Child Education by Wave, Ages 7–14

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Currently enrolled (%)	0.039 (1.693)	0.006 (0.265)	0.033 (1.505)	0.740	0.806	0.782
Full attendance prior week (%)	0.032 (0.709)	0.066 (1.880)	-0.033 (-0.807)	0.790	0.811	0.781
Number of days in attendance prior week (0–5)	0.249 (1.566)	0.197 (1.370)	0.052 (0.381)	3.295	3.735	3.558
Number of days in attendance prior week (0–5) if enrolled	0.113 (0.897)	0.207 (1.815)	-0.093 (-0.861)	4.483	4.639	4.564
N		7,694		2,206	1,533	1,499

NOTE: Estimations use difference-in-difference modeling among panel households. Robust t-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for gender, age, household size, recipient age, education and marital status, districts, household demographic composition and a vector of cluster-level prices.





At the secondary school age level (ages 15–17), the program continues to not have any significant impacts on any dimension of schooling, consistent with what was reported at 24 months. Note, of course, that given the demographic profile of eligible households, only 10 percent of school-age children in eligible households are in the secondary school age range. This study is not powered to detect effects for this subgroup since they are a small part of the beneficiary population and the primary goal of the program is to help young children under five years old.

Table 8.3: Comparison of CGP Impacts on Child Education by Wave, Ages 15–17

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Currently enrolled (%)	-0.037 (-0.73)	-0.053 (-1.02)	0.016 (0.33)	0.659	0.741	0.684
Full attendance prior week (%)	-0.005 (-0.06)	-0.051 (-0.74)	0.046 (0.68)	0.807	0.810	0.768
Number of days in attendance prior week (0–5)	-0.035 (-0.14)	-0.272 (-1.13)	0.238 (1.06)	2.918	3.451	3.003
Number of days in attendance prior week (0–5) if enrolled	0.098 (0.45)	-0.123 (-0.69)	0.221 (1.13)	4.505	4.741	4.517
N		1,382		388	297	242

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for gender, age, household size, recipient age, education and marital status, districts, household demographic composition and a vector of cluster-level prices.

Labor

At 36 months there is no impact of the program on paid or unpaid labor, including unpaid domestic work/chores, done by children ages 7–14 (Table 8.4). There was a program impact on child work at 24 months of 7 points increase (column 2), which no longer persists, and in fact overall child labor rates are similar among intervention and control households. Figure 8.4 presents the evolution of child labor across the survey waves and shows the jump in child labor at 24 months among children living in treatment households, followed by a similar jump among control households at 30 months, and by 36 months both groups display the same level of child work. Among older children, ages 15–17, there is no impact of the program on child labor (Table 8.5).

Table 8.4: Comparison of CGP Impacts on Older Child Labor by Wave, Ages 7–14

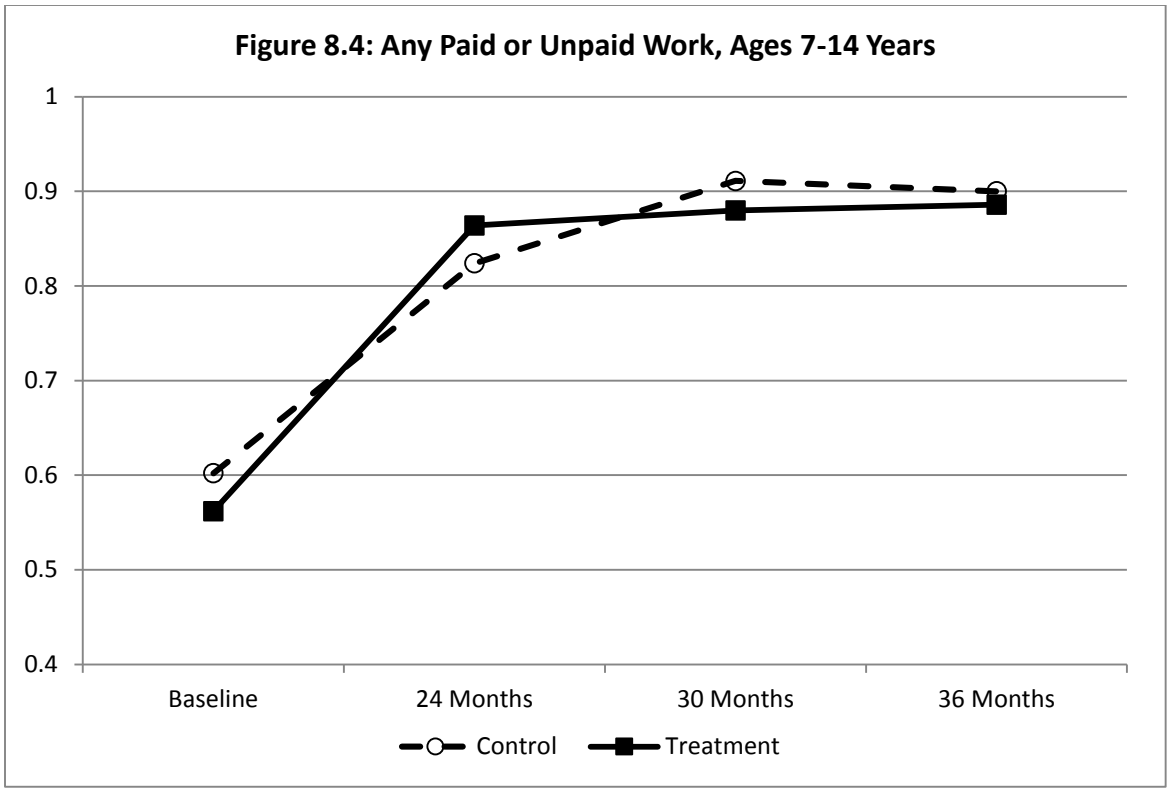
Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Engaged in any work	0.020 (0.482)	**0.072** (2.180)	-0.052 (-1.729)	0.584	0.886	0.899
Engaged in paid work	-0.005 (-1.020)	**-0.007** (-2.088)	0.002 (0.526)	0.023	0.008	0.013
Unpaid hours	-1.143 (-0.372)	-2.259 (-0.681)	1.116 (0.665)	21.382	13.775	13.717
N		7,795		1,743	1,688	1,740

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for gender, age, household size, recipient age, education and marital status, districts, household demographic composition and a vector of cluster-level prices.

Table 8.5: Comparison of CGP Impacts on Older Child Labor by Wave, Ages 15–17

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Engaged in any work	0.027 (1.047)	0.017 (0.705)	0.010 (0.366)	0.793	0.986	0.982
Engaged in paid work	-0.040 (-1.583)	-0.032 (-1.303)	-0.009 (-0.352)	0.113	0.036	0.065
Unpaid hours	-2.400 (-0.541)	-3.108 (-0.687)	0.709 (0.278)	27.413	19.733	19.660
N		1,858		467	415	376

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for gender, age, household size, recipient age, education and marital status, districts, household demographic composition and a vector of cluster-level prices.



We also collected detailed information on time spent in nonfarm enterprise and agricultural work among household members including children. There is a clear overall increasing trend in child labor over the study period, particularly for agricultural labor, with agricultural work increasing by 6 and 17 percentage points among all children ages 7–14 and 15–17, respectively, between 24 and 36 months. However, there is no systematic difference between children in treatment versus control households in either nonfarm business or agriculture at 36 months.

IX. Women

Although the CGP is targeted toward children under age 5, because in most cases cash is given directly to women, there is potential for specific impacts on women-level outcomes. As demonstrated in the conceptual framework, these impacts depend on many factors, including power relations in households and individual characteristics of women, such as how future looking they are in determining consumption patterns. The following section explores trends and the impact of CGP on bargaining power as proxied by household decision making indicators, savings, future outlook, women's health, and labor force participation.

Bargaining Power

To explore bargaining power among sample households, we asked decision making questions across nine domains: (1) children's health, (2) children's schooling, (3) spending of own income, (4) spending of partner's income, (5) major household purchases, (6) daily household purchases, (7) spending on children's clothes and shoes, (8) visits to family and relatives, and (9) own health.[13] These questions were asked of one woman per household (typically a mother or caregiver of a target child), and they allowed the respondent to answer whether a decision is typically made by herself, by her partner, jointly, or by someone else in the household. The same woman was targeted throughout the baseline, 24-month, and 36-month surveys; however, if she was no longer in the household or unable to be interviewed, she could be replaced by another woman in the household who met the interviewing criteria. These types of decision making questions are widely used as a proxy for women's empowerment and are routinely collected in the DHS and other large-scale surveys.

To explore impacts, we construct two indicators for each decision making domain. First, we construct a binary indicator if a woman indicates sole decision making power over the domain. Second, we construct a binary indicator if a woman indicates she has sole or joint decision making power over the domain. In addition, we construct a composite measure representing the count or summation of the decision making domains, giving 1 point to each time the woman indicates having sole or sole and joint decision making power (ranges from 0 to 9)[14].

Results indicate that the program has no measurable impact on any of the sole decision making domains, within the 24 or 36-month impact framework. In addition, the average levels of women's sole decision making have no discernable trend. In some cases, women's sole decision making trends upward (e.g., control over daily purchases), and in other cases, trends downward (e.g., children's health) from baseline to the 36-month follow up. Table 9.1 shows results for indicators of sole decision making by domain. Mean values at baseline for these indicators range from a low of 35 percent for decisions on partner's income to a high of 56 percent for decisions on children's health.

[13] Because some decisions are not applicable to all women, individual decision making domains have different sample sizes. For example, not all women work for wages or income, and thus there is no decision made around spending of her own income.

[14] Results are robust to use of a more sophisticated composite measure constructed by factor analysis, which weights indicators differently on the basis of their variation within the sample and correlation between each other.

Table 9.1: Effects on Women's Sole Decision Making, by Domain

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Children's health (N = 7,239)	-0.01	0.02	-0.04	0.56	0.48	0.48
	(-0.34)	(0.46)	(-0.81)			
Children's schooling (N = 7, 239)	-0.00	0.02	-0.03	0.43	0.34	0.35
	(-0.05)	(0.57)	(-0.63)			
Own income (N = 6834)	-0.05	-0.02	-0.03	0.41	0.35	0.39
	(-1.36)	(-0.42)	(-1.00)			
Partner's income (N = 5,730)	0.03	0.04	-0.01	0.35	0.03	0.03
	(0.68)	(1.31)	(-0.14)			
Major purchases (N = 7,234)	0.02	0.03	-0.01	0.40	0.27	0.28
	(0.38)	(0.64)	(-0.29)			
Daily purchases (N = 7,237)	-0.06	0.01	-0.07	0.48	0.63	0.67
	(-1.53)	(0.20)	(-1.43)			
Children's cloths and shoes (N =7,238)	-0.01	0.02	-0.03	0.44	0.47	0.48
	(-0.20)	(0.48)	(-0.56)			
Family visits (N = 7,236)	0.07	0.04	0.03	0.40	0.41	0.36
	(1.51)	(0.69)	(0.78)			
Own health (N = 7,236)	0.01	0.05	-0.04	0.53	0.67	0.65
	(0.28)	(1.26)	(-0.89)			

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size and demographics, recipient age, education and marital status, districts, and a vector of cluster-level prices. One woman per household is asked questions on who in the household usually makes decisions about nine domains. The biological mother or primary caregiver of children aged 0–5 in baseline is targeted for questions throughout the panel; however, if this woman is not available, a substitute mother or primary caregiver may respond to questions.

Impact results show that over the 36-month panel, there was a significant positive effect of the program on decisions regarding own income and partner's income. In addition, decisions around major purchases and family visits approach significance (downward trend), but do not attain the $p < 0.05$ cut point. In contrast to the sole decision making indicators only, all domains show upward trends over the 36-month period. The means for these indicators range from a low of 56 percent for decisions on partner's income to a high of 71 percent for decisions on children's health. Table 9.2 shows parallel results for women's indicators of sole or joint decision making.

Table 9.2: Effects on Women's Sole or Joint Decision Making, by Domain

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Children's health (N = 7,239)	0.04	0.01	0.03	0.71	0.82	0.78
	(1.17)	(0.25)	(0.87)			
Children's schooling (N = 7, 239)	0.05	0.03	0.02	0.60	0.70	0.65
	(0.99)	(0.61)	(0.41)			
Own income (N = 6,834)	**0.10**	0.02	0.08	0.60	0.90	0.83
	(3.04)	(0.44)	(2.04)			
Partner's income (N = 5,730)	**0.15**	0.07	0.09	0.56	0.76	0.64
	(3.57)	(1.24)	(1.90)			
Major purchases (N = 7,234)	0.09	0.02	0.07	0.60	0.80	0.74
	(2.22)	(0.41)	(1.91)			
Daily purchases (N = 7,237)	0.01	0.01	-0.00	0.65	0.91	0.91
	(0.19)	(0.29)	(-0.07)			
Children's cloths and shoes (N =7,238)	0.04	0.02	0.02	0.63	0.88	0.85
	(1.28)	(0.54)	(0.49)			
Family visits (N = 7,236)	0.09	0.05	0.04	0.58	0.72	0.64
	(2.12)	(0.98)	(1.11)			
Own health (N = 7,236)	0.00	0.04	-0.03	0.64	0.80	0.81
	(0.06)	(1.05)	(-0.83)			

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size and demographics, recipient age, education and marital status, districts, and a vector of cluster-level prices. One woman per household is asked questions on who in the household usually makes decisions about nine domains. The biological mother or primary caregiver of children aged 0–5 in baseline is targeted for questions throughout the panel; however, if this woman is not available, a substitute mother or primary caregiver may respond to questions.

Results from the average summations show that women make approximately 3.75 sole decisions and approximately 5.45 sole or joint decisions at baseline. Although the sole and joint decision making composite measure approaches significance at the $p < .05$ level, it does not achieve the cut-off point. The composite indicators as well as the domain indicators show that, overall, women in both program and control communities are trending towards making more joint and fewer sole decisions over time. The overall lack of measureable impact on the decision making indicators is not entirely unexpected. Recent reviews of decision making and women's empowerment indicators show that there are few rigorous evaluations showing large impacts on women's decision making or bargaining power, even in instances where programs were designed to explicitly empower women (Doss, 2013; van den Bold, Quisumbing, & Gillespie, 2013). Table 9.3 shows results for the composite decision making indicators for sole as well as sole and joint decision making.

Table 9.3: Effects on Composite Measures of Women's Sole and/or Joint Decision Making

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Sum sole decision making	-0.14	0.28	-0.42	3.75	2.14	2.28
	(-0.61)	(1.07)	(-1.43)			
Sum sole/joint decision making	0.64	0.36	0.27	5.45	6.87	6.30
	(2.12)	(0.98)	(0.81)			
N		5,543		2,210	829	864

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size and demographics, recipient age, education and marital status, districts, and a vector of cluster-level prices. One woman per household is asked questions on who in the household usually makes decisions about nine domains. Summations represent totals across decision making domains. The biological mother or primary caregiver of children aged 0–5 in baseline is targeted for questions throughout the panel; however, if this woman is not available, a substitute mother or primary caregiver may respond to questions.

Savings and Future Outlook

We investigate indicators of savings and future outlook as reported by the female respondents answering decision making questions for each household. Results indicate that at baseline, approximately 16 percent of households had any saving in the previous 3 months. Although these averages increase to 35 percent among treatment households and 22 percent among control households at 36 months, program impacts are only significant at 24 months. These impacts demonstrate that households are saving more over time; however, increased incidence of savings attributable to the program are only seen after 24 months. However, when we examine the amount of savings, we see strong program impacts across both the 24- and 36-month time periods. When we examine future outlook, we find upward trends in beliefs that life will be better in 1, 2, and 3 years; however, we only observe program impacts on 3-year expectations after 24 months. Table 9.4 shows the results to these analyses.

Table 9.4: Effects on Women's Savings and Future Expectations

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Base-line Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Any savings	0.10	**0.22**	-0.12	0.17	0.35	0.22
	(1.83)	(3.86)	(-2.34)			
Log amount saved last month (ZMK)	**0.57**	**1.08**	**-0.51**	0.63	1.58	0.95
	(3.33)	(5.92)	(-2.74)			
Believes life will be better 1 year	0.17	0.13	0.04	0.51	0.72	0.58
	(2.41)	(2.09)	(0.81)			
Believes life will be better 2 years	0.06	0.07	-0.01	0.55	0.82	0.77
	(1.22)	(1.62)	(-0.30)			
Believes life will be better 3 years	0.06	**0.11**	-0.05	0.61	0.87	0.82
	(1.75)	(3.19)	(-1.68)			
N		7,256		2,503	1,218	1,238

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size and demographics, recipient age, education and marital status, districts, and a vector of cluster-level prices. One woman per household is asked questions on who in the household usually makes decisions about nine domains. The biological mother or primary caregiver of children aged 0–5 in baseline is targeted for questions throughout the panel; however, if this woman is not available, a substitute mother or primary caregiver may respond to questions.

Women's Health

We investigate health outcomes for women age 18 and older with respect to morbidity in the previous 2 weeks, chronic illness in the previous 6 months, and self-reported health status (self-rated "good health or better" and "very good health or better.") Although self-reported measures of health are subject to bias, this may be an indicator that women are more optimistic about their health and economic situation. At baseline, 15 percent of women report having been sick in the last 2 weeks, and approximately 2/3 sought care of some type for the sickness. Only 3 percent of women report having been chronically ill in the last 6 months, and approximately 41 percent have self-rated good or excellent health. Despite positive trends over the 36-month period, there are no program impacts on any of the general health outcomes. Table 9.5 shows the estimated impacts for these indicators.

Table 9.5: Effects on Women's General Health (Age 18 and Older)

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Sick in the last 2 weeks	-0.01	-0.01	-0.00	0.15	0.07	0.08
	(-0.64)	(-0.47)	(-0.14)			
Sought care for sickness (N = 782)	0.14	0.03	0.10	0.66	0.73	0.64
	(1.88)	(0.43)	(1.37)			
Chronically ill in the last 6 months	-0.00	0.01	-0.01	0.03	0.01	0.01
	(-0.53)	(0.91)	(-1.52)			
Self rated good or excellent health	0.02	0.09	-0.07	0.41	0.70	0.70
	(0.41)	(1.57)	(-1.29)			
N		7,405		1,868	1,455	1,447

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for age of women in years, household size and demographics, recipient age, education and marital status, districts, and a vector of cluster-level prices.

X. Birth Outcomes

Although not a focus of the program, it is possible that the CGP impacts health care utilization at birth, including quality and quantity of antenatal care (ANC) and skilled attendance at birth. Possible impact pathways include direct health care spending on or reallocation of resources through increases in women's bargaining power. We examine a range of health care utilization outcomes, for children born in the 15 months prior to the baseline and 24-month follow up, and 12 months prior to the 36-month follow up. These cut points ensure that mothers giving birth to children during the panel period would have received the transfer for all 9 months of her pregnancy. Since the CGP initially targets women and households with children under age 5, the baseline sample is larger as compared with the subsequent waves.

We examine seven indicators of ANC: (1) Any skilled ANC (with doctor or nurse), (2) ANC within the first trimester, (3) at least four ANC visits, (4) tetanus vaccination during ANC, (5) malaria prevention during ANC, (6) voluntary counseling and testing (VCT) for HIV, and (7) an indicator of high quality of ANC (tetanus, malaria, and VCT during ANC). We do not analyze any ANC (skilled or unskilled), as this percentage is approaching 99 percent in our sample. In addition, we analyze skilled attendance at birth (with doctor or nurse).

We find no significant impacts across all ANC and skilled attendance indicators. For several indicators, including tetanus vaccination and malaria prevention, it is unlikely we would observe impacts, due to high baseline averages (over 90 percent). However, only 73 percent of the baseline sample report any ANC with a doctor or a nurse, and only 25 percent report the first visit within the first trimester of pregnancy. Likewise, only 35 percent births at baseline were attended by a doctor or a nurse. Unlike many of the indicators examined in the report, there is no overall improvement in indicators from baseline to the 36-month follow up, indicating a lack of progress on these indicators. The baseline indicators are also roughly comparable to the statistics found in the 2007 ZDHS, which collected information on births over the 5 years prior to the survey. According to the ZDHS, ANC is nearly universal (97 percent); approximately 21 percent of the sample visits within the first trimester, 59 percent of the sample completes at least the recommended four visits, and 42 percent of births are attended by a doctor or a nurse. Overall, lack of impact means that increases on health expenditures are likely being allocated to young children and not to pregnant mothers and that transfers are not inducing large shifts in bargaining power and reallocation of resources. Table 10.1 shows results of our analysis.

Table 10.1: Effects on Health Care Utilization at Birth (Among Children 0–15 Months)

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Skilled ANC (doctor or nurse)	-0.00	0.01	-0.02	0.73	0.76	0.79
	(-0.06)	(0.19)	(-0.20)			
ANC in first trimester	0.07	0.03	0.04	0.25	0.23	0.18
	(1.27)	(0.67)	(0.64)			
At least four ANC visits	0.04	-0.10	0.13	0.64	0.46	0.46
	(0.61)	(-1.42)	(1.70)			
Any tetanus during ANC	0.03	0.01	0.02	0.92	0.90	0.85
	(1.41)	(0.47)	(0.66)			
Any malaria during ANC	0.00	0.02	-0.02	0.93	0.95	0.93
	(0.19)	(1.02)	(-0.71)			
Any VCT during ANC	-0.10	0.02	-0.12	0.85	0.88	0.93
	(-2.04)	(0.76)	(-2.08)			
High quality of ANC	-0.02	0.04	-0.07	0.78	0.81	0.80
	(-0.47)	(1.07)	(-1.13)			
Skilled attendance at birth (doctor or nurse)	0.07	0.05	0.01	0.35	0.43	0.44
	(0.85)	(1.09)	(0.14)			
N		2,257		1,268	195	181

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size and demographics, recipient age, education and marital status, districts, and a vector of cluster-level prices. ANC stands for antenatal care; VCT stands for voluntary counseling and testing for HIV. High quality of ANC indicates receiving tetanus, malaria, and VCT during ANC.

XI. Credit

We begin by looking at loans taken out prior to March 2013, that is, not within the last 6 months (recall that the 36-month survey was conducted in September and October 2013). We see a rather large and significant impact on the likelihood of not having a loan from this prior period—a 7.3 percentage point reduction in the likelihood of having an outstanding loan. Note that this impact is much larger among large households (8.4 points) than small households (4.7 points). There is no impact on the amount outstanding overall; however, there is an impact for large households who on average owe 45 ZMW less than control households. These results seem to be consistent with the idea that part of the transfer is being used to pay down old loans taken out by CGP households. Table 11.1 shows impact results for credit and loans among study households. Note that credit information was not collected at baseline or 24-month wave; therefore, the tables look different from those in the previous chapter. The results in Column 1 present the differential impacts of the program between treatment and control households. Column 2 provides the average for the control group for each outcome considered, which serves as a reference point for the estimated impacts. The remaining columns show impacts for small and large households, respectively, as well as control group means for those subsamples. The relevant sample size is shown in the square bracket below the *t*-statistic.

Table 11.1: Impact of CGP on Credit Outcomes—36-Month Wave

	All HH		Small HH		Large HH	
	Program Impact	Control Stats	Program Impact	Control Stats	Program Impact	Control Stats
Dependent Variable	(1)	(2)	(3)	(4)	(5)	(6)
Owe money from before March 2013	**-0.073**	0.118	**-0.047**	0.096	**-0.084**	0.129
	(-4.669)		(-2.570)		(-4.709)	
	[2,454]	[1,237]	[787]	[416]	[1,667]	[821]
Amount owed*	-27.067	92.612	6.923	79.462	**-45.432**	97.793
	(-1.756)		(0.214)		(-2.593)	
	[199]	[138]	[57]	[39]	[142]	[99]
Borrow money last 6 months	-0.018	0.205	-0.059	0.204	0.003	0.206
	(-0.680)		(-1.672)		(0.090)	
	[2,453]	[1,237]	[787]	[416]	[1,666]	[821]
Loan used for consumption	-0.017	0.843	-0.001	0.918	**0.012**	0.799
	(-0.445)		(-1.519)		(0.252)	
	[487]	[254]	[118]	[73]	[347]	[169]
Amount borrowed last 6 months*	1.387	62.132	6.736	57.321	-0.486	64.673
	(0.176)		(0.588)		(-0.053)	
	[460]	[243]	[137]	[84]	[323]	[159]

NOTE: Estimations use single difference modeling. Robust t-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, and household demographic composition. HH stands for household.

*The highest 5 percent values for this outcome were discarded owing to unlikely large values for this population.

XII. Asset Ownership

We investigate the ownership of assets to determine whether the CGP enables beneficiaries to purchase more expensive items. We assess three categories of assets: household assets, agricultural tools, and livestock.

Household Assets

The CGP continues to have a positive impact on the ownership of a wide variety of household assets at both the 24-month and the 36-month waves. The results presented in Table 12.1 indicate that households receiving the transfer are more likely to own a bed, a mattress, a sofa, a radio, and a solar panel in both waves. For some of these assets, program impacts are twice as large as baseline values. For example, the proportion of beneficiary households that own a bed and a mattress at 36 months is about 48 percent, whereas it was only 20 percent at baseline. There is no difference between the 24- and 36-month results, except that the CGP impacts cell phone ownership at 36 months by 5 percentage points, with 16 percent of beneficiary households owning a cell phone (10 percent of control group owns a cell phone). This means that beneficiary households acquiring these assets did so before the 24-month wave with no additional purchases afterward. In general, the observation that beneficiary households only purchased some assets once during the study, before the 24 month round and not a second time since, is consistent with most of these assets being durable goods for general use within the household. Another way to investigate asset ownership is to aggregate asset indicators through a weighted index, where the weight for each individual asset is estimated using the statistical procedure of principal components analysis (PCA)[15]. Using PCA allows us to summarize a multitude of measurements (all assets) into a single indicator (asset index). Each individual asset index for a given household has no meaning on its own, but relative to other households' indexes can give a measure of the wealth of the individual household. A more negative index is poorer overall than a more positive index. Another interesting feature of Table 12.1 is that program impacts are positive for all considered assets, even though some of them are not statistically different from zero. If there is heterogeneity in asset preferences, beneficiary households will invest in a variety of assets. As a result, the estimated effects for some specific assets would not be large enough to be significantly different from the control group.

[15] Principal components is a data reduction technique that allows creating a linear index of all the variables considered that captures the largest amount of information that is common to all of the variables. See Lindeman, R. H., Merenda, P. F., & Gold, R. Z. (1980). Introduction to bivariate and multivariate analysis. Glenview, IL: Scott, Foresman.

Table 12.1: Impact of CGP on Asset Ownership (Share)

Dependent Variable	36-Month Impact	24-Month Impact	Diff 36M-24M	Baseline Mean	36M Treated Mean	36M Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Assets index	**0.458**	**0.416**	0.043	-0.227	0.395	-0.137
	(6.052)	(6.727)	(0.768)			
Bed	**0.178**	**0.216**	-0.038	0.202	0.477	0.247
	(4.463)	(6.482)	(-1.070)			
Mattress	**0.186**	**0.235**	-0.049	0.155	0.476	0.250
	(5.015)	(7.250)	(-1.338)			
Net	0.053	0.033	0.020	0.801	0.877	0.808
	(1.613)	(1.024)	(0.961)			
Table	0.029	0.045	-0.016	0.160	0.152	0.091
	(0.920)	(1.393)	(-0.585)			
Sofa	**0.036**	**0.024**	0.012	0.034	0.069	0.028
	(2.839)	(2.015)	(1.038)			
Radio	**0.082**	**0.087**	-0.005	0.110	0.218	0.124
	(3.412)	(3.176)	(-0.160)			
Cell	**0.051**	-0.006	**0.058**	0.088	0.164	0.099
	(2.646)	(-0.307)	(3.029)			
Watch	0.013	0.010	0.003	0.032	0.028	0.014
	(1.402)	(1.098)	(0.272)			
Iron	0.009	0.022	-0.014	0.033	0.054	0.038
	(0.763)	(1.804)	(-0.899)			
Solar panel	**0.057**	**0.084**	-0.028	0.026	0.113	0.060
	(3.832)	(5.320)	(-1.612)			
N		7,251		2,514	1,217	1,235

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.

Agricultural Tools

We continue to see a positive impact on ownership of agricultural tools, but with no difference in impacts between 24 and 36 months. For both hammer and plough, the results are not significant at the 0.05 level at 36 months, but are also not statistically different from 24 months. Additionally, using PCA to calculate an agricultural implement index, shows that, overall, the baseline 'wealth' of households in regards to agricultural implements was lower at baseline than either control or beneficiary households at 36 months, and had a positive program impact at both 24 and 36 months. The similar program

impacts on agricultural tool ownership between the two follow-up waves are also a consequence of the durable-goods condition of the agricultural tools considered and the short period of time between both waves.

Table 12.2: Impact of CGP on Agricultural Implements (Share)

Dependent Variable	36-Month Impact	24-Month Impact	Diff 36M-24M	Baseline Mean	36M Treated Mean	36M Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Ag implements index	**0.208**	**0.230**	-0.022	-0.240	0.290	-0.007
	(3.014)	(2.966)	(-0.380)			
Axe	0.015	0.001	0.014	0.772	0.890	0.850
	(0.353)	(0.026)	(0.344)			
Pick	0.019	0.008	0.010	0.026	0.044	0.028
	(1.440)	(0.644)	(0.697)			
Hoe	0.005	0.006	-0.001	0.912	0.975	0.971
	(0.326)	(0.440)	(-0.057)			
Hammer	0.030	**0.039**	-0.009	0.047	0.072	0.044
	(1.919)	(2.709)	(-0.554)			
Shovel	0.008	0.022	-0.014	0.053	0.091	0.053
	(0.568)	(1.551)	(-0.947)			
Plough	0.028	**0.048**	-0.020	0.065	0.086	0.053
	(1.578)	(2.623)	(-1.095)			
N		7,226		2,499	1,216	1,236

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.

Livestock Ownership

The CGP at the 36-month survey has a positive impact on the ownership of a wide variety of livestock, both in the share of households with livestock and in the total number of animals; however, these impacts are similar to those observed at the 24-month survey. The only difference to note is that there is an 18 percentage point impact to the number of households that own chickens, which is 6 percentage points higher than the 24-month period, though the impacts are not statistically different. The livestock index shows that impacts on overall livestock ownership has increased for the beneficiary households at 36 months and decreased for control households, resulting in a significant positive impact, which is not statistically different from the results at 24 months. Table 12.3 shows the impact of the program at 36 months on livestock ownership. Column 3 shows that impacts do not differ between 24 and 36 months.

Table 12.3: Impact of CGP on Livestock Ownership (Share)

Dependent Variable	36-Month Impact	24-Month Impact	Diff 36M-24M	Baseline Mean	36M Treated Mean	36M Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Livestock Index	**0.403**	**0.392**	0.010	-0.123	0.243	-0.209
	(6.189)	(5.142)	(0.181)			
Cows	0.006	**0.021**	-0.014	0.052	0.003	0.002
	(0.631)	(2.086)	(-1.030)			
Cattle	**0.104**	**0.096**	0.008	0.096	0.171	0.081
	(4.135)	(3.963)	(0.429)			
Goats	0.016	0.018	-0.002	0.022	0.053	0.011
	(1.518)	(1.756)	(-0.163)			
Chicken	**0.175**	**0.120**	0.055	0.426	0.544	0.386
	(3.718)	(2.175)	(1.331)			
Ducks	**0.031**	**0.031**	0.000	0.031	0.040	0.023
	(3.415)	(2.848)	(0.043)			
N		7,223		2,495	1,216	1,237

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.

The program also has an effect on the number of animals, though again these do not differ from the 24-month results. Beneficiaries continue to own more goats, chickens, and ducks per household. This finding is consistent with the ownership patterns discussed above for other types of assets. Table 12.4 shows the impacts on the number of livestock owned at 36 months into program implementation.

Table 12.4: Impact of CGP on Livestock Ownership (Number)

Dependent Variable	36-Month Impact	24-Month Impact	Diff 36M-24M	Baseline Mean	36M Treated Mean	36M Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Livestock Index	**0.403**	**0.392**	0.011	-0.123	0.243	-0.209
	(6.194)	(5.130)	(0.202)			
Cows	0.153	0.082	0.071	0.197	0.007	0.006
	(1.164)	(0.774)	(1.875)			
Cattle	0.247	0.293	-0.046	0.419	0.701	0.316
	(1.283)	(1.441)	(-0.382)			
Goats	**0.107**	**0.150**	-0.043	0.055	0.188	0.031
	(2.053)	(3.701)	(-1.073)			
Chicken	**1.545**	**1.137**	0.408	1.941	3.484	1.809
	(4.822)	(2.884)	(1.196)			
Ducks	**0.167**	**0.214**	-0.047	0.130	0.207	0.111
	(2.939)	(2.907)	(-0.929)			
N		7,223		2,495	1,216	1,237

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.

XIII. Nonfarm Enterprise

Beneficiary households of the CGP continue to be significantly more likely to have a nonfarm enterprise (Table 13.1). The share of beneficiary households operating a nonfarm enterprise increases by 12 percentage points relative to the control households, with no differential impacts between the 24- and 36-month waves. Monthly profits are also larger for beneficiaries than for control households, with no significant differences in program impacts between the two waves; however, the impact is not statistically significant at 36 months. The impact might have reduced because control households with businesses are also increasing their profitability. However the primary impact of importance is the number of households with businesses and not the difference in profit between treatment and control household's with businesses. In addition, the impacts are similar for both small and large households, although large households have a larger impact on the probability of running a nonfarm enterprise (see Annex 7, Tables A7.1 and A7.2).

Table 13.1: CGP Impacts on Nonfarm Enterprises (NFE)

Dependent Variable	36-Month Impact	24-Month Impact	Diff 36M-24M	24M Treated Mean	24M Control Mean	36M Treated Mean	36M Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
HH operates NFE	**0.121**	**0.150**	-0.030	0.471	0.298	0.452	0.307
	(2.708)	(3.639)	(-0.621)				
Months in operation since Oct. 2012	-0.007	0.555	-0.562	7.580	6.953	6.127	5.976
	(-0.017)	(1.477)	(-1.215)				
Total monthly profit (ZMW)*	13.226	**31.564**	-18.338	150.373	110.038	142.743	120.575
	(1.054)	(2.438)	(-1.007)				
N		1,809		541	339	550	379

NOTE: Estimations use single difference modeling. Robust t-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, and household demographic composition.

*The highest 5 percent values for this outcome were discarded owing to unlikely large values for this population.

XIV. Housing Conditions

Beneficiaries use the transfers to purchase items to improve their living and housing conditions, which can lead to improved health outcomes. For example, the CGP had a 15 percentage point increase in the number of households that own a latrine (67 percent of beneficiaries). Owning a latrine is important for improving household hygiene and sanitation, yet less than half of households had a latrine at baseline. Similarly, the CGP had a 3 percentage point increase in the number of households with cement floors. Cement floors can lead to improved health outcomes over dirt floors because they provide a cleaner environment that is less likely to transmit parasites and pathogens, especially to young children.[16] However, concrete is an expensive item that few people in a village can afford, demonstrated by the fact that only 3 percent of households had cement floors at baseline. Table 14.1 lists the impacts of the CGP on housing conditions at 36 months into program implementation. Of note, the results at 36 months are very similar to those reported in the 30-month wave. Many of these indicators are a long-term purchase such as flooring and roof, so we would not expect a big change in a short period of time.

In addition to improving their home, we also find that beneficiaries improved their daily living conditions by purchasing torches or candles to light their home instead of using an open fire. Over half the households used open fire to light their home at baseline (58 percent). The CGP had a 20 percentage point impact on the number of households using a purchased method to light their home, such as candles or torch, with 84 percent of beneficiary households using a purchased method. Wood smoke from an open fire is very harmful to one's health, especially for children. According to a report about wood smoke by the World Health Organization in 2014, "4.3 million people a year die prematurely from illness attributable to the household air pollution caused by the inefficient use of solid fuels."[17] Thus, the CGP's impact on reducing the use of an open fire in the home also contributes to reducing health problems caused by wood smoke. Interestingly, both the treatment and control households experienced a large reduction from baseline in the use of open fires to light their home (although the treatment group's reduction was much greater than the control's). We found that many more treatment and control households used torches 36 months into the study than at baseline. We attribute this change to the introduction of low-cost LED torches in rural Zambia. These LED torches generate light for a much longer time than traditional torches using the same number of batteries, making the LED torches very efficient and economical. LED torches appear to be more cost-efficient than even candles, because we observe a shift in use from candles to torches in both the treatment and control groups during the 36 months.

[16] http://www.csd-i.org/installing-concrete-floors/
[17] http://www.who.int/mediacentre/factsheets/fs292/en/

Table 14.1: CGP Impacts on Housing Conditions

Dependent Variable	Program Impact (1)	Baseline Mean (2)	36M Treated Mean (3)	36M Control Mean (4)
Iron sheet roof	0.010 (0.839)	0.054	0.055	0.056
Cement floor	**0.032** (3.835)	0.030	0.053	0.019
Brick wall	-0.016 (-0.387)	0.317	0.349	0.357
Purchased lighting	**0.204** (4.963)	0.577	0.838	0.671
Purchased cooking material	**0.027** (2.224)	0.051	0.121	0.075
Clean water	**0.089** (2.270)	0.220	0.336	0.233
Own toilet	**0.147** (2.847)	0.437	0.665	0.560
N	4,971	2,513	1,220	1,238

NOTE: Estimations use difference-in-difference modeling among panel households. Robust *t*-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for gender, age, household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.

XV. Community Overview

Along with the household survey, we administered 90 community surveys throughout the three districts: Kaputa, Kalabo, and Shang'ombo. The survey was administered by a team of Zambian enumerators experienced in household surveys and fluent in the local language who were instructed to interview key informants from among the following: the village head, Area Coordinating Committee/CWAC members, government officials, and NGO workers.

Population and Migration

The sampled population in the CWACs has been relatively stable over the 3 years of the study. CWACs have an average of 493 households, which represent on average 2,827 individuals. Migration between the CWACs is also extremely low and balanced between immigration and emigration. The median number of households that moved into a CWAC is 5, while the median number moving out is 4.

Community Empowerment & Collective Action

The CWACs overall are well represented in both regional and local development institutions, with 70 percent of CWACs represented in either the local ACC or the Community Development Committee. Most of the executive committees on the CWACs are elected (93 percent), which empowers the community to make inclusive collective action decisions. The CWAC committees themselves are on average composed of 10 community members, with 4 female members. However, only 13 percent of CWAC committee chairpersons are female. Regular meetings are important in establishing committee effectiveness. Roughly 60 percent of committees meet on a quarterly basis, and the 50 percent of the committees' executives meet quarterly.

Access to Services

Transportation Infrastructure

Only 22 percent of CWACs have a market, so access to food and goods heavily relies on transportation infrastructure. Having around-the-year access to markets in other communities is therefore crucial. A community's year-round access to roads varies between the districts, 39 percent of communities in Kalabo have year-round access to road, and 50 percent of communities in Shang'ombo have access. In contrast, 83 percent of communities in Kaputa have road access. Even when travel by road is available, 70 percent of communities do not have access to public transportation.

Health and schooling facilities

Medical facilities are on average 13 kilometers away from a CWAC, and about 30 percent of communities are within 3 kms of a health facility. Facilities with doctors, however, are much further away from CWACs. The average distance from a CWAC to the closest medical facility with a doctor is 69 kilometers. When asked about their level of satisfaction with their local health facility, 55 percent of communities said they were dissatisfied, and only 6 percent said they were very satisfied. Access to schools is also a major constraint in the study sites. Only 13 percent of communities have a primary school and 8 percent have a secondary school. These figures illustrate how difficult it is for a demand-side intervention such as the CGP to have an impact on schooling and health outcomes of young children.

Cultural Norms

To enrich the CGP report by understanding cultural context, questions about cultural community norms surrounding child care and inheritance were included in the survey instrument.

Language

In Kaputa, Bemba is the primary household language in 86 percent of communities. English is the primary household language in 10 percent of Kaputa communities. In Shang'ombo, 30 percent of communities speak Lozi as the primary household language. Ten percent of Shang'ombo communities speak English as a primary household language. Fifty-six percent of Shang'ombo communities speak local dialects. However, 63 percent of communities list Lozi as secondary or tertiary household language. In Kalabo, English is the primary household language in 64 percent of communities, and 32 percent of communities listed English as a secondary or tertiary household language.

Religion

Christian religious practices are most common among the communities. Protestant practices are held in 96 percent of the communities, and Catholic practices are held in 74 percent of the communities. Traditional practices occur in 19 percent of communities.

Marriage

Ninety-eight percent of marriages occur through customary means with a dowry. Church weddings are also common, with 51 percent of communities reporting them as a marriage method. Communities in Shang'ombo have an average of 30 percent of households that are polygamous. Kaputa's communities also have an average of 29 percent of households that are polygamous. Communities in Kalabo have lower instances of polygamous households; on average 11 percent of community households in Kalabo practice polygamy.

Child Care

The survey asked how the community would respond to a child at the age of 10 who is healthy but does not attend school or has been absent for large stretches. Thirty-eight percent of the communities said that they would do nothing, 25 percent said there would be community disapproval, and 27 percent said there would be action by village elders.

In the event of parental death, family and community members often become the primary caregivers for children. When the mother of a child passes away, the maternal grandmother of a child becomes the primary female caregiver in 54 percent of communities, the paternal grandmother in 20 percent of communities, and the eldest female child in 10 percent. When both parents pass away, 50 percent of communities note that grandparents are the most likely to assume care. The family member with the financial ability to assume the care of children with deceased parents is most likely to do so in 31 percent of communities.

Inheritance

Women have a mixed ability to inherit property from their partners and family. If a woman's parents die, she can inherit their land in 72 percent of communities overall, with some differences between districts; Kalabo has the lowest reported rate, with only half of women being able to inherit their parents' land, while 79 percent and 90 percent of communities in Kalabo and Shang'ombo report that the daughter could inherit their parents' land, respectively. However, if her husband dies, she would only be able to inherit land from him in 43 percent of communities. There is a larger disparity between districts on the number of communities that will allow women to inherit their husbands' land in case of

his death—only 11 percent of communities in Kalabo and approximately 60 percent in both Kaputa and Shang'ombo. In addition, a woman can be inherited as a wife by a brother or other male family member of her deceased husband in 38 percent of communities. Nearly all communities in Kaputa (97 percent) report that the brother or other male family members of a deceased husband can inherit the widowed wife, while no communities in Kalabo and only 17 percent of communities in Shang'ombo report that the wife can be inherited in the case her husband dies.

Prices

There is a concern that in the remote villages of Zambia where the CGP operates, a large influx of cash to the community may lead to inflation if supply cannot adequately respond to the new increase in demand for goods and services. We implemented a community questionnaire as part of the survey fieldwork in which we collected prices on 12 key consumption items. We deflated the reported values from both the 24-month and 36-month data to 2010 units using the all-Zambia CPI and checked to see whether there was any excess inflation in intervention communities relative to control communities, a sign of supply bottlenecks that might cause inflationary pressure with the existence of the program.

Table 15.1 reports difference-in-difference estimates that effectively compare the change in a price over this period between treatment and control households in a manner similar to program impact estimates reported in the main text. We are interested in whether the existence of the program has led to changes in a price relative to control communities; although we are finding some decreases in cost of a number of items when controlling for inflation, these differences in price are not attributable to the program. However, we see an impact on the cost of chickens by 3 ZMW in treatment communities. The program impacts chicken ownership both in the share of households owning chickens and number of chickens per household, shown in the household data. Perhaps increased demand for chickens created by the program leads to an increase in prices in CGP communities because the supply cannot meet the increased demand.

Table 15.1: CGP Impacts on Prices

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Maize grain price	-5.50	-2.85	-2.65	28.15	22.55	25.17
	(-1.78)	(-1.21)	(-1.09)			
Rice price	-0.45	0.56	-1.01	4.16	3.32	4.22
	(-0.94)	(0.92)	(-1.79)			
Bean price	-0.68	-2.28	1.60	4.24	8.27	8.61
	(-0.79)	(-1.98)	(1.32)			
Dry fish price	-0.00	0.76	-0.76	2.79	1.96	2.29
	(-0.00)	(0.87)	(-1.23)			
Chicken price	**3.04**	1.28	1.76	16.44	14.07	13.69
	(2.21)	(0.68)	(1.16)			
Cooking oil price	-0.40	**-1.47**	1.07	12.77	9.06	9.24
	(-1.24)	(-2.42)	(1.68)			
Sugar price	-0.21	-0.78	0.57	9.07	6.76	6.92
	(-0.41)	(-1.27)	(1.25)			
Table salt price	0.45	-0.19	0.64	4.86	3.57	3.21
	(0.50)	(-0.22)	(1.29)			

Toilet soap price	0.33	0.13	0.20	5.88	3.84	3.76
	(1.22)	(0.33)	(0.61)			
Laundry soap price	-0.28	0.30	-0.58	6.00	4.11	4.35
	(-0.88)	(0.69)	(-1.45)			
Panadol price	0.98	1.59	-0.61	3.60	2.47	2.18
	(1.57)	(1.14)	(-0.44)			
Secondary school fee	-94.30	8.47	-102.77	201.50	650.27	795.14
	(-0.96)	(0.07)	(-0.81)			
N		270		90	45	45

XV. Conclusion

After 3 years of transfers, the CGP continues to meet some its goals with respect to reducing poverty, improving food security, providing more consumption smoothing, increasing productivity, and increasing livestock ownership. As a result, program households are significantly more financially secure than those in control locations, and are thus more likely to be able to withstand unforeseen setbacks to health and agricultural productivity that would otherwise reduce income and consumption. This improvement in the capacity to withstand shocks, what is often termed 'resilience', is a key impact of the program.

However, the program is unable to translate this improvement in economic security into impacts to young children's nutritional status (stunting, wasting, and underweight). Some of the key factors necessary for changing nutritional status have improved, such as greater food security, diet diversity, and increased infant and young child feeding. Yet, some other important factors, such as access to medical care and medicine are in poor condition, limiting the scope of the program. The cash transfers in theory can help households access health services by enabling them to pay costs to reach the nearest clinic. However, only 30 percent of communities are within 3 kms of a health facility, and more than half of these do not even have oral rehydration salts, a critical drug for addressing diarrhea in young children. The program alone cannot address these problems, which require coordinated effort from the government to provide support services.

Similarly, we do not find impacts to enrollment and attendance in school—primary and secondary. However, there is strong evidence that the program helps children enroll in school earlier in the year (by 10 points), while children not in CGP households delay their enrollment until later in the year. This could be due to control households needing to wait until they have secured funds from harvesting their cash crop, while CGP households already have funds to cover items like shoes and clothing needed for school. As for health services, school availability is a challenge in the study areas, with only 13 percent of communities having a primary school and even less having a secondary school.

The impacts on poverty and consumption at 36 months are similar to those observed at 24 months, which is consistent with the fact that the transfer size did not change over time. This result indicates that the program has not yet generated income multiplier effects within program households which could then be translated into further increases in consumption. However, there is clear evidence that the program smoothes consumption, itself a critical achievement, and along with the reduction in debt and increased savings by women, means that the overall economic stability of the household has improved significantly.

In conclusion, the CGP continues to play an important role in strengthening the financial position of households, allowing them to increase consumption and diet diversity, reduce their debt, and even make investments towards asset accumulation (tools, housing) and livelihood diversification (nonfarm enterprise, livestock). These increases suggest that households in the program are likely to be much more resilient to shocks and external sources of fluctuations in income. However, these important benefits to household economic security have not yet been fully translated into positive developmental impacts on young children, particularly in the health and nutrition domains. The results from this report suggest that there may be a limit to what a demand-side intervention can accomplish for children in a situation with a low level supply of services. Cash transfers in general can be expected to raise consumption and food security, and as long as markets are available, the conditions for realizing these objectives can be met. However, children's human development depends in part on the availability of

complementary services such as health care and education; without these services, cash alone is unlikely to be sufficient to realize sustained improvements in this area.

Annex 1: Conceptual Framework

The CGP provides an unconditional cash transfer to households with a child under age 5. CGP-eligible households are extremely poor, with 95 percent falling below the national extreme poverty line and having a median household per-capita daily consumption of ZMW 1.05, or approximately 20 U.S. cents. Among households at such low levels of consumption, the marginal propensity to consume will be almost 100 percent; that is, they will spend all of any additional income rather than save it. Thus, we expect the immediate impact of the program will be to raise spending levels, particularly basic spending needs for food, clothing, and shelter, some of which will influence children's health, nutrition, and material well-being. Once immediate basic needs are met, and possibly after a period of time, the sustained influx of new cash may then trigger further responses within the household economy, for example, by providing room for investment and other productive activity, the use of services, and the ability to free up older children from work to attend school.

Figure A1.1 brings together these ideas into a conceptual framework that shows how the CGP can affect household activity, the causal pathways involved, and the potential moderator and mediator factors. The diagram is read from left to right. We expect a direct effect of the cash transfer on household consumption (food security, material well-being), on the use of services, and possibly even on productive activity after some time. Sociological and economic theories of human behavior suggest that the impact of the cash may work through several mechanisms (mediators), including a woman's bargaining power within the household (because the woman receives the cash directly) and the degree to which the woman receiving the cash is forward looking. Similarly, the impact of the cash transfer may be weaker or stronger depending on local conditions in the community. These moderators include access to markets and other services, prices of goods and services, and shocks. Moderating effects are shown with dotted lines that intersect with the solid lines to indicate that they can influence the strength of the direct effect.[18]

The next step in the causal chain is the effect on children, which we separate into effects on older and younger children because of the program's focus on very young children and because the key indicators of welfare are different for the two age groups. It is important to recognize that any potential impact of the program on children must work through the household by its effect on spending or time allocation decisions (including use of services). The link between the household and children can also be moderated by environmental factors, such as distance to schools or health facilities, as indicated in the diagram, and household-level characteristics themselves, such as the mother's literacy. Indeed, from a theoretical perspective, some factors cited as mediators may actually be moderators, such as women's bargaining power. We can test for moderation versus mediation through established statistical techniques,[19] and this information will be important to help us understand the actual impact of the program on behavior.

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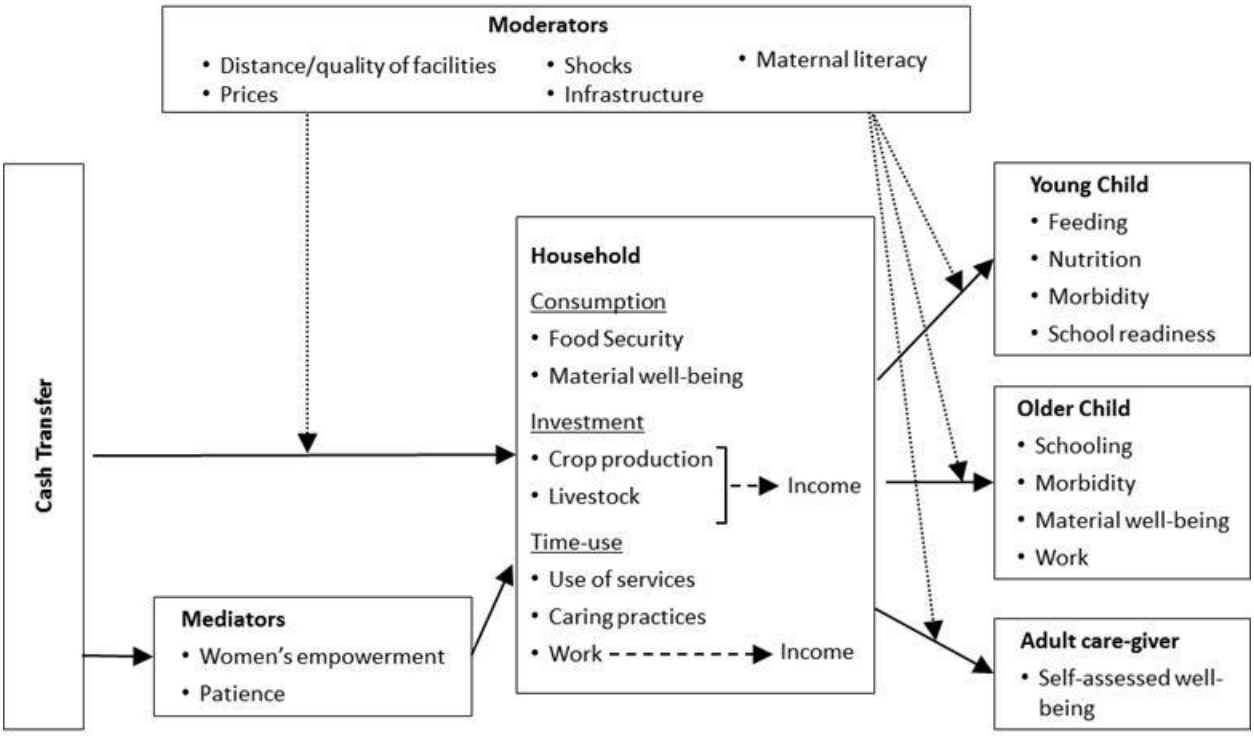
[18] A mediator is a factor that can be influenced by the program and so lies directly within the causal chain. A moderator, in contrast, is not influenced by the program. Thus, service availability is a moderator, whereas women's bargaining power may be either a moderator or a mediator depending on whether it is itself changed by the program. Maternal literacy is a moderator and not a program outcome, unless the program inspires caregivers to learn to read and write.

[19] Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173–1182.

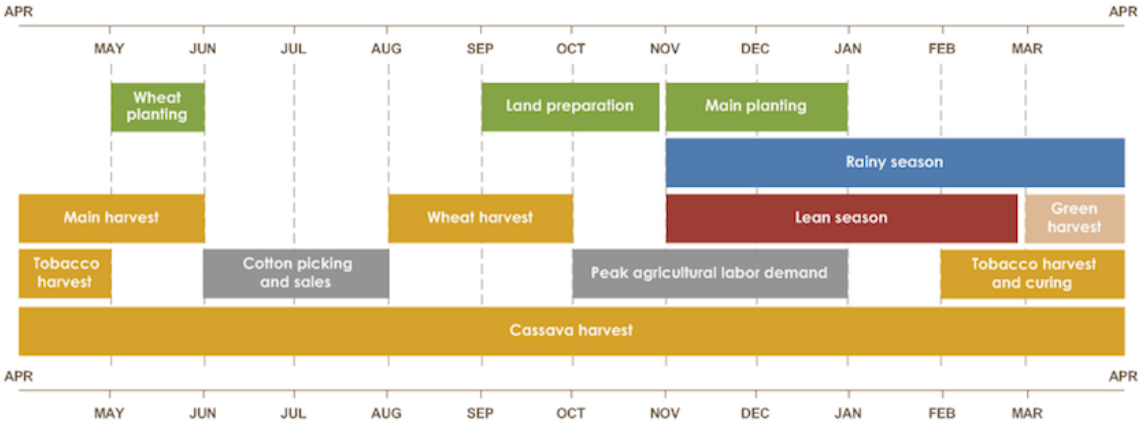
Figure A1.1 identifies some of the key indicators along the causal chain that we analyze in the evaluation of the CGP. These are consistent with the log frame of the project and are all measured using established items in existing national sample surveys such as the Living Conditions Monitoring Survey (LCMS) and the Zambia Demographic and Health Survey (ZDHS). The only exception is the school readiness indicator, which is a relatively new index developed by UNICEF to be rolled out as part of its global Multiple Indicators Cluster Surveys (MICS) Program.

Figure 1. Conceptual Framework for Impact Evaluation of Child Grant Program



We expect the effects of the program on some outcomes to depend on the time of year because lifestyle in the rural Zambian villages varies by the farming season, including how people spend their time and how much money they have available. The average subsistence farmer in rural Zambia has the fewest resources and food security in the lean season, from November to March, and the greatest amount of food and resources during the harvest season in May and June. Figure A1.2 shows the seasonal agricultural calendar with planting, rain, lean season, and harvest season. We expect a smaller difference in consumption and food security between beneficiaries and the control group during the harvest season than during the lean season because the control group members have food from their harvest. Therefore, we may not see programmatic impacts to food-related outcomes during the harvest time. Similarly, we may observe smaller impacts to items such as clothing and shoes, because this is the time of year when farmers have some money from the harvest and purchase necessities. Instead, we are more likely to observe impacts for more expensive items, such as assets or livestock.

Figure A1.2: Seasonal Agricultural Calendar for a Typical Year in ZAMBIA



Source: http://www.fews.net/southern-africa/zambia [FEWS Net—Family Early Warning System Net]

Annex 2: Difference-in-Differences Estimation

The statistical approach we take to derive average treatment effects of the CGP is the difference-in-differences (DD) estimator. This entails calculating the change in an indicator (Y), such as food consumption, between baseline and follow-up periods for treatment and comparison group units and comparing the magnitude of these changes.

The DD is one of the strongest estimators available in the evaluation literature (Shadish et al., 2002). Two key features of this design are particularly attractive for deriving unbiased program impacts. First, using pre- and posttreatment measures allows us to "difference" out unmeasured fixed (i.e., time-invariant) family or individual characteristics that may affect outcomes, such as motivation, health endowment, mental capacity, and unobserved productivity. It also allows us to benchmark the change in the indicator against its value in the absence of treatment. Second, using the change in a control group as a comparison allows us to account for general trends in the value of the outcome. For example, if there is a general increase in school enrollment owing to expansion of school access, deriving treatment effects only on the basis of the treatment group will confound program impacts on schooling with the general trend increase in schooling.

The key assumption underpinning the DD is that there is no systematic unobserved time-varying difference between the treatment and control groups. For example, if the treatment group changes its preference for schooling over time but the control group does not, then we would attribute a greater increase in schooling in the treatment group to the program rather than to this unobserved time-varying change in characteristic. In practice, the random assignment to treatment and control groups is the geographical proximity of the samples, and the rather short duration between pre- and postintervention measurements will make this assumption quite reasonable.

Figure A2.1 illustrates how the estimate of differences in differences between treatment (T) and control (C) groups is computed. The top row shows the baseline and postintervention values of the indicator (Y), and the last cell in that row depicts the change or difference in the value of the outcome for T units. The second row shows the value of the indicator at baseline and postintervention for comparison group units, and the last cell illustrates the change or difference in the value of this indicator over time. The difference between these two differences (treatment vs. control), shown in the shaded cell in Figure A2.1, is the difference-in-differences or double-difference estimator.

Figure A2.1: The Difference-in-Differences (DD) Estimator (Post = 24-month follow-up)

	Baseline (2010)	Post (2012)	1st difference
Treatment (T)	Y^T_0	Y^T_{24}	$\Delta Y^T_{24}=(Y^T_{24}-Y^T_0)$
Comparison (C)	Y^C_0	Y^C_{24}	$\Delta Y^C_{24}=(Y^C_{24}-Y^C_0)$
			Difference in differences DD_{24} $= (\Delta Y^T_{24} - \Delta Y^C_{24})$

A convenient way to implement the DD methodology is through an ordinary least squares regression. In particular, the DD estimator presented in Figure A1.1 can be specified as follows:

$$Y_{i,g,wave} = \alpha_{24} + \beta_{1,24} * d_{g=Treat} + \beta_{2,24} * d_{wave=24} + \beta_{3,24} * d_{g=Treat} * d_{wave=24} + \varepsilon_{i,g,wave}$$

where

- $d_{g=Treat}$ is an indicator variable equal to 1 if observation ***i*** belongs to the treatment condition and equal to zero otherwise;
- $d_{wave=24}$ is an indicator variable equal to 1 if observation ***i*** belongs to the 24-month wave and equal to zero for a variable measured at baseline (i.e., 2010); and
- $\beta_{3,24}$ is equivalent to DD_{24} in Figure A2.1, the effect of the program after 24 months of being implemented.

The differences in differences estimator can also be applied to different follow-up waves to estimate the effects of the program at a given point in time. That is, instead of using the 24-month follow-up as in Figure A2.1, we can use data from the 30-month wave collected in 2013 to estimate CGP impacts at the harvest season. Figure A2.2 presents DD impact estimation at the 30-month wave (i.e., $DD_{30} = \Delta Y^{T}_{30} - \Delta Y^{C}_{30}$), which essentially differences out the average change in the outcome between the 30-month and baseline waves for both the treatment (i.e., ΔY^{T}_{30}) and control groups (i.e., ΔY^{c}_{30}).

Figure A2.2: The Difference-in-Differences (DD) Estimator (Post = 30-month follow-up)

	Baseline (2010)	Post (2013)	1st difference
Treatment (T)	Y^{T}_{0}	Y^{T}_{30}	$\Delta Y^{T}_{30}=(Y^{T}_{30}-Y^{T}_{0})$
Comparison (C)	Y^{C}_{0}	Y^{C}_{30}	$\Delta Y^{C}_{30}=(Y^{C}_{30}-Y^{C}_{0})$
			Difference in differences DD_{30} $= (\Delta Y^{T}_{30} - \Delta Y^{C}_{30})$

Note that the DD_{30} can also be estimated using the following linear regression framework:

$$Y_{i,g,wave} = \alpha_{30} + \beta_{1,30} * d_{g=Treat} + \beta_{2,30} * d_{wave=30} + \beta_{3,30} * d_{g=Treat} * d_{wave=30} + \varepsilon_{i,g,wave}$$

where

- $d_{g=Treat}$ is an indicator variable equal to 1 if observation ***i*** belongs to the treatment condition and equal to zero otherwise;
- $d_{wave=30}$ is an indicator variable equal to 1 if observation ***i*** belongs to the 30-month wave and equal to zero for a variable measured at baseline (i.e., 2010); and
- $\beta_{3,30}$ is equivalent to DD_{30} in Figure A1.2, the effect of the program after 30 months of being implemented.

Note also that both DD_{24} and DD_{30} can be estimated simultaneously using a combined linear regression specified as follows:

$$Y_{i,g,wave} = \alpha \quad + \beta_1 * d_{g=Treat} + \beta_{2,24} * d_{wave=24} \; + \beta_{2,30} * d_{wave=30} + \beta_{3,24} * d_{g=Treat} * d_{wave=24} + \beta_{3,30} * d_{g=Treat} * d_{wave=30} \; + \varepsilon_{i,g,wave}$$

where

- $\beta_{3,24}$ is equivalent to DD_{24} in Figure A1.1 and
- $\beta_{3,30}$ is equivalent to DD_{30} in Figure A1.2.

This last specification is the one used throughout this report to estimate the effects of the program. The combined specification allows us to test for differential impacts of the program between the 24- and 30-month waves by testing whether $\beta_{3,24} = \beta_{3,30}$

Note also that one of the advantages of using a linear regression specification is the ability to control for other determinants of the outcomes of interest in order to obtain program impacts that are more precisely estimated. For example, when estimating outcomes at the household level, such as food expenditures, we control for household size, recipient's age, education and marital status, district fixed effects, household demographic composition, and a vector of cluster-level prices.

Annex 3: Mean Differences at Baseline for Attrition Analysis

Table A3.1: Household Level Control Comparisons
(Control versus Treatment for Respondent Households)

Variables	Control Mean	Control N1	Treatment Mean	Treatment N2	T-C Diff	Diff SE	p-value	Effect Size
Household size	5.628	1,238	5.764	1,221	0.136	0.174	0.437	0.064
Number of children ages 0-5	1.923	1,238	1.889	1,221	-0.035	0.056	0.535	-0.045
Distance to food market	24.579	868	19.987	849	-4.592	5.841	0.434	-0.143
Distance to health facility	13.979	1,188	14.443	1,178	0.464	2.595	0.859	0.020
HH was affected by drought	0.052	1,238	0.048	1,221	-0.003	0.019	0.862	-0.015
HH was affected by flood	0.074	1,238	0.033	1,221	-0.042	0.027	0.126	-0.184
HH was affected by any shocks	0.191	1,23H8	0.179	1,221	-0.012	0.060	0.841	-0.031

NOTE: Diff is the average difference between Treatment and Control, and SE is the standard error of this difference clustered at the CWAC level.

Table A3.2 Household Level Outcome Comparisons
(Control versus Treatment for Respondent Households)

NOTE: Diff is the average difference between Treatment and Control, and SE is the standard error of this difference clustered at the CWAC level.

Variables	Control Mean	Control N1	Treatment Mean	Treatment N2	T-C Diff	Diff SE	p-value	Effect Size
Per capita food expenditure, kwacha (not rebased)	29,285	1,238	30,934	1,221	1,649	2,245	0.464	0.062
Food share of total household expenditure	0.719	1,238	0.720	1,220	0.001	0.013	0.946	0.006
Cereal as share of total food expenditure	0.312	1,238	0.341	1,218	0.029	0.039	0.455	0.112
Roots and tubers as share of total food expenditure	0.170	1,238	0.149	1,218	-0.021	0.035	0.542	-0.094
Pulses and legumes as share of total food expenditure	0.029	1,238	0.028	1,218	-0.001	0.005	0.818	-0.017
Fruits and vegetables as share of total food expenditure	0.226	1,238	0.209	1,218	-0.017	0.017	0.311	-0.096
Meats, poultry, fish as share of total food expenditure	0.174	1,238	0.185	1,218	0.011	0.012	0.389	0.064
Total household expenditure per person in the household (not rebased)	39,460	1,238	41,489	1,221	2,029	2,659	0.447	0.063
Food security scale	15.351	1,219	14.958	1,198	-0.393	0.575	0.496	-0.069

Table A3.3: Children under 5 Control Comparisons
(Control versus Treatment for Respondent Households)

Variables	Control Mean	Control N1	Treatment Mean	Treatment N2	T-C Diff	Diff SE	p-value	Effect Size
Age in months	26.685	2,078	26.087	2,041	-0.598	0.438	0.176	-0.037
Female	0.501	2,078	0.525	2,041	0.024	0.015	0.115	0.048
Highest grade level of primary care giver	0.960	2,052	0.960	2,007	0.001	0.007	0.935	0.003
BCG vaccination	0.957	2,051	0.951	2,001	-0.006	0.008	0.454	-0.029
Oral polio vaccination	0.945	2,047	0.945	1,995	0.000	0.009	0.993	0.000

NOTE: Diff is the average difference between Treatment and Control, and SE is the standard error of this difference clustered at the CWAC level.

Table A3.4: Children Under 5 Outcome Comparisons
(Control versus Treatment for Respondent Households)

Variables	Control Mean	Control N1	Treatment Mean	Treatment N2	T-C Diff	Diff SE	p-value	Effect Size
Weight children 0-3 months	11.782	1,995	11.749	1,949	-0.032	0.339	0.925	-0.003
Height (cms) children 0-3 months	80.299	1,882	78.779	1,835	-1.519	1.114	0.176	-0.080
Received vitamin a dose last 6 months	0.759	1,743	0.800	1,712	0.041	0.033	0.217	0.099
Had diarrhea in the past 2 weeks	0.175	2,050	0.201	2,003	0.026	0.021	0.220	0.067
Has been ill with fever last 2 weeks	0.231	2,061	0.238	2,019	0.006	0.030	0.834	0.015

NOTE: Diff is the average difference between Treatment and Control, and SE is the standard error of this difference clustered at the CWAC level.

Table A3.5: Children Under 5 Anthropometrics
(Control versus Treatment for Respondent Households)

Variables	Control Mean	Control N1	Treatment Mean	Treatment N2	T-C Diff	Diff SE	p-value	Effect Size
Child's Height-for-Age (z-score)	-1.419	1,743	-1.407	1,657	0.012	0.085	0.885	0.008
Child's Weight-for-Age (z-score)	-0.878	1,957	-0.926	1,897	-0.048	0.058	0.407	-0.038
Child's Weight-for-Height (z-score)	-0.148	1,741	-0.195	1,651	-0.047	0.061	0.444	-0.038

NOTE: Diff is the average difference between Treatment and Control, and SE is the standard error of this difference clustered at the CWAC level.

Table A3.6: Children Aged 3-7 Development Scores (Control versus Treatment for Respondent Households)

Variables	Control Mean	Control N1	Treatment Mean	Treatment N2	T-C Diff	Diff SE	p-value	Effect Size
Development scale 1: Play with items	1.461	976	1.486	888	0.025	0.066	0.700	0.032
Care scale: Family engagement activities	2.451	976	2.215	888	-0.236	0.174	0.179	-0.108
Development scale 2: skills/behaviors	4.020	976	4.072	888	0.052	0.159	0.746	0.025

NOTE: Diff is the average difference between Treatment and Control, and SE is the standard error of this difference clustered at the CWAC level.

Table A3.7: Older Child (5-17) Characteristics (Control versus Treatment for Respondent Households)

Variables	Control Mean	Control N1	Treatment Mean	Treatment N2	T-C Diff	Diff SE	p-value	Effect Size
Age in years	9.590	2,400	9.822	2,431	0.231	0.110	0.038	0.065
Female	0.492	2,400	0.521	2,431	0.028	0.015	0.071	0.057
Maternal orphan	0.073	2,400	0.083	2,431	0.010	0.017	0.568	0.036
Paternal orphan	0.153	2,400	0.176	2,431	0.022	0.022	0.314	0.060
OVC	0.199	2,400	0.224	2,431	0.025	0.027	0.358	0.061
Minimum needs met	0.780	2,400	0.766	2,431	-0.014	0.037	0.701	-0.034
Ever enrolled in school	0.636	2,384	0.652	2,417	0.016	0.022	0.478	0.033
Currently enrolled in school	0.576	2,384	0.590	2,417	0.014	0.023	0.537	0.029
Full attendance in prior week	0.784	1,336	0.801	1,375	0.016	0.029	0.578	0.040
Paid or unpaid work	0.526	2,362	0.513	2,371	-0.013	0.039	0.735	-0.027
Unpaid hours last 2 weeks	20.908	1,222	22.609	1,184	1.701	2.875	0.555	0.078

NOTE: Diff is the average difference between Treatment and Control, and SE is the standard error of this difference clustered at the CWAC level.

Table A3.8: Household Level Control Comparisons (Full Sample Versus Sample Remaining at 36-month Follow-up)

Variables	Full Sample Mean	Full Sample N1	Remaining Sample Mean	Remaining Sample N2	T-C Diff	Diff SE	p-value	Effect Size
Household size	5.697	2,518	5.696	2,459	-0.001	0.007	0.918	-0.000
Number of children ages 0-5	1.903	2,518	1.906	2,459	0.003	0.003	0.327	0.003
Distance to food market	22.176	1,756	22.308	1,717	0.132	0.119	0.272	0.004
Distance to health facility	14.171	2,421	14.210	2,366	0.039	0.063	0.540	0.002
HH was affected by drought	0.050	2,518	0.050	2,459	-0.000	0.001	0.528	-0.002
HH was affected by flood	0.054	2,518	0.054	2,459	-0.000	0.001	0.635	-0.001
HH was affected by any shocks	0.186	2,518	0.185	2,459	-0.001	0.001	0.394	-0.003

NOTE: Diff is the average difference between full and the remaining samples, and SE is the standard error of this difference clustered at the CWAC level.

Table A3.9: Household Level Outcome Comparisons
(Full Sample Versus Sample Remaining at 36-month Follow-up)

	Full Sample		Remaining Sample		T-C	Diff	p-value	Effect
Variables	Mean	N1	Mean	N2	Diff	SE		Size
Per capita food expenditure, kwacha (not rebased)	30,044	2,518	30,104	2,459	60	65	0.364	0.002
Food share of total household expenditure	0.719	2,517	0.719	2,458	0.000	0.000	0.536	0.002
Cereal as share of total food expenditure	0.326	2,515	0.327	2,456	0.000	0.001	0.564	0.002
Roots and tubers as share of total food expenditure	0.161	2,515	0.160	2,456	-0.002	0.001	0.101	-0.007
Pulses and legumes as share of total food expenditure	0.029	2,515	0.029	2,456	0.000	0.000	0.255	0.003
Fruits and vegetables as share of total food expenditure	0.217	2,515	0.218	2,456	0.001	0.001	0.355	0.003
Meats, poultry, fish as share of total food expenditure	0.179	2,515	0.179	2,456	0.001	0.001	0.332	0.003
Total household expenditure per person in the household (not rebased)	40,443	2,518	40,467	2,459	25	89	0.781	0.001
Food security scale	15.145	2,474	15.156	2,417	0.011	0.020	0.568	0.002

NOTE: Diff is the average difference between full and the remaining samples, and SE is the standard error of this difference clustered at the CWAC level.

Table A3.10: Children under 5 Control Comparisons
(Full Sample Versus Sample Remaining at 36-month Follow-up)

	Full Sample		Remaining Sample		T-C	Diff	p-value	Effect
Variables	Mean	N1	Mean	N2	Diff	SE		Size
Age in months	26.437	4,215	26.389	4,119	-0.048	0.029	0.101	-0.003
Female	0.510	4,215	0.513	4,119	0.002	0.001	0.094	0.005
Highest grade level of primary care giver	5.468	3,015	5.477	2,932	0.008	0.011	0.455	0.003
BCG vaccination	0.960	4,152	0.960	4,059	-0.000	0.000	0.219	-0.002
Oral polio vaccination	0.955	4,145	0.954	4,052	-0.001	0.000	0.000	-0.005

NOTE: Diff is the average difference between full and the remaining samples, and SE is the standard error of this difference clustered at the CWAC level.

Table A3.11: Children under 5 Outcome Comparisons at Baseline (Full Sample Versus Sample Remaining at 36-month Follow-up)

Variables	Full Sample Mean	Full Sample N1	Remaining Sample Mean	Remaining Sample N2	T-C Diff	Diff SE	p-value	Effect Size
Weight children 0-3 months	11.766	4,037	11.766	3,944	-0.001	0.020	0.973	-0.000
Height (cms) children 0-3 months	79.550	3,803	79.549	3,717	-0.002	0.044	0.971	-0.000
Received vitamin a dose last 6 months	0.779	3,539	0.779	3,455	0.001	0.001	0.605	0.002
Had diarrhea in the past 2 weeks	0.189	4,148	0.188	4,053	-0.001	0.001	0.209	-0.004
Has been ill with fever last 2 weeks	0.234	4,175	0.235	4,080	0.000	0.001	0.956	0.000

NOTE: Diff is the average difference between full and the remaining samples, and SE is the standard error of this difference clustered at the CWAC level.

Table A3.12 Children under 5 Anthropometrics (Full Sample Versus Sample Remaining at 36-month Follow-up)

Variables	Full Sample Mean	Full Sample N1	Remaining Sample Mean	Remaining Sample N2	T-C Diff	Diff SE	p-value	Effect Size
Child's Height-for-Age (z-score)	-1.419	3,479	-1.413	3,400	0.006	0.004	0.129	0.004
Child's Weight-for-Age (z-score)	-0.908	3,946	-0.902	3,854	0.006	0.004	0.084	0.005
Child's Weight-for-Height (z-score)	-0.172	3,470	-0.171	3,392	0.001	0.004	0.694	0.001

NOTE: Diff is the average difference between full and the remaining samples, and SE is the standard error of this difference clustered at the CWAC level.

Table A3.13 Children (3-7) Development Scores (Full Sample Versus Sample Remaining at 36-month Follow-up)

Variables	Full Sample Mean	Full Sample N1	Remaining Sample Mean	Remaining Sample N2	T-C Diff	Diff SE	P-value Mean	Effect N1
Development scale 1: Play with items	1.475	1,909	1.473	1,864	-0.001	0.003	1.475	1,909
Care scale: Family engagement activities	2.332	1,909	2.339	1,864	0.006	0.009	2.332	1,909
Development scale 2: skills/behaviors	4.056	1,909	4.045	1,864	-0.011	0.009	4.056	1,909

NOTE: Diff is the average difference between full and the remaining samples, and SE is the standard error of this difference clustered at the CWAC level.

Table A3.14 Older Child (5-17) Characteristics at Baseline
(Full Sample Versus Sample Remaining at 36-month Follow-up)

Variables	Full Sample Mean	Full Sample N1	Remaining Sample Mean	Remaining Sample N2	T-C Diff	Diff SE	p-value Mean	Effect N1
Age in years	9.715	4,949	9.707	4,831	-0.008	0.008	9.715	4,949
Female	0.504	4,949	0.507	4,831	0.003	0.001	0.504	4,949
Maternal orphan	0.078	4,949	0.078	4,831	0.000	0.001	0.078	4,949
Paternal orphan	0.165	4,949	0.165	4,831	-0.001	0.001	0.165	4,949
OVC	0.212	4,949	0.211	4,831	-0.001	0.001	0.212	4,949
Minimum needs met	0.774	4,949	0.773	4,831	-0.001	0.001	0.774	4,949
Ever enrolled in school	0.645	4,919	0.644	4,801	-0.001	0.001	0.645	4,919
Currently enrolled in school	0.584	4,919	0.583	4,801	-0.001	0.001	0.584	4,919
Full attendance in prior week	0.791	2,782	0.793	2,711	0.002	0.002	0.791	2,782
Paid or unpaid work	0.519	4,849	0.520	4,733	0.001	0.002	0.519	4,849
Unpaid hours last 2 weeks	21.595	2,462	21.745	2,406	0.149	0.075	21.595	2,462

NOTE: Diff is the average difference between full and the remaining samples, and SE is the standard error of this difference clustered at the CWAC level.

Annex 4: Expenditure, Consumption Smoothing, and Poverty

Table A4.1: CGP Impacts on per-capita expenditures

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Total	**7.88**	**14.40**	**-6.53**	40.48	57.07	47.10
	(4.34)	(4.81)	(-2.71)			
Food	**5.51**	**11.12**	**-5.61**	30.06	42.75	35.64
	(3.43)	(4.67)	(-2.65)			
Clothing	**0.45**	**0.84**	**-0.39**	1.27	1.89	1.46
	(3.32)	(5.79)	(-2.89)			
Education	0.18	0.10	0.08	0.44	0.93	0.66
	(1.43)	(0.40)	(0.30)			
Health	0.48	**1.02**	-0.54	2.25	3.42	2.83
	(1.89)	(4.22)	(-1.82)			
Domestic	0.39	0.45	-0.06	5.18	5.45	4.83
	(0.77)	(0.77)	(-0.16)			
Transport/Communication	**0.96**	**0.87**	0.09	0.75	1.73	0.78
	(3.33)	(2.53)	(0.21)			
Other	-0.09	0.00	-0.09	0.11	0.49	0.53
	(-0.68)	(0.03)	(-0.71)			
Alcohol, Tobacco	0.03	0.03	0.00	0.40	0.41	0.37
	(0.24)	(0.22)	(0.04)			
N		7,263		2,517	1,217	1,236

NOTE: Estimations use difference-in-difference modeling among panel households. Robust t-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for household size, recipient age, education and marital status, districts, household demographic composition, and a vector of cluster-level prices.

Table A4.2: CGP Impacts on expenditure shares

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Food	0.001	0.008	-0.007	0.720	0.750	0.747
	(0.065)	(0.593)	(-0.623)			
Clothing	0.004	**0.008**	-0.004	0.034	0.035	0.033
	(1.466)	(2.990)	(-1.424)			
Education	0.002	0.001	0.001	0.014	0.017	0.014
	(0.704)	(0.202)	(0.499)			
Health	0.003	0.005	-0.002	0.056	0.060	0.058
	(0.825)	(1.388)	(-0.594)			
Domestic	-0.014	**-0.026**	0.012	0.155	0.103	0.117
	(-1.129)	(-2.010)	(1.535)			
Transport/Communication	**0.009**	0.006	0.002	0.011	0.019	0.012
	(2.582)	(1.666)	(0.624)			
Other	-0.003	0.001	-0.004	0.002	0.009	0.012
	(-1.430)	(1.512)	(-1.909)			
Alcohol, Tobacco	-0.002	-0.002	0.000	0.008	0.007	0.007
	(-0.689)	(-0.940)	(0.225)			
N		7,261		2,515	1,217	1,236

NOTE: Same notes as in Table A4.1

Figure A4.1

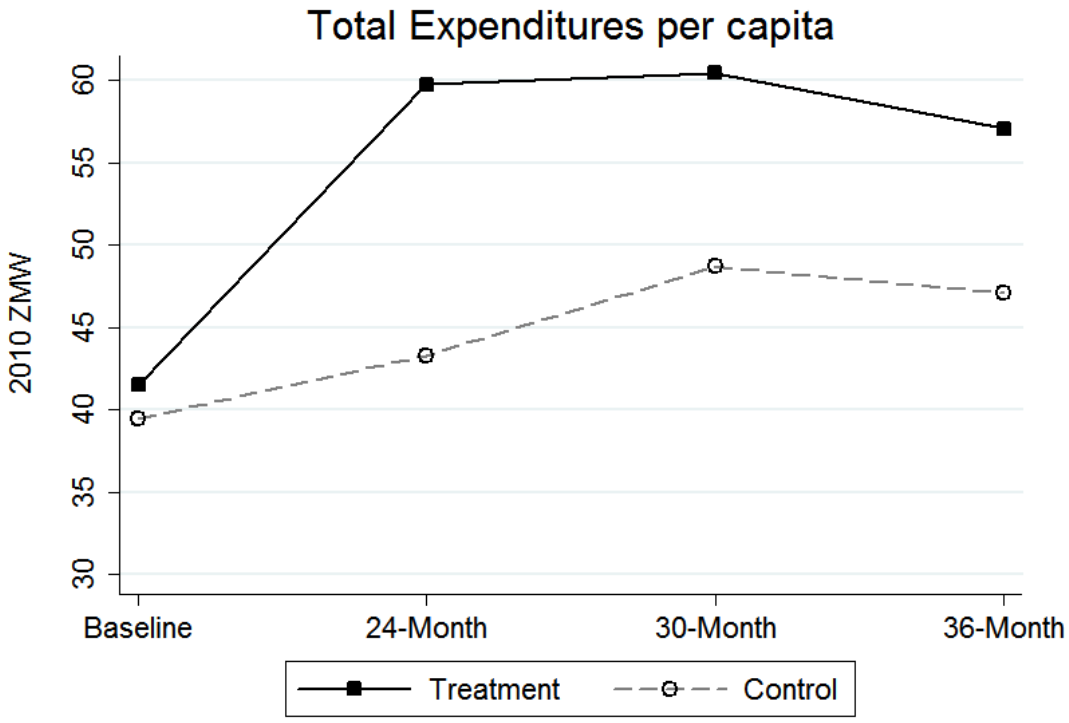


Figure A4.2

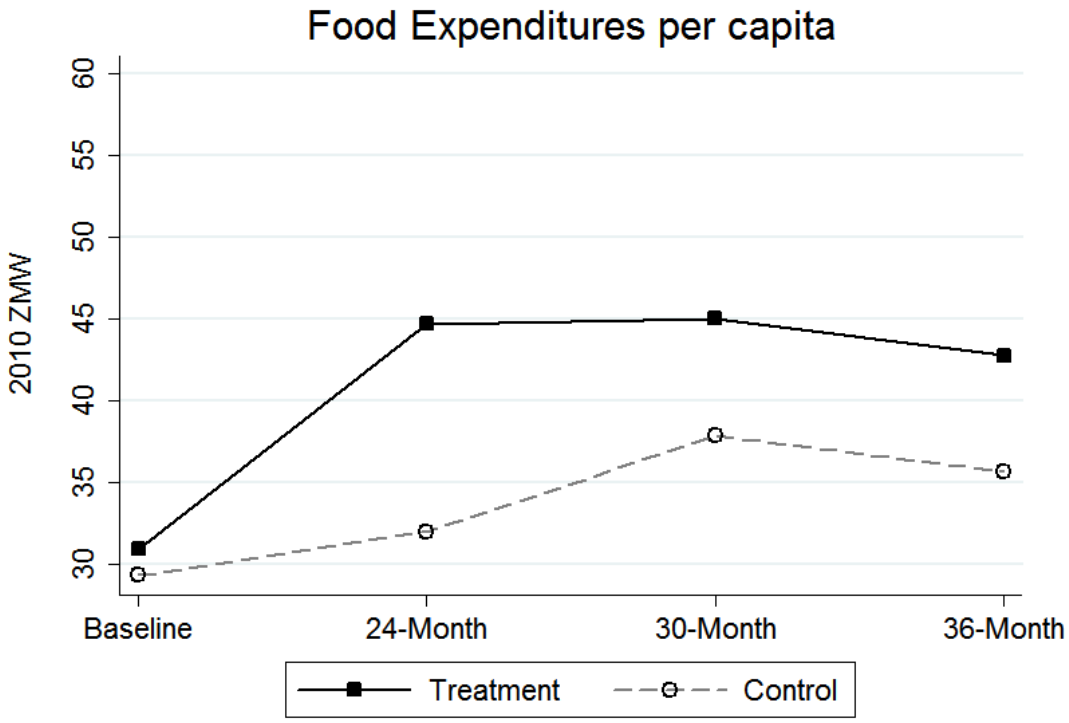


Figure A4.3

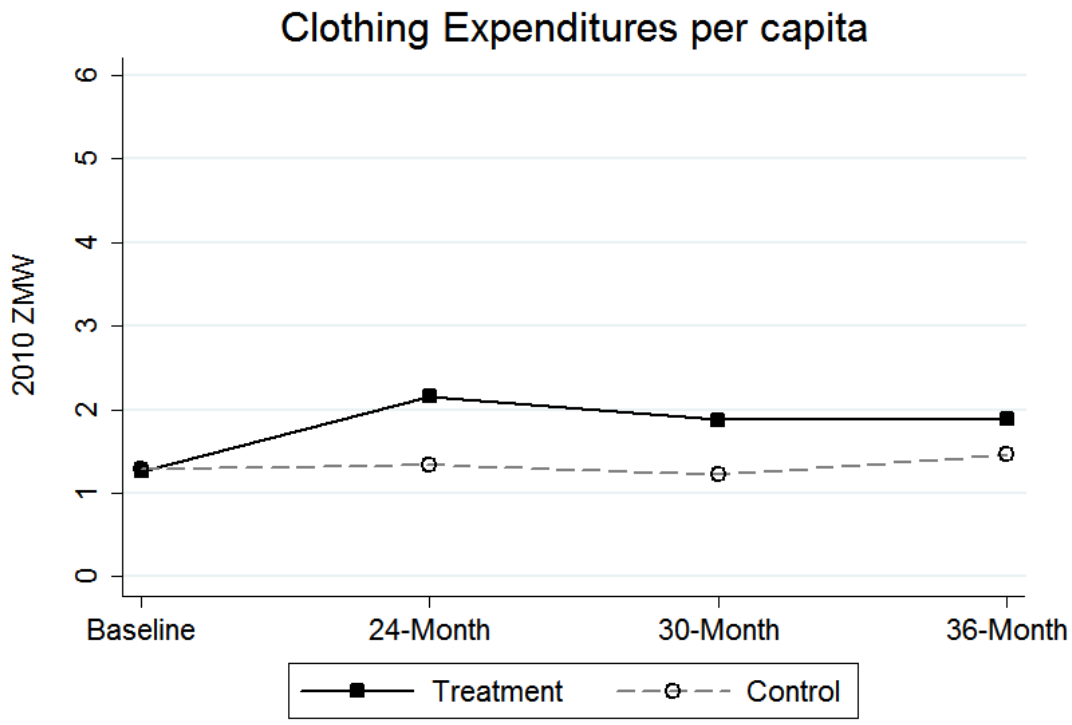


Figure A4.4

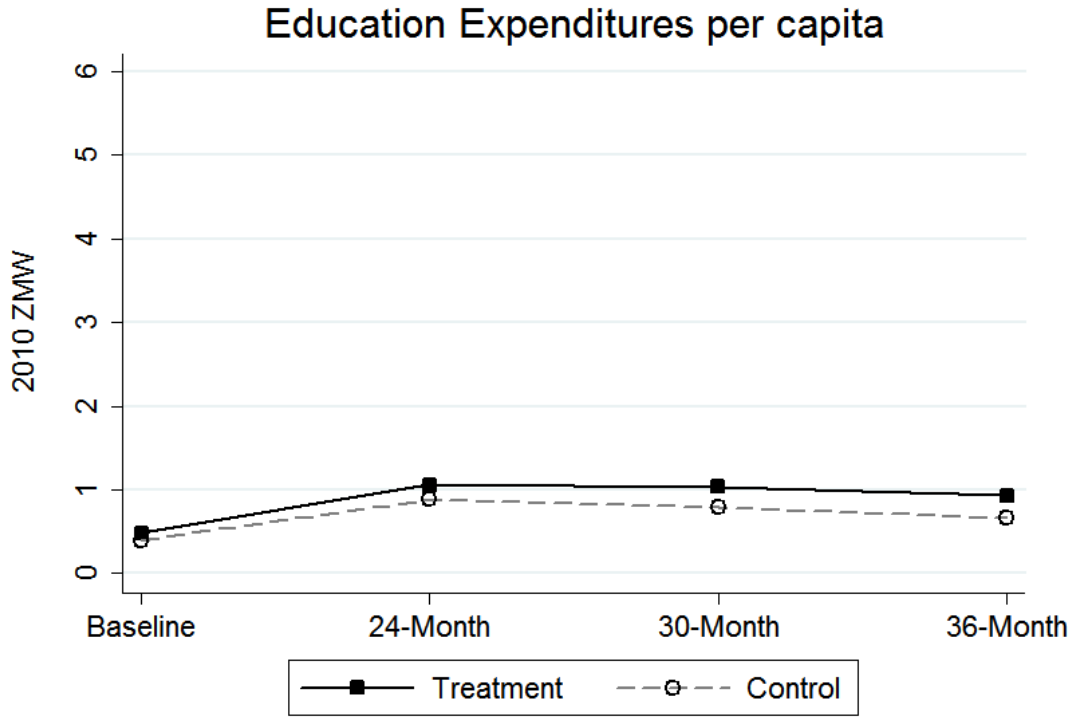


Figure A4.5

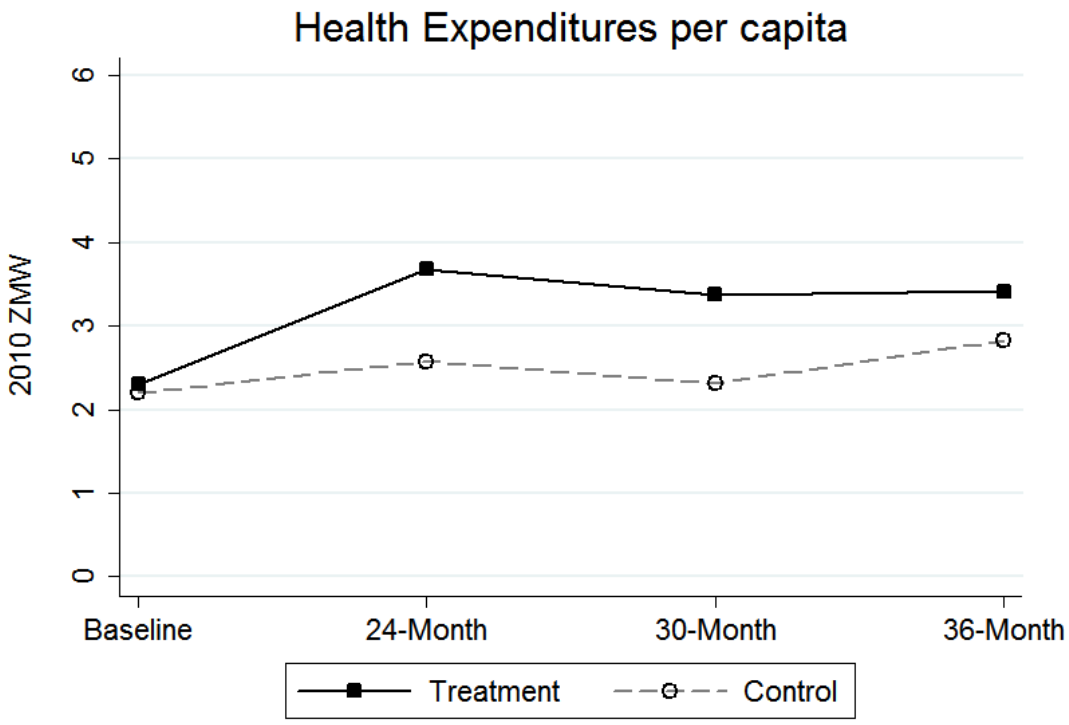


Figure A4.6

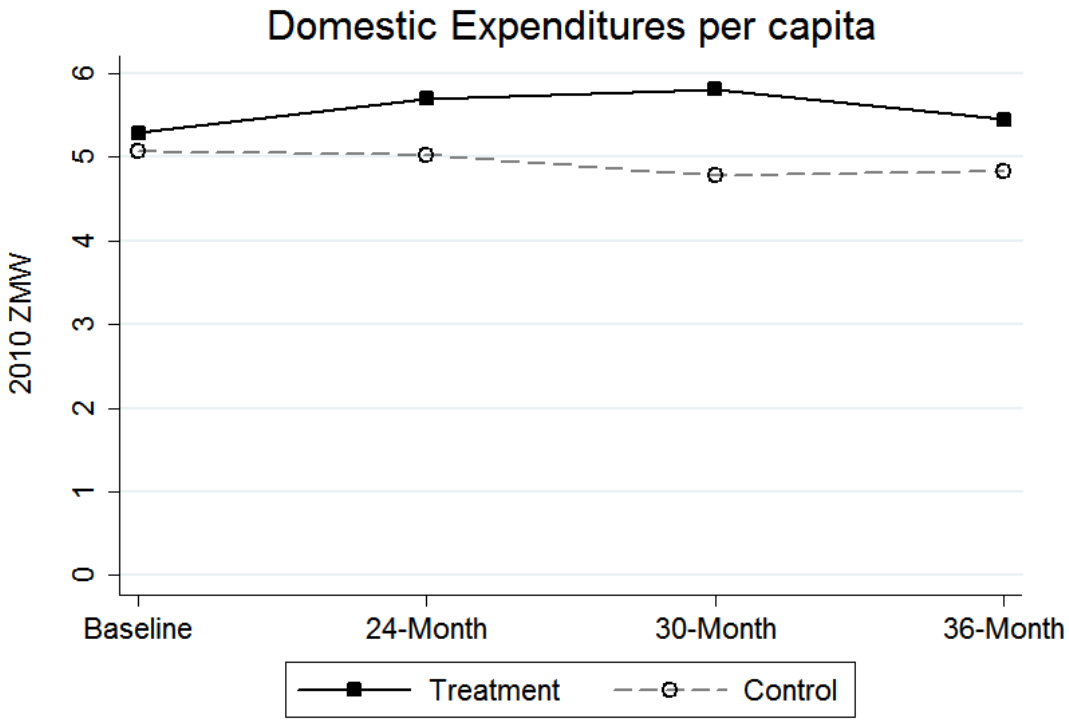


Figure A4.7

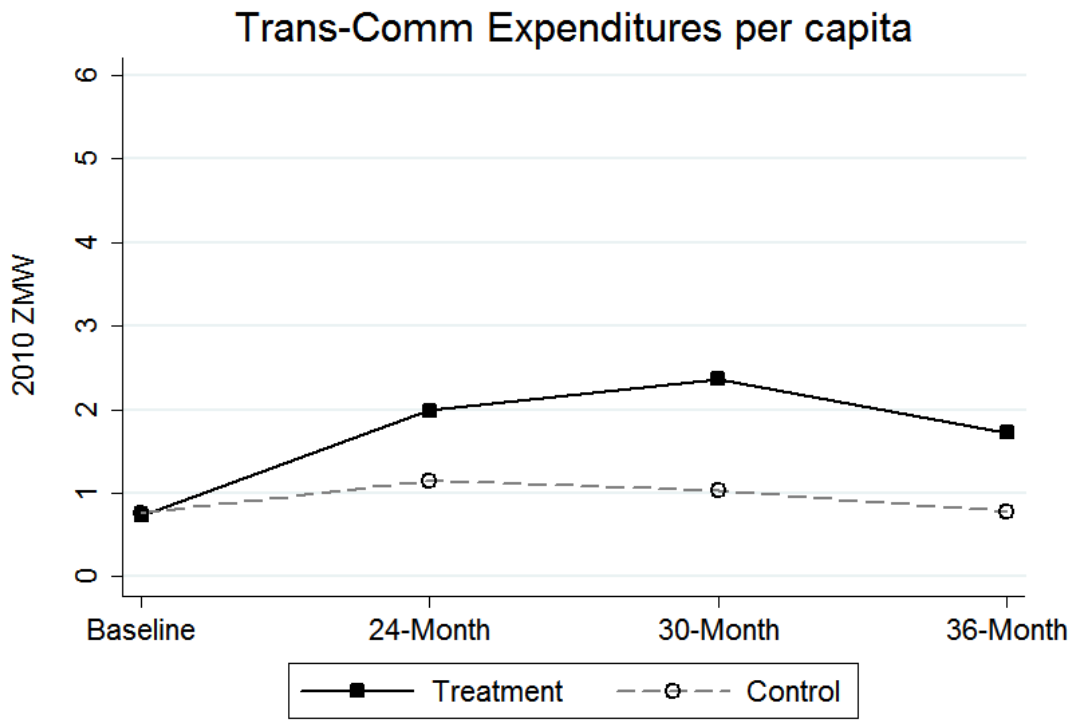


Figure A4.8

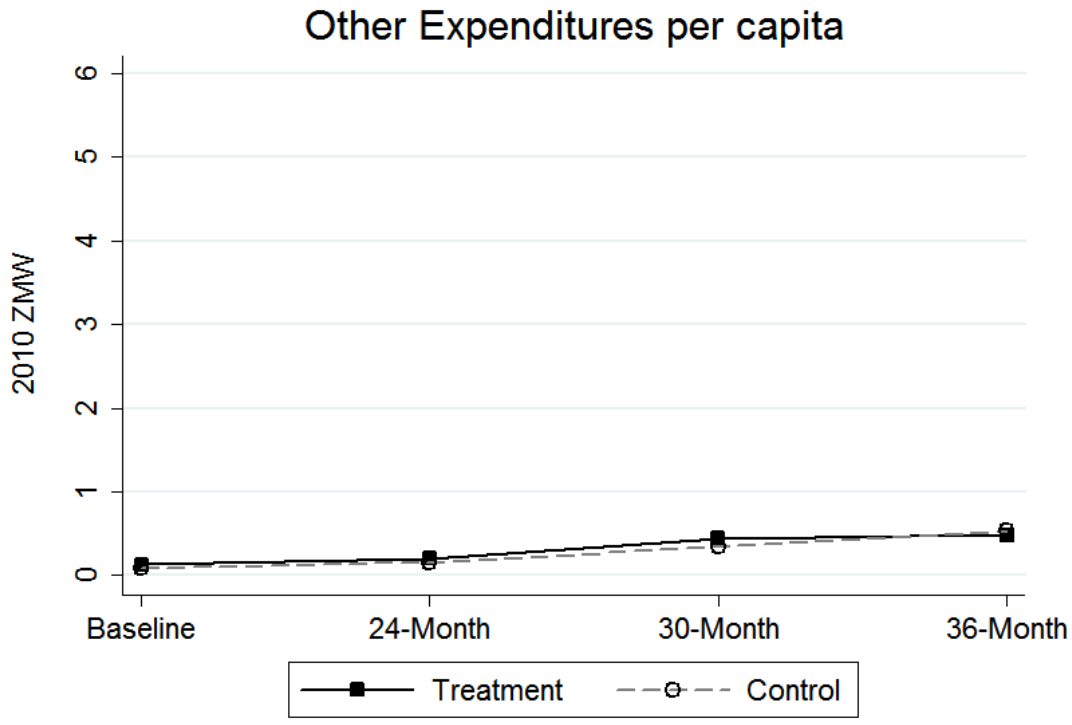


Figure A4.9

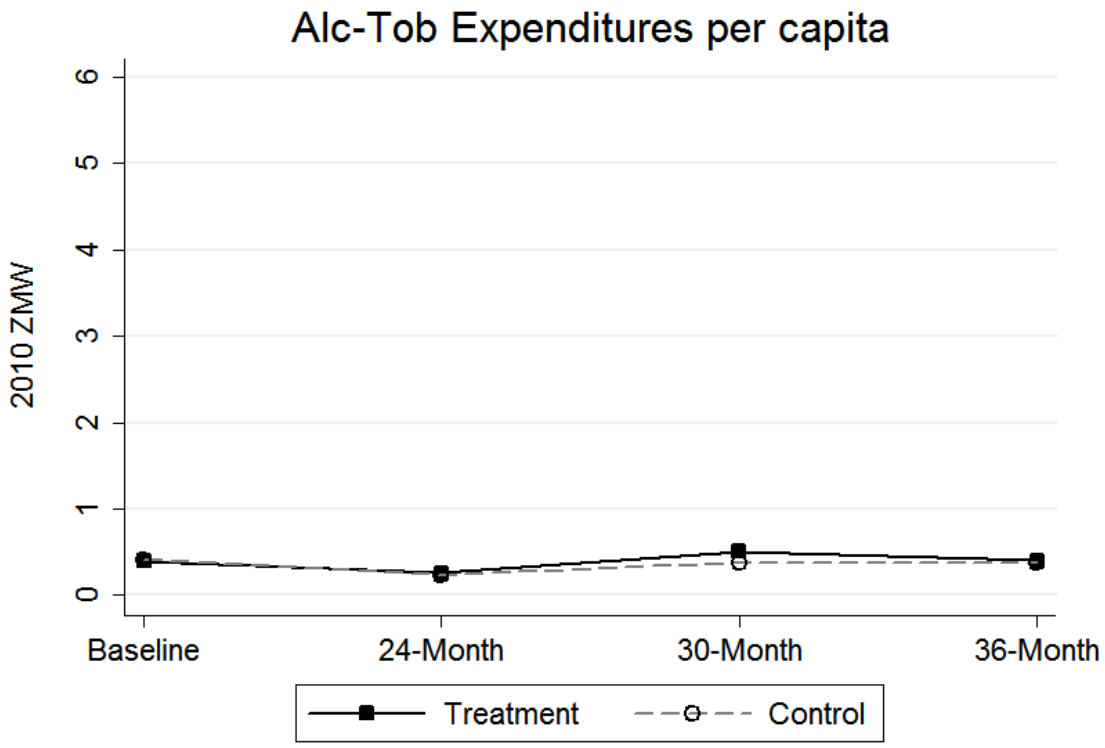


Table A4.3: CGP Impacts on Per-Capita Expenditures—Small Households (ZMW 2010 = 100)

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Total	**6.81**	**17.20**	**-10.38**	48.27	71.85	61.98
	(2.02)	(3.92)	(-2.61)			
Food	5.10	**13.52**	**-8.42**	36.17	54.80	47.06
	(1.71)	(3.78)	(-2.51)			
Clothing	0.40	**1.03**	**-0.63**	1.54	2.26	1.96
	(1.89)	(4.85)	(-2.90)			
Education	0.01	-0.37	0.38	0.23	0.34	0.36
	(0.07)	(-0.82)	(0.80)			
Health	0.44	**1.49**	-1.05	2.81	4.61	4.02
	(0.68)	(3.61)	(-1.37)			
Domestic	0.56	0.74	-0.19	6.26	7.40	6.49
	(0.73)	(0.87)	(-0.23)			
Transport/Communication	0.53	0.80	-0.27	0.69	1.40	0.92
	(1.18)	(1.63)	(-0.50)			
Other	-0.35	-0.05	-0.29	0.13	0.48	0.77
	(-1.27)	(-0.33)	(-0.94)			
Alcohol, Tobacco	0.15	0.07	0.09	0.41	0.56	0.42
	(0.57)	(0.31)	(0.49)			
N		3,041		1,279	368	416

NOTE: Same notes as in Table A4.1

Table A4.4: CGP Impacts on Expenditure Shares—Small Households

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Food	-0.003	0.004	-0.008	0.727	0.754	0.752
	(-0.193)	(0.321)	(-0.610)			
Clothing	0.004	**0.008**	-0.004	0.035	0.035	0.034
	(1.087)	(2.301)	(-1.292)			
Education	0.003	-0.002	**0.004**	0.005	0.009	0.006
	(1.132)	(-0.644)	(2.242)			
Health	0.001	0.008	-0.006	0.061	0.061	0.060
	(0.286)	(1.536)	(-1.324)			
Domestic	-0.011	-0.023	0.013	0.155	0.108	0.120
	(-0.791)	(-1.662)	(1.235)			
Transport/Communication	0.008*	0.002	0.006	0.008	0.018	0.009
	(2.179)	(0.534)	(1.232)			
Other	-0.004	0.002	**-0.005**	0.002	0.008	0.012
	(-1.560)	(1.550)	(-2.085)			
Alcohol, Tobacco	0.001	0.001	0.000	0.006	0.007	0.006
	(0.490)	(0.505)	(0.071)			
N		3,684		1,278	604	637

NOTE: Same notes as in Table A4.1

Table A4.5: CGP Impacts on Per-Capita Expenditures—Large Households (ZMW 2010 = 100)

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Total	**9.28**	**12.64**	-3.36	32.44	49.00	37.81
	(4.16)	(4.26)	(-1.39)			
Food	**6.89**	**9.55**	-2.66	23.74	36.38	28.24
	(4.06)	(4.11)	(-1.32)			
Clothing	**0.43**	**0.66**	-0.23	1.00	1.63	1.13
	(2.98)	(4.66)	(-1.52)			
Education	0.12	0.46	-0.34	0.67	1.26	0.96
	(0.73)	(1.93)	(-1.38)			
Health	**0.64**	**0.63**	0.01	1.67	2.82	2.06
	(3.15)	(2.45)	(0.04)			
Domestic	0.27	0.26	0.01	4.06	4.38	3.83
	(0.48)	(0.43)	(0.03)			
Transport/Communication	**0.88**	**1.17**	-0.28	0.80	1.70	0.85
	(2.18)	(2.53)	(-0.50)			
Other	0.11	0.03	0.07	0.08	0.51	0.39
	(1.02)	(0.64)	(0.64)			
Alcohol, Tobacco	-0.04	-0.10	0.06	0.40	0.32	0.35
	(-0.29)	(-0.68)	(0.46)			
N		3,578		1,238	613	599

NOTE: Same notes as in Table A4.1

Table A4.6: CGP Impacts on Expenditure Shares—Large Households

Dependent Variable	36-Month Impact (1)	24-Month Impact (2)	Diff 36M-24M (3)	Baseline Mean (4)	36M Treated Mean (5)	36M Control Mean (6)
Food	0.005	0.011	-0.006	0.711	0.746	0.741
	(0.285)	(0.640)	(-0.456)			
Clothing	0.004	**0.007**	-0.003	0.033	0.034	0.032
	(1.252)	(2.503)	(-0.981)			
Education	0.001	0.003	-0.002	0.024	0.025	0.023
	(0.224)	(0.654)	(-0.469)			
Health	0.004	0.003	0.002	0.051	0.058	0.055
	(0.974)	(0.538)	(0.409)			
Domestic	-0.017	-0.029	0.012	0.154	0.099	0.114
	(-1.239)	(-1.868)	(1.526)			
Transport/Communication	0.010	0.011	-0.001	0.014	0.021	0.015
	(1.807)	(1.775)	(-0.171)			
Other	-0.002	0.001	-0.003	0.002	0.010	0.012
	(-1.011)	(0.655)	(-1.271)			
Alcohol, Tobacco	-0.004	-0.005	0.001	0.011	0.006	0.008
	(-1.260)	(-1.592)	(0.287)			
N		3,577		1,237	613	599

NOTE: Same notes as in Table A4.1

Annex 5: Children Under 5

Table A5.1: Impact of CGP on Anthropometrics (<=24 months)

Dependent Variable	30-Month Impact (1)	24-Month Impact (2)	Diff 30M–24M (3)	Baseline Mean (4)	30M Treated Mean (5)	30M Control Mean (6)
Weight-for-Height (z-score)	-0.005	-0.017	0.013	-0.288	-0.144	-0.050
	(-0.035)	(-0.184)	(0.091)			
Height-for-Age (z-score)	0.078	-0.094	0.172	-1.210	-1.181	-1.309
	(0.515)	(-0.774)	(0.991)			
Weight-for-Age (z-score)	0.040	-0.000	0.040	-0.713	-0.690	-0.690
	(0.364)	(-0.004)	(0.355)			
Wasted (%)	-0.015	0.034	-0.050	0.071	0.069	0.081
	(-0.792)	(1.274)	(-1.700)			
Stunted (%)	0.063	0.066	-0.003	0.278	0.368	0.346
	(1.373)	(1.398)	(-0.053)			
Underweight (%)	0.008	0.011	-0.003	0.137	0.156	0.146
	(0.312)	(0.385)	(-0.105)			
IYCF	**0.183**	**0.180**	0.003	0.307	0.545	0.362
	(2.884)	(2.979)	(0.063)			
N		2,910		1,417	409	426

NOTE: Estimations use difference-in-difference modeling among panel households. Robust t-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for age and gender, as well as household size, recipient age, education and marital status, districts, household demographic composition and a vector of cluster-level prices.

Data Quality of Anthropometric indicators

Anthropometric measures are notoriously difficult to collect in large scale field surveys and the resulting z-scores based on measured height and weight can often contain significant measurement error. With repeated measures on the same child we are able to do more sophisticated data quality checks then the simple 'outlier' checks that are done in cross-section type surveys like MICS and DHS. In our case, by comparing z-scores across survey rounds we can identify 'unlikely' or 'unbelievable' changes in nutritional status. Specifically, we flagged cases where the change in height was more than 2.5 z-scores in either direction in a two year period, and greater than 1.5 z-scores in a year or less. For z-scores related to weight we allowed a slightly larger feasible change in z-score since weight can change more rapidly in shorter periods of time. The largest number of flags appeared in the height z-score between 30- and 36-months; overall we eventually dropped approximately 10 percent of the anthropometric observations due to unrealistic changes in growth or weight over between surveys. Figure A5.1 below shows the relationship between age and the height z-score across study arms at each wave based on the original (uncleaned) data, and Figure A5.2 shows these graphs after eliminating the unbelievable cases. The relationship between treatment and control remains unchanged which indicates that there is no systematic difference in measurement error across study arms, important for preserving the internal validity of the impacts we estimate.

Figure A5.1

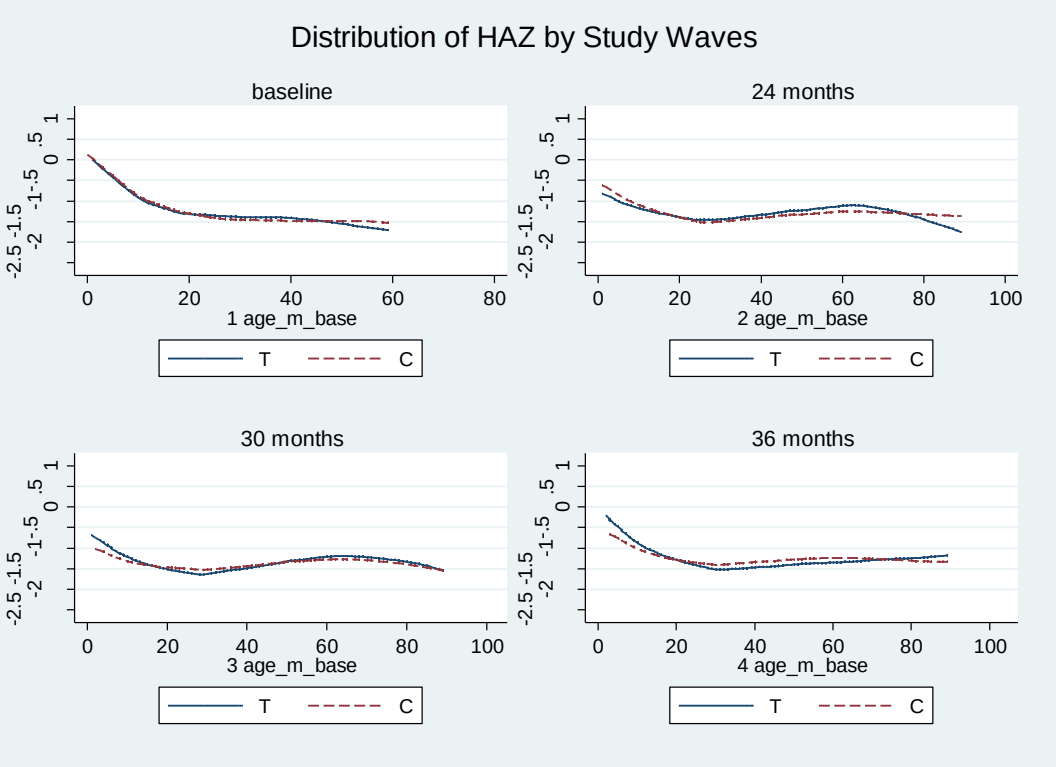
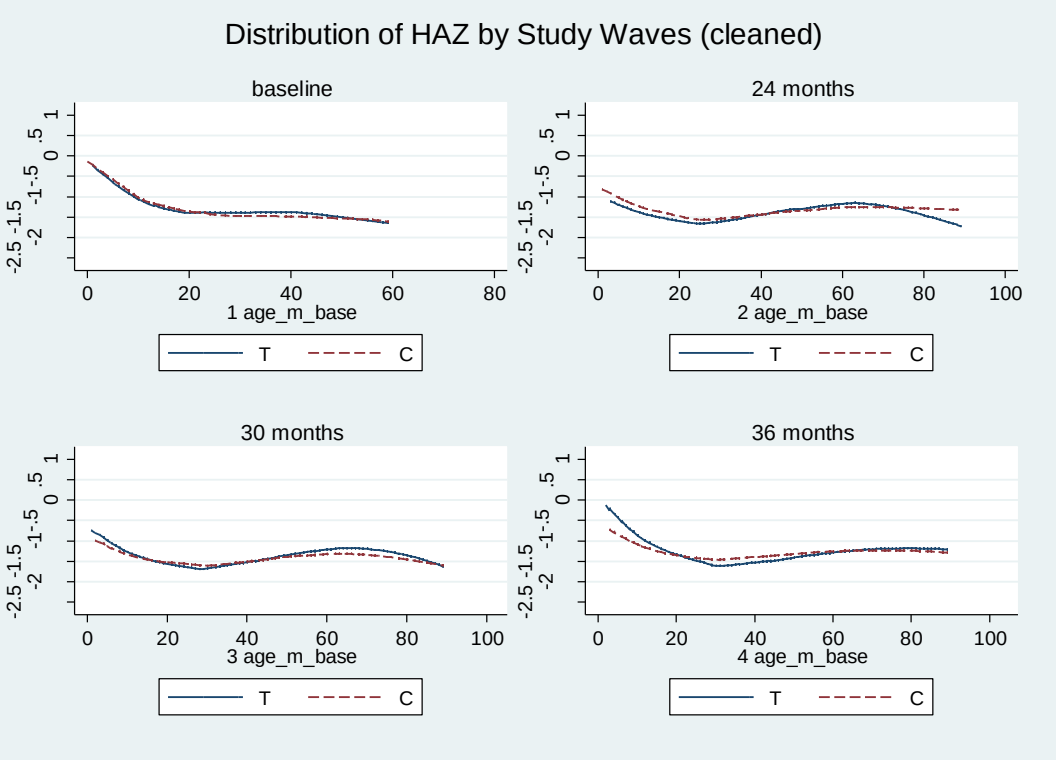


Figure A5.2



Annex 6: Education Impacts on Children 4-7 Years

The CGP appears to be supporting on-time entrance into school of young children in program households. In the study districts, school enrollment among 5-6 year olds is 12 percent. This rate jumps to 30 percent for 6-7 year olds, and 52 per cent for those 7-8 years old, hence this is an important moment when households are making schooling decisions for young children. The CGP has had a significant impact of 9 percentage points on school enrollment of children age 4-7 years at 24-months (column 3 of Table A6.1) and 10 percentage points at 30 months (column 2). This impact has decreased slightly at 36-months to 6 percentage points (column 1), which measures enrollment later in the same school year, indicating that children in program households are able to commence their schooling at the beginning of the year. Among this age group overall school enrollment rates are still 6 points higher in recipient households.

Table A6.1: CGP Impacts on Child Education by Wave: ages 4-7

Dependent Variable	36-Month Impact	30-Month Impact	24-Month Impact	Diff 36M-30M	Diff 30M-24M	Baseline Mean	36M Treated Mean	36M Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Currently enrolled in school	0.06	**0.10**	**0.09**	-0.04	0.01	0.21	0.24	0.18
	(1.63)	(2.70)	(2.50)	(-1.92)	(0.19)			
Full attendance in prior week	0.01	0.10	**0.11**	-0.09	-0.01	0.79	0.87	0.78
	(0.17)	(1.71)	(2.19)	(-1.68)	(-0.15)			
Days in attendance in prior week	0.25	**0.40**	**0.39**	-0.15	0.02	0.90	1.09	0.79
	(1.58)	(2.71)	(2.58)	(-1.87)	(0.12)			
Days attended prior week if enrolled	0.05	0.05	0.21	0.00	-0.16	4.43	4.68	4.59
	(0.23)	(0.23)	(1.03)	(0.01)	(-0.86)			
N		1,127				251	164	127

NOTE: Estimations use difference-in-difference modeling among panel households and children in all 4 waves. Robust t-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at $p < .05$. All estimations control for gender, age, household size, recipient age, education and marital status, districts, household demographic composition and a vector of cluster-level prices.

Annex 7: Nonfarm Enterprises

Table A7.1: CGP Impacts on Nonfarm Enterprises (NFE) - Small Household

Dependent Variable	36-Month Impact	24-Month Impact	Diff 36M-24M	24M Treated Mean	24M Control Mean	36M Treated Mean	36M Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
HH operates NFE	**0.125**	**0.126**	-0.002	0.469	0.315	0.457	0.305
	(2.426)	(2.650)	(-0.026)				
Months in operation since Oct/12	0.329	0.334	-0.006	7.213	7.016	5.902	5.572
	(0.740)	(0.858)	(-0.012)				
Total monthly profit (ZMW)95%	16.617	**33.423**	-16.806	135.762	98.659	124.170	104.113
	(1.499)	(2.683)	(-1.017)				
N		922		267	185	276	194

NOTE: Estimations use single difference modeling. Robust t-statistics clustered at the CWAC level are in parentheses. Bold indicates that they are significant at p<.05. All estimations control for household size, recipient age, education and marital status, districts, and household demographic composition. 1. The highest 5% values for this outcome were discarded owing to unlikely large values for this population.

Table A7.1: CGP Impacts on Nonfarm Enterprises (NFE) - Large Households

Dependent Variable	36-Month Impact	24-Month Impact	Diff 36M-24M	24M Treated Mean	24M Control Mean	36M Treated Mean	36M Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
HH operates NFE	**0.115**	**0.177**	-0.062	0.473	0.281	0.447	0.309
	(2.480)	(4.017)	(-1.222)				
Months in operation since Oct/12	-0.242	1.009	-1.251	7.938	6.876	6.354	6.400
	(-0.469)	(1.682)	(-1.953)				
Total monthly profit (ZMW)95%	18.132	35.871	-17.739	165.157	123.903	162.270	138.066
	(0.901)	(1.811)	(-0.634)				
N		887		274	154	274	185

NOTE: Same notes as Table A7.1